UNIT 2 : Computer Basics

Math Video ACTIVITY

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.2	Formulate problems from everyday and mathematical situations (e.g., how many forks are needed?, how many students are absent?, how can we share/divide these cookies?, how many different ways can we find to compare these fractions?).
1 - 5	2.1	Express mathematical ideas coherently and clearly to peers, teachers, and others (e.g., with verbal ideas, models or manipulatives, pictures, or symbols).
1 - 5	2.4	Represent, discuss, write, and read mathematical ideas and concepts. Start by relating everyday language to mathematical language and symbols and progress toward the use of appropriate terminology (e.g., "add more" becomes "plus", "repeated addition" becomes "multiplication", "fair share" becomes "divide", "balance the equation" becomes "solve the equation").
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).

UNIT 4 : Beginning Graphics

Brushes and Lines LESSON

Grade	Code	Standard
1	3.2	Identify, name, and describe two-dimensional geometric shapes (including rhombi) and objects in everyday situations (e.g., the face of a round clock is a circle, a desktop is a rectangle).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).

Drawing a Vehicle ACTIVITY

Grade	Code	Standard
1	3.2	Identify, name, and describe two-dimensional geometric shapes (including rhombi) and objects in everyday situations (e.g., the face of a round clock is a circle, a desktop is a rectangle).
1	3.3	Identify, name and describe three-dimensional geometric shapes (including cones) and objects in everyday situations (e.g., a can is a cylinder, a basketball is a sphere).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
2	3.2	Investigate and predict the results of putting together and taking apart two-dimensional shapes.

Personal Flag ACTIVITY

Grade	Code	Standard
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).

Shapes and Fills LESSON

Grade	Code	Standard
1	3.2	Identify, name, and describe two-dimensional geometric shapes (including rhombi) and objects in everyday situations (e.g., the face of a round clock is a circle, a desktop is a rectangle).
1	3.3	Identify, name and describe three-dimensional geometric shapes (including cones) and objects in everyday situations (e.g., a can is a cylinder, a basketball is a sphere).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).

UNIT 5 : Visual Mapping Basics

Designing a Visual Map ACTIVITY

Grade	Code	Standard
1	5.1.a	Organize, describe, and display data using concrete objects, pictures, or numbers.
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.

Grouping and Labeling LESSON

Grade	Code	Standard
1	2.2.a.ii	Perform addition by joining sets of objects and subtraction by separating and by comparing sets of objects.

I Belong to Many Groups ACTIVITY

Grade	Code	Standard
1	5.1.a	Organize, describe, and display data using concrete objects, pictures, or numbers.
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.

Living Things ACTIVITY

Grade	Code	Standard
1	2.2.a.ii	Perform addition by joining sets of objects and subtraction by separating and by comparing sets of objects.
1	5.1.a	Organize, describe, and display data using concrete objects, pictures, or numbers.

2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.

Our Community ACTIVITY

Grade	Code	Standard
1	5.1.a	Organize, describe, and display data using concrete objects, pictures, or numbers.
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.

Reading Visual Maps ACTIVITY

Grade	Code	Standard
1	5.1.a	Organize, describe, and display data using concrete objects, pictures, or numbers.
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.

Sorting Sets ACTIVITY

Grade	Code	Standard
1	2.2.a.ii	Perform addition by joining sets of objects and subtraction by separating and by comparing sets of objects.
1	5.1.a	Organize, describe, and display data using concrete objects, pictures, or numbers.
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.

Water Cycle ACTIVITY

Grade	Code	Standard
1	5.1.a	Organize, describe, and display data using concrete objects, pictures, or numbers.
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.

UNIT 6 : Word Processing Basics

Word Problems ACTIVITY

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.4	Verify and interpret results with respect to the original problem (e.g., students explain verbally why an answer makes sense, explain in a written format why an answer makes sense, verify the validity of each step taken to obtain a final result).

1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	2.1	Express mathematical ideas coherently and clearly to peers, teachers, and others (e.g., with verbal ideas, models or manipulatives, pictures, or symbols).
1 - 5	2.2	Extend mathematical knowledge by considering the thinking and strategies of others (e.g., agree or disagree, rephrase another student's explanation, analyze another student's explanation).
1 - 5	2.4	Represent, discuss, write, and read mathematical ideas and concepts. Start by relating everyday language to mathematical language and symbols and progress toward the use of appropriate terminology (e.g., "add more" becomes "plus", "repeated addition" becomes "multiplication", "fair share" becomes "divide", "balance the equation" becomes "solve the equation").
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
2	4.3.b	Recognize and write different amounts of money using dollar and cent notation.

UNIT 7 : Data and Database Basics (New)

Data and Database Basics Unit Quiz QUIZ

Grade	Code	Standard
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).

Databases: Data Classification LESSON

Grade	Code	Standard
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).

1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).

Databases: Data Classification Activity ACTIVITY

Grade	Code	Standard
1	5.1.b	Formulate and solve problems that involve collecting and analyzing data common to children's lives (e.g., color of shoes, numbers of pets, favorite foods).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.4	Verify and interpret results with respect to the original problem (e.g., students explain verbally why an answer makes sense, explain in a written format why an answer makes sense, verify the validity of each step taken to obtain a final result).
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	2.1	Express mathematical ideas coherently and clearly to peers, teachers, and others (e.g., with verbal ideas, models or manipulatives, pictures, or symbols).
1 - 5	2.2	Extend mathematical knowledge by considering the thinking and strategies of others (e.g., agree or disagree, rephrase another student's explanation, analyze another student's explanation).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.1	Relate various concrete and pictorial models of concepts and procedures to one another (e.g., use two colors of cubes to represent addition facts for the number 5, relate patterns on a hundreds chart to multiples, use base-10 blocks to represent decimals).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
3	5.1.b	Read graphs and charts, identify the main idea, draw conclusions, and make predictions based on the data (e.g., predict how many children will bring their lunch based on a menu).

3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).

Databases: Search and Filter LESSON

Grade	Code	Standard
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).

Databases: Search and Filter Activity ACTIVITY

Grade	Code	Standard
1	5.1.b	Formulate and solve problems that involve collecting and analyzing data common to children's lives (e.g., color of shoes, numbers of pets, favorite foods).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.4	Verify and interpret results with respect to the original problem (e.g., students explain verbally why an answer makes sense, explain in a written format why an answer makes sense, verify the validity of each step taken to obtain a final result).
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	2.1	Express mathematical ideas coherently and clearly to peers, teachers, and others (e.g., with verbal ideas, models or manipulatives, pictures, or symbols).
1 - 5	2.2	Extend mathematical knowledge by considering the thinking and strategies of others (e.g., agree or disagree, rephrase another student's explanation, analyze another student's explanation).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).

1 - 5	4.1	Relate various concrete and pictorial models of concepts and procedures to one another (e.g., use two colors of cubes to represent addition facts for the number 5, relate patterns on a hundreds chart to multiples, use base-10 blocks to represent decimals).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
3	5.1.b	Read graphs and charts, identify the main idea, draw conclusions, and make predictions based on the data (e.g., predict how many children will bring their lunch based on a menu).
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).

Databases: Sort and Filter LESSON

Grade	Code	Standard
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).

Databases: Sort and Filter Activity ACTIVITY

Grade	Code	Standard
1	5.1.b	Formulate and solve problems that involve collecting and analyzing data common to children's lives (e.g., color of shoes, numbers of pets, favorite foods).

1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.4	Verify and interpret results with respect to the original problem (e.g., students explain verbally why an answer makes sense, explain in a written format why an answer makes sense, verify the validity of each step taken to obtain a final result).
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	2.1	Express mathematical ideas coherently and clearly to peers, teachers, and others (e.g., with verbal ideas, models or manipulatives, pictures, or symbols).
1 - 5	2.2	Extend mathematical knowledge by considering the thinking and strategies of others (e.g., agree or disagree, rephrase another student's explanation, analyze another student's explanation).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.1	Relate various concrete and pictorial models of concepts and procedures to one another (e.g., use two colors of cubes to represent addition facts for the number 5, relate patterns on a hundreds chart to multiples, use base-10 blocks to represent decimals).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
3	5.1.b	Read graphs and charts, identify the main idea, draw conclusions, and make predictions based on the data (e.g., predict how many children will bring their lunch based on a menu).
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).

Databases: Tables, Records, and Fields LESSON

Grade	Code	Standard
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).

1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).

Databases: Tables, Records, and Fields Activity ACTIVITY

Grade	Code	Standard
1	5.1.b	Formulate and solve problems that involve collecting and analyzing data common to children's lives (e.g., color of shoes, numbers of pets, favorite foods).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.4	Verify and interpret results with respect to the original problem (e.g., students explain verbally why an answer makes sense, explain in a written format why an answer makes sense, verify the validity of each step taken to obtain a final result).
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	2.1	Express mathematical ideas coherently and clearly to peers, teachers, and others (e.g., with verbal ideas, models or manipulatives, pictures, or symbols).
1 - 5	2.2	Extend mathematical knowledge by considering the thinking and strategies of others (e.g., agree or disagree, rephrase another student's explanation, analyze another student's explanation).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.1	Relate various concrete and pictorial models of concepts and procedures to one another (e.g., use two colors of cubes to represent addition facts for the number 5, relate patterns on a hundreds chart to multiples, use base-10 blocks to represent decimals).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
3	5.1.b	Read graphs and charts, identify the main idea, draw conclusions, and make predictions based on the data (e.g., predict how many children will bring their lunch based on a menu).

3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).

UNIT 8 : Database Basics

Basic Parts and Searches LESSON

Grade	Code	Standard
1	1.1	Describe, extend and create patterns using concrete objects (e.g., sort a bag of objects by attributes and orally communicate the pattern for each grouping).
1	5.1.a	Organize, describe, and display data using concrete objects, pictures, or numbers.
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.

Database Basics Unit Quiz QUIZ

Grade	Code	Standard
1	1.1	Describe, extend and create patterns using concrete objects (e.g., sort a bag of objects by attributes and orally communicate the pattern for each grouping).
1	5.1.a	Organize, describe, and display data using concrete objects, pictures, or numbers.
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	2.4	Represent, discuss, write, and read mathematical ideas and concepts. Start by relating everyday language to mathematical language and symbols and progress toward the use of appropriate terminology (e.g., "add more" becomes "plus", "repeated addition" becomes "multiplication", "fair share" becomes "divide", "balance the equation" becomes "solve the equation").
1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).

2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.

Simple Search LESSON

Grade	Code	Standard
1	1.1	Describe, extend and create patterns using concrete objects (e.g., sort a bag of objects by attributes and orally communicate the pattern for each grouping).
1	5.1.a	Organize, describe, and display data using concrete objects, pictures, or numbers.
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	2.4	Represent, discuss, write, and read mathematical ideas and concepts. Start by relating everyday language to mathematical language and symbols and progress toward the use of appropriate terminology (e.g., "add more" becomes "plus", "repeated addition" becomes "multiplication", "fair share" becomes "divide", "balance the equation" becomes "solve the equation").
1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.

Simple Sort LESSON

Grade	Code	Standard
1	1.1	Describe, extend and create patterns using concrete objects (e.g., sort a bag of objects by attributes and orally communicate the pattern for each grouping).
1	5.1.a	Organize, describe, and display data using concrete objects, pictures, or numbers.
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).

3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.

UNIT 10: Visual Mapping

Formats and Outlining LESSON

Grade	Code	Standard
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).

Idea Webs LESSON

Grade	Code	Standard
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).

UNIT 12: Spreadsheet Basics

Acts of Kindness ACTIVITY

Grade	Code	Standard
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	4.2.b	Solve problems involving number of days in a week, month, or year and problems involving weeks in a month and year.
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).

Animal Research Spreadsheet ACTIVITY

Grade	Code	Standard
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).

Book Report Progress ACTIVITY

Grade	Code	Standard
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	4.2.b	Solve problems involving number of days in a week, month, or year and problems involving weeks in a month and year.
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	4.2.a	Solve elapsed time problems.
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).

4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).

Cell Formatting LESSON

Grade	Code	Standard
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).

Class Pets Spreadsheet ACTIVITY

Grade	Code	Standard
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).

Columns and Rows LESSON

Grade	Code	Standard
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).

Family Spreadsheet ACTIVITY

Grade	Code	Standard
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).

Making a Schedule ACTIVITY

Grade	Code	Standard
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	4.2.b	Solve problems involving number of days in a week, month, or year and problems involving weeks in a month and year.
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	4.2.a	Solve elapsed time problems.
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).

Parts of a Spreadsheet LESSON

Grade	Code	Standard
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).

Spreadsheet Basics Unit Quiz QUIZ

Grade	Code	Standard
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).

Student Information Spreadsheet ACTIVITY

Grade	Code	Standard
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).

Tables and Data LESSON

Grade	Code	Standard
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).
5	5.1.a	Compare and translate displays of data and justify the selection of the type of table of graph (e.g., charts, tables, bar graphs, pictographs, line graphs, circle graphs, Venn diagrams).

UNIT 14: Graphing in Spreadsheets

Bar Graphs LESSON

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	2.4	Represent, discuss, write, and read mathematical ideas and concepts. Start by relating everyday language to mathematical language and symbols and progress toward the use of appropriate terminology (e.g., "add more" becomes "plus", "repeated addition" becomes "multiplication", "fair share" becomes "divide", "balance the equation" becomes "solve the equation").
1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).
1 - 5	4.1	Relate various concrete and pictorial models of concepts and procedures to one another (e.g., use two colors of cubes to represent addition facts for the number 5, relate patterns on a hundreds chart to multiples, use base-10 blocks to represent decimals).

1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	1.1	Describe, extend, and create patterns using symbols, shapes, or designs (e.g., repeating and growing patterns made up of sets of shapes or designs, create patterns by combining different shapes and taking them apart).
2	1.2	Formulate and record generalizations about number patterns in a variety of situations (e.g., addition and subtraction patterns, even and odd numbers, build a table showing the cost of one pencil at 10 cents, 2 pencils at 20 cents).
2	4.1.a	Measure objects using standard units (e.g., measure length to the nearest foot, inch, and half inch).
2	4.1.b	Select and use appropriate units of measurement in problem solving and everyday situations.
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
3	5.1.b	Read graphs and charts, identify the main idea, draw conclusions, and make predictions based on the data (e.g., predict how many children will bring their lunch based on a menu).
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).
5	2.1.c	Identify and compare integers using real world situations. (e.g., owing money, temperature, or measuring elevations above and below sea level).
5	5.1.a	Compare and translate displays of data and justify the selection of the type of table of graph (e.g., charts, tables, bar graphs, pictographs, line graphs, circle graphs, Venn diagrams).

Classroom Measurements ACTIVITY

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.2	Formulate problems from everyday and mathematical situations (e.g., how many forks are needed?, how many students are absent?, how can we share/divide these cookies?, how many different ways can we find to compare these fractions?).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.4	Verify and interpret results with respect to the original problem (e.g., students explain verbally why an answer makes sense, explain in a written format why an answer makes sense, verify the validity of each step taken to obtain a final result).
1 - 5	2.1	Express mathematical ideas coherently and clearly to peers, teachers, and others (e.g., with verbal ideas, models or manipulatives, pictures, or symbols).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.

1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.1	Relate various concrete and pictorial models of concepts and procedures to one another (e.g., use two colors of cubes to represent addition facts for the number 5, relate patterns on a hundreds chart to multiples, use base-10 blocks to represent decimals).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	1.1	Describe, extend, and create patterns using symbols, shapes, or designs (e.g., repeating and growing patterns made up of sets of shapes or designs, create patterns by combining different shapes and taking them apart).
2	1.2	Formulate and record generalizations about number patterns in a variety of situations (e.g., addition and subtraction patterns, even and odd numbers, build a table showing the cost of one pencil at 10 cents, 2 pencils at 20 cents).
2	4.1.a	Measure objects using standard units (e.g., measure length to the nearest foot, inch, and half inch).
2	4.1.b	Select and use appropriate units of measurement in problem solving and everyday situations.
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	4.1.a	Choose an appropriate measurement instrument and measure the length of objects to the nearest inch or half-inch and the weight of objects to the nearest pound or ounce.
3	4.1.b	Choose an appropriate measurement instrument and measure the length of objects to the nearest meter or centimeter and the weight of objects to the nearest gram or kilogram.
3	4.1.d	Develop and use strategies to choose an appropriate unit and measurement instrument to estimate measurements (e.g., use parts of the body as benchmarks for measuring length).
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
3	5.1.b	Read graphs and charts, identify the main idea, draw conclusions, and make predictions based on the data (e.g., predict how many children will bring their lunch based on a menu).
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	4.1.a	Estimate the measures of a variety of objects using customary units.
4	4.1.b	Establish benchmarks for metric units and estimate the measures of a variety of objects (e.g., mass: the mass of a raisin is about 1 gram, length: the width of a finger is about 1 centimeter).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).
5	2.1.c	Identify and compare integers using real world situations. (e.g., owing money, temperature, or measuring elevations above and below sea level).
5	5.1.a	Compare and translate displays of data and justify the selection of the type of table of graph (e.g., charts, tables, bar graphs, pictographs, line graphs, circle graphs, Venn diagrams).

5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).

Coin Toss Probability ACTIVITY

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.2	Formulate problems from everyday and mathematical situations (e.g., how many forks are needed?, how many students are absent?, how can we share/divide these cookies?, how many different ways can we find to compare these fractions?).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.4	Verify and interpret results with respect to the original problem (e.g., students explain verbally why an answer makes sense, explain in a written format why an answer makes sense, verify the validity of each step taken to obtain a final result).
1 - 5	2.1	Express mathematical ideas coherently and clearly to peers, teachers, and others (e.g., with verbal ideas, models or manipulatives, pictures, or symbols).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	3.3	Make predictions and draw conclusions about mathematical ideas and concepts. Predictions become conjectures and conclusions become more logical as students mature mathematically.
1 - 5	4.1	Relate various concrete and pictorial models of concepts and procedures to one another (e.g., use two colors of cubes to represent addition facts for the number 5, relate patterns on a hundreds chart to multiples, use base-10 blocks to represent decimals).
1 - 5	4.3	Recognize relationships among different topics within mathematics (e.g., the length of an object can be represented by a number, multiplication facts can be modeled with geometric arrays, 1/2 can be written as .5 and 50%).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	1.1	Describe, extend, and create patterns using symbols, shapes, or designs (e.g., repeating and growing patterns made up of sets of shapes or designs, create patterns by combining different shapes and taking them apart).
2	1.2	Formulate and record generalizations about number patterns in a variety of situations (e.g., addition and subtraction patterns, even and odd numbers, build a table showing the cost of one pencil at 10 cents, 2 pencils at 20 cents).
2	2.1.d	Demonstrate (using concrete objects, pictures, and numerical symbols) fractional parts including halves, thirds, fourths and common percents (25%, 50%, 75%, and 100%).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.

3	1.1	Describe (orally or in written form), create, extend and predict patterns in a variety of situations (e.g., 3, 6, 9, 12... , use a function machine to generate input and output values for a table, show multiplication patterns on a hundreds chart, determine a rule and generate additional pairs with the same relationship).
3	2.1.b.ii	Create and compare physical and pictorial models of equivalent and nonequivalent fractions including halves, thirds, fourths, eighths, tenths, twelfths, and common percents (25%, 50%, 75%, 100%) (e.g., fraction circles, pictures, egg cartons, fraction strips, number lines).
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
3	5.1.b	Read graphs and charts, identify the main idea, draw conclusions, and make predictions based on the data (e.g., predict how many children will bring their lunch based on a menu).
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
3	5.2	Describe the probability (more, less, or equally likely) of chance events.
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	2.1.b.ii	Use 0, 1/2, and 1 or 0, 0.5, and 1 as benchmarks and place additional fractions, decimals, and percents on a number line (e.g., 1/3, 3/4, 0.7, 0.4, 62%, 12%).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).
4	5.2	Predict the probability of outcomes of simple experiments using words such as certain, equally likely, impossible (e.g., coins, number cubes, spinners).
5	2.1.c	Identify and compare integers using real world situations. (e.g., owing money, temperature, or measuring elevations above and below sea level).
5	5.1.a	Compare and translate displays of data and justify the selection of the type of table of graph (e.g., charts, tables, bar graphs, pictographs, line graphs, circle graphs, Venn diagrams).
5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).
5	5.2.a	Determine the probability of events occurring in familiar contexts or experiments and express probabilities as fractions from zero to one (e.g., find the fractional probability of an event given a biased spinner).

Ethnic Foods Survey ACTIVITY

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.2	Formulate problems from everyday and mathematical situations (e.g., how many forks are needed?, how many students are absent?, how can we share/divide these cookies?, how many different ways can we find to compare these fractions?).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.4	Verify and interpret results with respect to the original problem (e.g., students explain verbally why an answer makes sense, explain in a written format why an answer makes sense, verify the validity of each step taken to obtain a final result).
1 - 5	2.1	Express mathematical ideas coherently and clearly to peers, teachers, and others (e.g., with verbal ideas, models or manipulatives, pictures, or symbols).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.

1 - 5	2.4	Represent, discuss, write, and read mathematical ideas and concepts. Start by relating everyday language to mathematical language and symbols and progress toward the use of appropriate terminology (e.g., "add more" becomes "plus", "repeated addition" becomes "multiplication", "fair share" becomes "divide", "balance the equation" becomes "solve the equation").
1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.1	Relate various concrete and pictorial models of concepts and procedures to one another (e.g., use two colors of cubes to represent addition facts for the number 5, relate patterns on a hundreds chart to multiples, use base-10 blocks to represent decimals).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	1.1	Describe, extend, and create patterns using symbols, shapes, or designs (e.g., repeating and growing patterns made up of sets of shapes or designs, create patterns by combining different shapes and taking them apart).
2	1.2	Formulate and record generalizations about number patterns in a variety of situations (e.g., addition and subtraction patterns, even and odd numbers, build a table showing the cost of one pencil at 10 cents, 2 pencils at 20 cents).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
3	5.1.b	Read graphs and charts, identify the main idea, draw conclusions, and make predictions based on the data (e.g., predict how many children will bring their lunch based on a menu).
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).
5	2.1.c	Identify and compare integers using real world situations. (e.g., owing money, temperature, or measuring elevations above and below sea level).
5	5.1.a	Compare and translate displays of data and justify the selection of the type of table of graph (e.g., charts, tables, bar graphs, pictographs, line graphs, circle graphs, Venn diagrams).
5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).

Graphing in Spreadsheets Unit Quiz QUIZ

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).
1 - 5	4.1	Relate various concrete and pictorial models of concepts and procedures to one another (e.g., use two colors of cubes to represent addition facts for the number 5, relate patterns on a hundreds chart to multiples, use base-10 blocks to represent decimals).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	1.1	Describe, extend, and create patterns using symbols, shapes, or designs (e.g., repeating and growing patterns made up of sets of shapes or designs, create patterns by combining different shapes and taking them apart).
2	1.2	Formulate and record generalizations about number patterns in a variety of situations (e.g., addition and subtraction patterns, even and odd numbers, build a table showing the cost of one pencil at 10 cents, 2 pencils at 20 cents).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
3	5.1.b	Read graphs and charts, identify the main idea, draw conclusions, and make predictions based on the data (e.g., predict how many children will bring their lunch based on a menu).
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
5	2.1.c	Identify and compare integers using real world situations. (e.g., owing money, temperature, or measuring elevations above and below sea level).
5	5.1.a	Compare and translate displays of data and justify the selection of the type of table of graph (e.g., charts, tables, bar graphs, pictographs, line graphs, circle graphs, Venn diagrams).

Graphing Weather ACTIVITY

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).

1 - 5	1.4	Verify and interpret results with respect to the original problem (e.g., students explain verbally why an answer makes sense, explain in a written format why an answer makes sense, verify the validity of each step taken to obtain a final result).
1 - 5	2.1	Express mathematical ideas coherently and clearly to peers, teachers, and others (e.g., with verbal ideas, models or manipulatives, pictures, or symbols).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.1	Relate various concrete and pictorial models of concepts and procedures to one another (e.g., use two colors of cubes to represent addition facts for the number 5, relate patterns on a hundreds chart to multiples, use base-10 blocks to represent decimals).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	1.1	Describe, extend, and create patterns using symbols, shapes, or designs (e.g., repeating and growing patterns made up of sets of shapes or designs, create patterns by combining different shapes and taking them apart).
2	1.2	Formulate and record generalizations about number patterns in a variety of situations (e.g., addition and subtraction patterns, even and odd numbers, build a table showing the cost of one pencil at 10 cents, 2 pencils at 20 cents).
2	4.1.b	Select and use appropriate units of measurement in problem solving and everyday situations.
2	4.2.b	Solve problems involving number of days in a week, month, or year and problems involving weeks in a month and year.
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	3.3	Make and use coordinate systems to specify locations and shapes on a grid with ordered pairs and to describe paths from one point to another point on a grid.
3	4.1.b	Choose an appropriate measurement instrument and measure the length of objects to the nearest meter or centimeter and the weight of objects to the nearest gram or kilogram.
3	4.2.c	Read a thermometer and solve for temperature change.
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
3	5.1.b	Read graphs and charts, identify the main idea, draw conclusions, and make predictions based on the data (e.g., predict how many children will bring their lunch based on a menu).
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	4.2.b	Read thermometers using different intervals (intervals of 1, 2, or 5) and solve for temperature change.
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).

5	2.1.c	Identify and compare integers using real world situations. (e.g., owing money, temperature, or measuring elevations above and below sea level).
5	5.1.a	Compare and translate displays of data and justify the selection of the type of table of graph (e.g., charts, tables, bar graphs, pictographs, line graphs, circle graphs, Venn diagrams).
5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).

Line Graphs LESSON

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	2.4	Represent, discuss, write, and read mathematical ideas and concepts. Start by relating everyday language to mathematical language and symbols and progress toward the use of appropriate terminology (e.g., "add more" becomes "plus", "repeated addition" becomes "multiplication", "fair share" becomes "divide", "balance the equation" becomes "solve the equation").
1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).
1 - 5	4.1	Relate various concrete and pictorial models of concepts and procedures to one another (e.g., use two colors of cubes to represent addition facts for the number 5, relate patterns on a hundreds chart to multiples, use base-10 blocks to represent decimals).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	1.1	Describe, extend, and create patterns using symbols, shapes, or designs (e.g., repeating and growing patterns made up of sets of shapes or designs, create patterns by combining different shapes and taking them apart).
2	1.2	Formulate and record generalizations about number patterns in a variety of situations (e.g., addition and subtraction patterns, even and odd numbers, build a table showing the cost of one pencil at 10 cents, 2 pencils at 20 cents).
2	4.2.b	Solve problems involving number of days in a week, month, or year and problems involving weeks in a month and year.
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	3.3	Make and use coordinate systems to specify locations and shapes on a grid with ordered pairs and to describe paths from one point to another point on a grid.
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
3	5.1.b	Read graphs and charts, identify the main idea, draw conclusions, and make predictions based on the data (e.g., predict how many children will bring their lunch based on a menu).
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.

4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	3.1	Identify, draw, and construct models of intersecting, parallel, and perpendicular lines.
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).
5	2.1.c	Identify and compare integers using real world situations. (e.g., owing money, temperature, or measuring elevations above and below sea level).
5	5.1.a	Compare and translate displays of data and justify the selection of the type of table of graph (e.g., charts, tables, bar graphs, pictographs, line graphs, circle graphs, Venn diagrams).

Measuring Matter ACTIVITY

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.2	Formulate problems from everyday and mathematical situations (e.g., how many forks are needed?, how many students are absent?, how can we share/divide these cookies?, how many different ways can we find to compare these fractions?).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.4	Verify and interpret results with respect to the original problem (e.g., students explain verbally why an answer makes sense, explain in a written format why an answer makes sense, verify the validity of each step taken to obtain a final result).
1 - 5	2.1	Express mathematical ideas coherently and clearly to peers, teachers, and others (e.g., with verbal ideas, models or manipulatives, pictures, or symbols).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.1	Relate various concrete and pictorial models of concepts and procedures to one another (e.g., use two colors of cubes to represent addition facts for the number 5, relate patterns on a hundreds chart to multiples, use base-10 blocks to represent decimals).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	1.1	Describe, extend, and create patterns using symbols, shapes, or designs (e.g., repeating and growing patterns made up of sets of shapes or designs, create patterns by combining different shapes and taking them apart).
2	1.2	Formulate and record generalizations about number patterns in a variety of situations (e.g., addition and subtraction patterns, even and odd numbers, build a table showing the cost of one pencil at 10 cents, 2 pencils at 20 cents).
2	4.1.a	Measure objects using standard units (e.g., measure length to the nearest foot, inch, and half inch).
2	4.1.b	Select and use appropriate units of measurement in problem solving and everyday situations.

2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	4.1.a	Choose an appropriate measurement instrument and measure the length of objects to the nearest inch or half-inch and the weight of objects to the nearest pound or ounce.
3	4.1.b	Choose an appropriate measurement instrument and measure the length of objects to the nearest meter or centimeter and the weight of objects to the nearest gram or kilogram.
3	4.1.d	Develop and use strategies to choose an appropriate unit and measurement instrument to estimate measurements (e.g., use parts of the body as benchmarks for measuring length).
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
3	5.1.b	Read graphs and charts, identify the main idea, draw conclusions, and make predictions based on the data (e.g., predict how many children will bring their lunch based on a menu).
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	4.1.a	Estimate the measures of a variety of objects using customary units.
4	4.1.b	Establish benchmarks for metric units and estimate the measures of a variety of objects (e.g., mass: the mass of a raisin is about 1 gram, length: the width of a finger is about 1 centimeter).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).
5	2.1.c	Identify and compare integers using real world situations. (e.g., owing money, temperature, or measuring elevations above and below sea level).
5	5.1.a	Compare and translate displays of data and justify the selection of the type of table of graph (e.g., charts, tables, bar graphs, pictographs, line graphs, circle graphs, Venn diagrams).
5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).

Mixtures and Solutions ACTIVITY

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.2	Formulate problems from everyday and mathematical situations (e.g., how many forks are needed?, how many students are absent?, how can we share/divide these cookies?, how many different ways can we find to compare these fractions?).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.4	Verify and interpret results with respect to the original problem (e.g., students explain verbally why an answer makes sense, explain in a written format why an answer makes sense, verify the validity of each step taken to obtain a final result).
1 - 5	2.1	Express mathematical ideas coherently and clearly to peers, teachers, and others (e.g., with verbal ideas, models or manipulatives, pictures, or symbols).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).

1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.1	Relate various concrete and pictorial models of concepts and procedures to one another (e.g., use two colors of cubes to represent addition facts for the number 5, relate patterns on a hundreds chart to multiples, use base-10 blocks to represent decimals).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	1.1	Describe, extend, and create patterns using symbols, shapes, or designs (e.g., repeating and growing patterns made up of sets of shapes or designs, create patterns by combining different shapes and taking them apart).
2	1.2	Formulate and record generalizations about number patterns in a variety of situations (e.g., addition and subtraction patterns, even and odd numbers, build a table showing the cost of one pencil at 10 cents, 2 pencils at 20 cents).
2	2.1.d	Demonstrate (using concrete objects, pictures, and numerical symbols) fractional parts including halves, thirds, fourths and common percents (25%, 50%, 75%, and 100%).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	2.1.b.ii	Create and compare physical and pictorial models of equivalent and nonequivalent fractions including halves, thirds, fourths, eighths, tenths, twelfths, and common percents (25%, 50%, 75%, 100%) (e.g., fraction circles, pictures, egg cartons, fraction strips, number lines).
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
3	5.1.b	Read graphs and charts, identify the main idea, draw conclusions, and make predictions based on the data (e.g., predict how many children will bring their lunch based on a menu).
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	2.1.b.ii	Use 0, 1/2, and 1 or 0, 0.5, and 1 as benchmarks and place additional fractions, decimals, and percents on a number line (e.g., 1/3, 3/4, 0.7, 0.4, 62%, 12%).
4	2.1.b.iii	Compare, add, or subtract fractional parts (fractions with like denominators and decimals) using physical or pictorial models. (e.g., egg cartons, fraction strips, circles, and squares).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).
5	2.1.c	Identify and compare integers using real world situations. (e.g., owing money, temperature, or measuring elevations above and below sea level).
5	2.2.b	Estimate add, or subtract fractions (including mixed numbers) to solve problems using a variety of methods (e.g., use fraction strips, use area models, find a common denominator).
5	5.1.a	Compare and translate displays of data and justify the selection of the type of table of graph (e.g., charts, tables, bar graphs, pictographs, line graphs, circle graphs, Venn diagrams).
5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).

Pie Charts LESSON

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	2.4	Represent, discuss, write, and read mathematical ideas and concepts. Start by relating everyday language to mathematical language and symbols and progress toward the use of appropriate terminology (e.g., "add more" becomes "plus", "repeated addition" becomes "multiplication", "fair share" becomes "divide", "balance the equation" becomes "solve the equation").
1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).
1 - 5	4.1	Relate various concrete and pictorial models of concepts and procedures to one another (e.g., use two colors of cubes to represent addition facts for the number 5, relate patterns on a hundreds chart to multiples, use base-10 blocks to represent decimals).
1 - 5	4.3	Recognize relationships among different topics within mathematics (e.g., the length of an object can be represented by a number, multiplication facts can be modeled with geometric arrays, 1/2 can be written as .5 and 50%).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	1.1	Describe, extend, and create patterns using symbols, shapes, or designs (e.g., repeating and growing patterns made up of sets of shapes or designs, create patterns by combining different shapes and taking them apart).
2	1.2	Formulate and record generalizations about number patterns in a variety of situations (e.g., addition and subtraction patterns, even and odd numbers, build a table showing the cost of one pencil at 10 cents, 2 pencils at 20 cents).
2	2.1.d	Demonstrate (using concrete objects, pictures, and numerical symbols) fractional parts including halves, thirds, fourths and common percents (25%, 50%, 75%, and 100%).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	1.1	Describe (orally or in written form), create, extend and predict patterns in a variety of situations (e.g., 3, 6, 9, 12... , use a function machine to generate input and output values for a table, show multiplication patterns on a hundreds chart, determine a rule and generate additional pairs with the same relationship).
3	2.1.b.ii	Create and compare physical and pictorial models of equivalent and nonequivalent fractions including halves, thirds, fourths, eighths, tenths, twelfths, and common percents (25%, 50%, 75%, 100%) (e.g., fraction circles, pictures, egg cartons, fraction strips, number lines).
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
3	5.1.b	Read graphs and charts, identify the main idea, draw conclusions, and make predictions based on the data (e.g., predict how many children will bring their lunch based on a menu).
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.

4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	2.1.b.ii	Use 0, 1/2, and 1 or 0, 0.5, and 1 as benchmarks and place additional fractions, decimals, and percents on a number line (e.g., 1/3, 3/4, 0.7, 0.4, 62%, 12%).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).
5	2.1.c	Identify and compare integers using real world situations. (e.g., owing money, temperature, or measuring elevations above and below sea level).
5	5.1.a	Compare and translate displays of data and justify the selection of the type of table of graph (e.g., charts, tables, bar graphs, pictographs, line graphs, circle graphs, Venn diagrams).

Traveling to School ACTIVITY

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.2	Formulate problems from everyday and mathematical situations (e.g., how many forks are needed?, how many students are absent?, how can we share/divide these cookies?, how many different ways can we find to compare these fractions?).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.4	Verify and interpret results with respect to the original problem (e.g., students explain verbally why an answer makes sense, explain in a written format why an answer makes sense, verify the validity of each step taken to obtain a final result).
1 - 5	2.1	Express mathematical ideas coherently and clearly to peers, teachers, and others (e.g., with verbal ideas, models or manipulatives, pictures, or symbols).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.1	Relate various concrete and pictorial models of concepts and procedures to one another (e.g., use two colors of cubes to represent addition facts for the number 5, relate patterns on a hundreds chart to multiples, use base-10 blocks to represent decimals).
1 - 5	4.3	Recognize relationships among different topics within mathematics (e.g., the length of an object can be represented by a number, multiplication facts can be modeled with geometric arrays, 1/2 can be written as .5 and 50%).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	1.1	Describe, extend, and create patterns using symbols, shapes, or designs (e.g., repeating and growing patterns made up of sets of shapes or designs, create patterns by combining different shapes and taking them apart).

2	1.2	Formulate and record generalizations about number patterns in a variety of situations (e.g., addition and subtraction patterns, even and odd numbers, build a table showing the cost of one pencil at 10 cents, 2 pencils at 20 cents).
2	2.1.d	Demonstrate (using concrete objects, pictures, and numerical symbols) fractional parts including halves, thirds, fourths and common percents (25%, 50%, 75%, and 100%).
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	2.1.b.ii	Create and compare physical and pictorial models of equivalent and nonequivalent fractions including halves, thirds, fourths, eighths, tenths, twelfths, and common percents (25%, 50%, 75%, 100%) (e.g., fraction circles, pictures, egg cartons, fraction strips, number lines).
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
3	5.1.b	Read graphs and charts, identify the main idea, draw conclusions, and make predictions based on the data (e.g., predict how many children will bring their lunch based on a menu).
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	2.1.b.ii	Use 0, 1/2, and 1 or 0, 0.5, and 1 as benchmarks and place additional fractions, decimals, and percents on a number line (e.g., 1/3, 3/4, 0.7, 0.4, 62%, 12%).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).
5	2.1.c	Identify and compare integers using real world situations. (e.g., owing money, temperature, or measuring elevations above and below sea level).
5	5.1.a	Compare and translate displays of data and justify the selection of the type of table of graph (e.g., charts, tables, bar graphs, pictographs, line graphs, circle graphs, Venn diagrams).
5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).

Weekly Reading Graph ACTIVITY

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.2	Formulate problems from everyday and mathematical situations (e.g., how many forks are needed?, how many students are absent?, how can we share/divide these cookies?, how many different ways can we find to compare these fractions?).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.4	Verify and interpret results with respect to the original problem (e.g., students explain verbally why an answer makes sense, explain in a written format why an answer makes sense, verify the validity of each step taken to obtain a final result).
1 - 5	2.1	Express mathematical ideas coherently and clearly to peers, teachers, and others (e.g., with verbal ideas, models or manipulatives, pictures, or symbols).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).

1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.1	Relate various concrete and pictorial models of concepts and procedures to one another (e.g., use two colors of cubes to represent addition facts for the number 5, relate patterns on a hundreds chart to multiples, use base-10 blocks to represent decimals).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
2	1.1	Describe, extend, and create patterns using symbols, shapes, or designs (e.g., repeating and growing patterns made up of sets of shapes or designs, create patterns by combining different shapes and taking them apart).
2	1.2	Formulate and record generalizations about number patterns in a variety of situations (e.g., addition and subtraction patterns, even and odd numbers, build a table showing the cost of one pencil at 10 cents, 2 pencils at 20 cents).
2	4.2.b	Solve problems involving number of days in a week, month, or year and problems involving weeks in a month and year.
2	5.1.a	Collect, sort, organize, and display data in charts, bar graphs, and tables (e.g., collect data on teeth lost and display results in a chart).
2	5.1.b	Summarize and interpret data in charts, bar graphs, and tables.
3	3.3	Make and use coordinate systems to specify locations and shapes on a grid with ordered pairs and to describe paths from one point to another point on a grid.
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
3	5.1.b	Read graphs and charts, identify the main idea, draw conclusions, and make predictions based on the data (e.g., predict how many children will bring their lunch based on a menu).
3	5.1.c	Construct bar graphs, frequency tables, line graphs (plots), and pictographs with labels and a title from a set of data.
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	3.1	Identify, draw, and construct models of intersecting, parallel, and perpendicular lines.
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).
5	2.1.c	Identify and compare integers using real world situations. (e.g., owing money, temperature, or measuring elevations above and below sea level).
5	5.1.a	Compare and translate displays of data and justify the selection of the type of table of graph (e.g., charts, tables, bar graphs, pictographs, line graphs, circle graphs, Venn diagrams).
5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).

UNIT 18: Formulas in Spreadsheets

Adding and Subtracting LESSON

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.2	Formulate problems from everyday and mathematical situations (e.g., how many forks are needed?, how many students are absent?, how can we share/divide these cookies?, how many different ways can we find to compare these fractions?).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	1.2	Find variables in simple arithmetic problems by solving open sentences (equations) and other problems involving addition, subtraction, multiplication, and division with whole numbers.
4	3.3	Identify, draw, and construct models of regular and irregular polygons including triangles, quadrilaterals, pentagons, hexagons, heptagons, and octagons to solve problems.
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).
5	1.3	Recognize and apply the commutative, associative, and distributive properties to solve problems (e.g., 3 x (2 + 4) = (3 x 2) + (3 x 4)).
5	2.1.c	Identify and compare integers using real world situations. (e.g., owing money, temperature, or measuring elevations above and below sea level).
5	3.1	Compare and contrast the basic characteristics of circle and polygons (triangles, quadrilaterals, pentagons, hexagons, heptagons, octagons).
5	4.1.b	Develop and use the formula for perimeter and area of a square and rectangle to solve application problems.
5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).

Bake Sale Spreadsheet ACTIVITY

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).

1 - 5	1.2	Formulate problems from everyday and mathematical situations (e.g., how many forks are needed?, how many students are absent?, how can we share/divide these cookies?, how many different ways can we find to compare these fractions?).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	1.2	Find variables in simple arithmetic problems by solving open sentences (equations) and other problems involving addition, subtraction, multiplication, and division with whole numbers.
4	1.3	Recognize and apply the associative property of multiplication (e.g., $6 \cdot (2 \cdot 3) = (6 \cdot 2) \cdot 3$).
4	2.1.a.ii	Model, read, write and rename decimal numbers to the hundredths (e.g., money, numerals to words).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).
5	1.3	Recognize and apply the commutative, associative, and distributive properties to solve problems (e.g., 3 x (2 + 4) = (3 x 2) + (3 x 4)).
5	2.1.c	Identify and compare integers using real world situations. (e.g., owing money, temperature, or measuring elevations above and below sea level).
5	4.2	Solve a variety of problems involving money.
5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).

Camping Supplies Spreadsheet ACTIVITY

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.2	Formulate problems from everyday and mathematical situations (e.g., how many forks are needed?, how many students are absent?, how can we share/divide these cookies?, how many different ways can we find to compare these fractions?).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).

1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	1.2	Find variables in simple arithmetic problems by solving open sentences (equations) and other problems involving addition, subtraction, multiplication, and division with whole numbers.
4	1.3	Recognize and apply the associative property of multiplication (e.g., $6 \cdot (2 \cdot 3) = (6 \cdot 2) \cdot 3$).
4	2.1.a.ii	Model, read, write and rename decimal numbers to the hundredths (e.g., money, numerals to words).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).
5	1.3	Recognize and apply the commutative, associative, and distributive properties to solve problems (e.g., 3 x (2 + 4) = (3 x 2) + (3 x 4)).
5	2.1.c	Identify and compare integers using real world situations. (e.g., owing money, temperature, or measuring elevations above and below sea level).
5	4.2	Solve a variety of problems involving money.
5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).

Copying Formulas and Functions LESSON

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.2	Formulate problems from everyday and mathematical situations (e.g., how many forks are needed?, how many students are absent?, how can we share/divide these cookies?, how many different ways can we find to compare these fractions?).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).

4	1.2	Find variables in simple arithmetic problems by solving open sentences (equations) and other problems involving addition, subtraction, multiplication, and division with whole numbers.
4	2.1.a.ii	Model, read, write and rename decimal numbers to the hundredths (e.g., money, numerals to words).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).
4	5.3	Determine the median (middle), and the mode (most often) of a set of data.
5	2.1.c	Identify and compare integers using real world situations. (e.g., owing money, temperature, or measuring elevations above and below sea level).
5	4.2	Solve a variety of problems involving money.
5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).
5	5.3	Determine the range (spread), mode (most often), and median (middle) of a set of data.

Formulas in Spreadsheets Unit Quiz QUIZ

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.2	Formulate problems from everyday and mathematical situations (e.g., how many forks are needed?, how many students are absent?, how can we share/divide these cookies?, how many different ways can we find to compare these fractions?).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	1.2	Find variables in simple arithmetic problems by solving open sentences (equations) and other problems involving addition, subtraction, multiplication, and division with whole numbers.
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).
4	5.3	Determine the median (middle), and the mode (most often) of a set of data.
5	2.1.c	Identify and compare integers using real world situations. (e.g., owing money, temperature, or measuring elevations above and below sea level).

5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).
5	5.3	Determine the range (spread), mode (most often), and median (middle) of a set of data.

Grocery Store Spreadsheet ACTIVITY

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.2	Formulate problems from everyday and mathematical situations (e.g., how many forks are needed?, how many students are absent?, how can we share/divide these cookies?, how many different ways can we find to compare these fractions?).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	1.2	Find variables in simple arithmetic problems by solving open sentences (equations) and other problems involving addition, subtraction, multiplication, and division with whole numbers.
4	1.3	Recognize and apply the associative property of multiplication (e.g., $6 \cdot (2 \cdot 3) = (6 \cdot 2) \cdot 3$).
4	2.1.a.ii	Model, read, write and rename decimal numbers to the hundredths (e.g., money, numerals to words).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).
5	1.3	Recognize and apply the commutative, associative, and distributive properties to solve problems (e.g., 3 x (2 + 4) = (3 x 2) + (3 x 4)).
5	2.1.c	Identify and compare integers using real world situations. (e.g., owing money, temperature, or measuring elevations above and below sea level).
5	4.2	Solve a variety of problems involving money.
5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).

Multiplying and Dividing LESSON

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.2	Formulate problems from everyday and mathematical situations (e.g., how many forks are needed?, how many students are absent?, how can we share/divide these cookies?, how many different ways can we find to compare these fractions?).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	1.2	Find variables in simple arithmetic problems by solving open sentences (equations) and other problems involving addition, subtraction, multiplication, and division with whole numbers.
4	1.3	Recognize and apply the associative property of multiplication (e.g., $6 \cdot (2 \cdot 3) = (6 \cdot 2) \cdot 3$).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).
5	1.3	Recognize and apply the commutative, associative, and distributive properties to solve problems (e.g., 3 x (2 + 4) = (3 x 2) + (3 x 4)).
5	2.1.c	Identify and compare integers using real world situations. (e.g., owing money, temperature, or measuring elevations above and below sea level).
5	4.1.b	Develop and use the formula for perimeter and area of a square and rectangle to solve application problems.
5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).

Walk-a-thon Spreadsheet ACTIVITY

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.2	Formulate problems from everyday and mathematical situations (e.g., how many forks are needed?, how many students are absent?, how can we share/divide these cookies?, how many different ways can we find to compare these fractions?).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).

1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
4	1.1	Discover, describe, extend, and create a wide variety of patterns using tables, graphs, rules, and verbal models (e.g., determine the rule from a table or "function machine", extend visual and number patterns).
4	1.2	Find variables in simple arithmetic problems by solving open sentences (equations) and other problems involving addition, subtraction, multiplication, and division with whole numbers.
4	1.3	Recognize and apply the associative property of multiplication (e.g., $6 \cdot (2 \cdot 3) = (6 \cdot 2) \cdot 3$).
4	2.1.a.ii	Model, read, write and rename decimal numbers to the hundredths (e.g., money, numerals to words).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).
5	1.3	Recognize and apply the commutative, associative, and distributive properties to solve problems (e.g., 3 x (2 + 4) = (3 x 2) + (3 x 4)).
5	2.1.c	Identify and compare integers using real world situations. (e.g., owing money, temperature, or measuring elevations above and below sea level).
5	4.2	Solve a variety of problems involving money.
5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).

UNIT 19: Database Creation, Queries, and Reports (New)

Database Creation, Queries, and Reports Unit Quiz QUIZ

Grade	Code	Standard
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
5	5.1.a	Compare and translate displays of data and justify the selection of the type of table of graph (e.g., charts, tables, bar graphs, pictographs, line graphs, circle graphs, Venn diagrams).

Databases: Database Creation LESSON

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.2	Formulate problems from everyday and mathematical situations (e.g., how many forks are needed?, how many students are absent?, how can we share/divide these cookies?, how many different ways can we find to compare these fractions?).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.4	Verify and interpret results with respect to the original problem (e.g., students explain verbally why an answer makes sense, explain in a written format why an answer makes sense, verify the validity of each step taken to obtain a final result).
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).
5	5.1.a	Compare and translate displays of data and justify the selection of the type of table of graph (e.g., charts, tables, bar graphs, pictographs, line graphs, circle graphs, Venn diagrams).
5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).

Databases: Database Creation Activity ACTIVITY

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.2	Formulate problems from everyday and mathematical situations (e.g., how many forks are needed?, how many students are absent?, how can we share/divide these cookies?, how many different ways can we find to compare these fractions?).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.4	Verify and interpret results with respect to the original problem (e.g., students explain verbally why an answer makes sense, explain in a written format why an answer makes sense, verify the validity of each step taken to obtain a final result).
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).

1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).
5	5.1.a	Compare and translate displays of data and justify the selection of the type of table of graph (e.g., charts, tables, bar graphs, pictographs, line graphs, circle graphs, Venn diagrams).
5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).

Databases: Queries and Reports LESSON

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.2	Formulate problems from everyday and mathematical situations (e.g., how many forks are needed?, how many students are absent?, how can we share/divide these cookies?, how many different ways can we find to compare these fractions?).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.4	Verify and interpret results with respect to the original problem (e.g., students explain verbally why an answer makes sense, explain in a written format why an answer makes sense, verify the validity of each step taken to obtain a final result).
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).
5	5.1.a	Compare and translate displays of data and justify the selection of the type of table of graph (e.g., charts, tables, bar graphs, pictographs, line graphs, circle graphs, Venn diagrams).

5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).

Databases: Queries and Reports Activity ACTIVITY

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.2	Formulate problems from everyday and mathematical situations (e.g., how many forks are needed?, how many students are absent?, how can we share/divide these cookies?, how many different ways can we find to compare these fractions?).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.4	Verify and interpret results with respect to the original problem (e.g., students explain verbally why an answer makes sense, explain in a written format why an answer makes sense, verify the validity of each step taken to obtain a final result).
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.4	Use mathematical strategies to solve problems that relate to other curriculum areas and the real world (e.g., use a timeline to sequence events, use symmetry in art work, explore fractions in quilt designs and to describe pizza slices).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
4	5.1.b	Collect, organize and record data in tables and graphs (e.g., line graphs (plots), bar graphs, pictographs).
5	5.1.a	Compare and translate displays of data and justify the selection of the type of table of graph (e.g., charts, tables, bar graphs, pictographs, line graphs, circle graphs, Venn diagrams).
5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).

UNIT 20: Database Searches

AND Searches LESSON

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).

1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).

Database Searches Unit Quiz QUIZ

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).

Library Database ACTIVITY

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).

Multi-item Sorting LESSON

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).

OR Searches LESSON

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
3	5.1.a	Pose questions, collect, record, and interpret data to help answer questions (e.g., which was the most popular booth at our carnival?).
4	5.1.a	Read and interpret data displays such as tallies, tables, charts, and graphs and use the observations to pose and answer questions (e.g., choose a table in social studies of population data and write problems).
5	5.1.b	Formulate questions, design investigations, consider samples, and collect, organize, and analyze data using observation, measurement, surveys, or experiments (e.g., how far can 5th graders throw a softball based on where it first hits the ground?).

UNIT 21: Creating a Database

Classroom Database ACTIVITY

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).

1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).

Creating a Database Unit Quiz QUIZ

Grade	Code	Standard
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).

Entering and Editing Data LESSON

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).

Fields LESSON

Grade	Code	Standard
1 - 5	1.1	Use problem-solving approaches (e.g., act out situations, represent problems with drawings and lists, use concrete, pictorial, graphical, oral, written, and/or algebraic models, understand a problem, devise a plan, carry out the plan, look back).
1 - 5	1.3	Develop, test, and apply strategies to solve a variety of routine and non-routine problems (e.g., look for patterns, make a table, make a problem simpler, process of elimination, trial and error).
1 - 5	1.5	Distinguish between necessary and irrelevant information in solving problems (e.g., play games and discuss "best" clues, write riddles with sufficient information, identify unnecessary information in written story problems).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).

UNIT 22: Computer Fundamentals

Creating File Structures ACTIVITY

Grade	Code	Standard
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.

Networking LESSON

Grade	Code	Standard
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.

Using Networks ACTIVITY

Grade	Code	Standard
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.

UNIT 23: Word Processing Software

Word Problem Document ACTIVITY

Grade	Code	Standard
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.
6 - 8	1.6	Use oral, written, concrete, pictorial, graphical, and/or algebraic methods to model mathematical situations.
6 - 8	2.1	Discuss, interpret, translate (from one to another) and evaluate mathematical ideas (e.g., oral, written, pictorial, concrete, graphical, algebraic).
6 - 8	2.2	Reflect on and justify reasoning in mathematical problem solving (e.g., convince, demonstrate, formulate).
6 - 8	2.3	Select and use appropriate terminology when discussing mathematical concepts and ideas.

UNIT 24: Spreadsheet Software

Basic Formatting LESSON

Grade	Code	Standard
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.
6 - 8	1.6	Use oral, written, concrete, pictorial, graphical, and/or algebraic methods to model mathematical situations.

6 - 8	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.
6 - 8	5.4	Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).

Basketball Budget Spreadsheet ACTIVITY

Grade	Code	Standard
6	5.1	Organize, construct displays, and interpret data to solve problems (e.g., data from student experiments, tables, diagrams, charts, graphs).
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.
6 - 8	1.6	Use oral, written, concrete, pictorial, graphical, and/or algebraic methods to model mathematical situations.
6 - 8	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.
6 - 8	5.4	Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.

Charts and Graphs LESSON

Grade	Code	Standard
6	5.1	Organize, construct displays, and interpret data to solve problems (e.g., data from student experiments, tables, diagrams, charts, graphs).
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.
6 - 8	1.6	Use oral, written, concrete, pictorial, graphical, and/or algebraic methods to model mathematical situations.
6 - 8	2.1	Discuss, interpret, translate (from one to another) and evaluate mathematical ideas (e.g., oral, written, pictorial, concrete, graphical, algebraic).
6 - 8	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.
6 - 8	5.1	Use a variety of representations to organize and record data (e.g., use concrete, pictorial, and symbolic representations).
6 - 8	5.2	Use representations to promote the communication of mathematical ideas (e.g., number lines, rectangular coordinate systems, scales to illustrate the balance of equations).
6 - 8	5.4	Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).
7	5.1	Compare, translate, and interpret between displays of data (e.g., multiple sets of data on the same graph, data from subsets of the same population, combinations of diagrams, tables, charts, and graphs).
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.

Earthquake Line Graph ACTIVITY

Grade	Code	Standard
6	5.1	Organize, construct displays, and interpret data to solve problems (e.g., data from student experiments, tables, diagrams, charts, graphs).
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.
6 - 8	1.6	Use oral, written, concrete, pictorial, graphical, and/or algebraic methods to model mathematical situations.
6 - 8	2.1	Discuss, interpret, translate (from one to another) and evaluate mathematical ideas (e.g., oral, written, pictorial, concrete, graphical, algebraic).
6 - 8	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.
6 - 8	5.1	Use a variety of representations to organize and record data (e.g., use concrete, pictorial, and symbolic representations).
6 - 8	5.2	Use representations to promote the communication of mathematical ideas (e.g., number lines, rectangular coordinate systems, scales to illustrate the balance of equations).
6 - 8	5.4	Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).
7	5.1	Compare, translate, and interpret between displays of data (e.g., multiple sets of data on the same graph, data from subsets of the same population, combinations of diagrams, tables, charts, and graphs).
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.

Endangered Mammals Bar Graph ACTIVITY

Grade	Code	Standard
6	5.1	Organize, construct displays, and interpret data to solve problems (e.g., data from student experiments, tables, diagrams, charts, graphs).
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.
6 - 8	1.6	Use oral, written, concrete, pictorial, graphical, and/or algebraic methods to model mathematical situations.
6 - 8	2.1	Discuss, interpret, translate (from one to another) and evaluate mathematical ideas (e.g., oral, written, pictorial, concrete, graphical, algebraic).
6 - 8	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.
6 - 8	5.1	Use a variety of representations to organize and record data (e.g., use concrete, pictorial, and symbolic representations).
6 - 8	5.2	Use representations to promote the communication of mathematical ideas (e.g., number lines, rectangular coordinate systems, scales to illustrate the balance of equations).
6 - 8	5.4	Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).
7	5.1	Compare, translate, and interpret between displays of data (e.g., multiple sets of data on the same graph, data from subsets of the same population, combinations of diagrams, tables, charts, and graphs).
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.

Formulas LESSON

Grade	Code	Standard
6	2.2.e	Build and recognize models of multiples to develop the concept of exponents and simplify numerical expressions with exponents and parentheses using order of operations.
6	5.1	Organize, construct displays, and interpret data to solve problems (e.g., data from student experiments, tables, diagrams, charts, graphs).
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.
6 - 8	1.6	Use oral, written, concrete, pictorial, graphical, and/or algebraic methods to model mathematical situations.
6 - 8	2.1	Discuss, interpret, translate (from one to another) and evaluate mathematical ideas (e.g., oral, written, pictorial, concrete, graphical, algebraic).
6 - 8	2.3	Select and use appropriate terminology when discussing mathematical concepts and ideas.
6 - 8	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.
6 - 8	5.4	Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).
7	2.2.c	Simplify numerical expressions with integers, exponents, and parentheses using order of operations.
8	1.1.d	Apply appropriate formulas to solve problems (e.g., d=rt, I=prt).
8	2.1	Represent and interpret large numbers and numbers less than one in exponential and scientific notation.
8	2.2.a	Use the rules of exponents, including integer exponents, to solve problems (e.g., $7^2 \cdot 7^3 = 7$ to the 5th power, 3 to the -10th $\cdot$ 3 to the 8th power = 3^{-2}).
8	2.2.b	Solve problems using scientific notation.
8	2.2.c	Simplify numerical expressions with rational numbers, exponents, and parentheses using order of operations.

Functions, Copy, and Paste LESSON

Grade	Code	Standard
6	1.1	Generalize and extend patterns and functions using tables, graphs, and number properties (e.g., number sequences, prime and composite numbers, recursive patters like the Fibonacci numbers).
6	5.1	Organize, construct displays, and interpret data to solve problems (e.g., data from student experiments, tables, diagrams, charts, graphs).
6	5.3	Find the measures of central tendency (mean, median, mode, and range) of a set of data (with and without outliers) and understand why a specific measure provides the most useful information in a given context.
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.
6 - 8	1.6	Use oral, written, concrete, pictorial, graphical, and/or algebraic methods to model mathematical situations.
6 - 8	2.1	Discuss, interpret, translate (from one to another) and evaluate mathematical ideas (e.g., oral, written, pictorial, concrete, graphical, algebraic).
6 - 8	2.3	Select and use appropriate terminology when discussing mathematical concepts and ideas.

6 - 8	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.
6 - 8	5.4	Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).
7	2.2.c	Simplify numerical expressions with integers, exponents, and parentheses using order of operations.
7	5.3	Compute the mean, median, mode, and range for data sets and understand how additional data or outliers in a set may affect the measures of central tendency.
8	1.1.d	Apply appropriate formulas to solve problems (e.g., d=rt, I=prt).
8	2.2.c	Simplify numerical expressions with rational numbers, exponents, and parentheses using order of operations.
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.
8	5.3	Find the measures of central tendency (mean, median, mode, and range) of a set of data and understand why a specific measure provides the most useful information in a given context.

Layout LESSON

Grade	Code	Standard
6	5.1	Organize, construct displays, and interpret data to solve problems (e.g., data from student experiments, tables, diagrams, charts, graphs).
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.
6 - 8	1.6	Use oral, written, concrete, pictorial, graphical, and/or algebraic methods to model mathematical situations.
6 - 8	2.1	Discuss, interpret, translate (from one to another) and evaluate mathematical ideas (e.g., oral, written, pictorial, concrete, graphical, algebraic).
6 - 8	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.
6 - 8	5.1	Use a variety of representations to organize and record data (e.g., use concrete, pictorial, and symbolic representations).
6 - 8	5.2	Use representations to promote the communication of mathematical ideas (e.g., number lines, rectangular coordinate systems, scales to illustrate the balance of equations).
6 - 8	5.4	Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).
7	5.1	Compare, translate, and interpret between displays of data (e.g., multiple sets of data on the same graph, data from subsets of the same population, combinations of diagrams, tables, charts, and graphs).
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.

Number Cube Probability ACTIVITY

Grade	Code	Standard
6	2.2.e	Build and recognize models of multiples to develop the concept of exponents and simplify numerical expressions with exponents and parentheses using order of operations.
6	5.1	Organize, construct displays, and interpret data to solve problems (e.g., data from student experiments, tables, diagrams, charts, graphs).
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.

6 - 8	1.4	Evaluate results to determine their reasonableness.
6 - 8	1.6	Use oral, written, concrete, pictorial, graphical, and/or algebraic methods to model mathematical situations.
6 - 8	2.1	Discuss, interpret, translate (from one to another) and evaluate mathematical ideas (e.g., oral, written, pictorial, concrete, graphical, algebraic).
6 - 8	2.3	Select and use appropriate terminology when discussing mathematical concepts and ideas.
6 - 8	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.
6 - 8	5.1	Use a variety of representations to organize and record data (e.g., use concrete, pictorial, and symbolic representations).
6 - 8	5.2	Use representations to promote the communication of mathematical ideas (e.g., number lines, rectangular coordinate systems, scales to illustrate the balance of equations).
6 - 8	5.4	Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).
7	5.1	Compare, translate, and interpret between displays of data (e.g., multiple sets of data on the same graph, data from subsets of the same population, combinations of diagrams, tables, charts, and graphs).
7	5.2	Determine the probability of an event involving "or", "and", or "not" (e.g., on a spinner with one blue, two red and two yellow sections, what is the probability of getting a red or a yellow?).
8	1.1.d	Apply appropriate formulas to solve problems (e.g., d=rt, I=prt).
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.

Orchestra Inventory ACTIVITY

Grade	Code	Standard
6	5.1	Organize, construct displays, and interpret data to solve problems (e.g., data from student experiments, tables, diagrams, charts, graphs).
6	5.3	Find the measures of central tendency (mean, median, mode, and range) of a set of data (with and without outliers) and understand why a specific measure provides the most useful information in a given context.
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.
6 - 8	1.6	Use oral, written, concrete, pictorial, graphical, and/or algebraic methods to model mathematical situations.
6 - 8	2.3	Select and use appropriate terminology when discussing mathematical concepts and ideas.
6 - 8	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.
6 - 8	5.4	Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).
8	1.1.d	Apply appropriate formulas to solve problems (e.g., d=rt, I=prt).
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.
8	5.3	Find the measures of central tendency (mean, median, mode, and range) of a set of data and understand why a specific measure provides the most useful information in a given context.

Paintings Spreadsheet ACTIVITY

Grade	Code	Standard
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.

6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.

Parts and Navigation LESSON

Grade	Code	Standard
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.
6 - 8	1.6	Use oral, written, concrete, pictorial, graphical, and/or algebraic methods to model mathematical situations.
6 - 8	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.
6 - 8	5.4	Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.

Planning a Project ACTIVITY

Grade	Code	Standard
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.

Project Planning Tool Part I ACTIVITY

Grade	Code	Standard
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.

Project Planning Tool Part II ACTIVITY

Grade	Code	Standard
6	5.1	Organize, construct displays, and interpret data to solve problems (e.g., data from student experiments, tables, diagrams, charts, graphs).
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.

6 - 8	2.1	Discuss, interpret, translate (from one to another) and evaluate mathematical ideas (e.g., oral, written, pictorial, concrete, graphical, algebraic).
6 - 8	5.1	Use a variety of representations to organize and record data (e.g., use concrete, pictorial, and symbolic representations).
7	5.1	Compare, translate, and interpret between displays of data (e.g., multiple sets of data on the same graph, data from subsets of the same population, combinations of diagrams, tables, charts, and graphs).
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.

Project Planning Tool Part III ACTIVITY

Grade	Code	Standard
6	5.1	Organize, construct displays, and interpret data to solve problems (e.g., data from student experiments, tables, diagrams, charts, graphs).
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.
6 - 8	2.1	Discuss, interpret, translate (from one to another) and evaluate mathematical ideas (e.g., oral, written, pictorial, concrete, graphical, algebraic).
6 - 8	5.1	Use a variety of representations to organize and record data (e.g., use concrete, pictorial, and symbolic representations).
7	5.1	Compare, translate, and interpret between displays of data (e.g., multiple sets of data on the same graph, data from subsets of the same population, combinations of diagrams, tables, charts, and graphs).
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.

Research Paper Progress Part I ACTIVITY

Grade	Code	Standard
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.

Research Paper Progress Part II ACTIVITY

Grade	Code	Standard
6	5.1	Organize, construct displays, and interpret data to solve problems (e.g., data from student experiments, tables, diagrams, charts, graphs).
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.
6 - 8	2.1	Discuss, interpret, translate (from one to another) and evaluate mathematical ideas (e.g., oral, written, pictorial, concrete, graphical, algebraic).

6 - 8	5.1	Use a variety of representations to organize and record data (e.g., use concrete, pictorial, and symbolic representations).
7	5.1	Compare, translate, and interpret between displays of data (e.g., multiple sets of data on the same graph, data from subsets of the same population, combinations of diagrams, tables, charts, and graphs).
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.

Research Paper Progress Part III ACTIVITY

Grade	Code	Standard
6	5.1	Organize, construct displays, and interpret data to solve problems (e.g., data from student experiments, tables, diagrams, charts, graphs).
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.
6 - 8	2.1	Discuss, interpret, translate (from one to another) and evaluate mathematical ideas (e.g., oral, written, pictorial, concrete, graphical, algebraic).
6 - 8	5.1	Use a variety of representations to organize and record data (e.g., use concrete, pictorial, and symbolic representations).
7	5.1	Compare, translate, and interpret between displays of data (e.g., multiple sets of data on the same graph, data from subsets of the same population, combinations of diagrams, tables, charts, and graphs).
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.

School Supplies Spreadsheet ACTIVITY

Grade	Code	Standard
6	2.1	Convert compare, and order decimals, fractions, and percents using a variety of methods.
6	2.2.b	Multiply and divide decimals with one- or two-digit multipliers or divisors to solve problems.
6	2.2.e	Build and recognize models of multiples to develop the concept of exponents and simplify numerical expressions with exponents and parentheses using order of operations.
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.
6 - 8	1.6	Use oral, written, concrete, pictorial, graphical, and/or algebraic methods to model mathematical situations.
6 - 8	2.1	Discuss, interpret, translate (from one to another) and evaluate mathematical ideas (e.g., oral, written, pictorial, concrete, graphical, algebraic).
6 - 8	2.3	Select and use appropriate terminology when discussing mathematical concepts and ideas.
6 - 8	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.
6 - 8	5.4	Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).
7	2.2.b	Solve percent application problems (e.g., discounts, tax, finding the missing value of percent/part/whole).
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.

Spreadsheet Layout ACTIVITY

Grade	Code	Standard
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.

Spreadsheet Software Unit Quiz QUIZ

Grade	Code	Standard
6	5.1	Organize, construct displays, and interpret data to solve problems (e.g., data from student experiments, tables, diagrams, charts, graphs).
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.
6 - 8	2.1	Discuss, interpret, translate (from one to another) and evaluate mathematical ideas (e.g., oral, written, pictorial, concrete, graphical, algebraic).
6 - 8	5.1	Use a variety of representations to organize and record data (e.g., use concrete, pictorial, and symbolic representations).
7	2.2.c	Simplify numerical expressions with integers, exponents, and parentheses using order of operations.
7	5.1	Compare, translate, and interpret between displays of data (e.g., multiple sets of data on the same graph, data from subsets of the same population, combinations of diagrams, tables, charts, and graphs).
8	1.1.d	Apply appropriate formulas to solve problems (e.g., d=rt, I=prt).
8	2.2.c	Simplify numerical expressions with rational numbers, exponents, and parentheses using order of operations.
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.

Weather Spreadsheet ACTIVITY

Grade	Code	Standard
6	5.3	Find the measures of central tendency (mean, median, mode, and range) of a set of data (with and without outliers) and understand why a specific measure provides the most useful information in a given context.
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.
6 - 8	1.6	Use oral, written, concrete, pictorial, graphical, and/or algebraic methods to model mathematical situations.
6 - 8	2.1	Discuss, interpret, translate (from one to another) and evaluate mathematical ideas (e.g., oral, written, pictorial, concrete, graphical, algebraic).
6 - 8	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.
6 - 8	5.1	Use a variety of representations to organize and record data (e.g., use concrete, pictorial, and symbolic representations).

6 - 8	5.2	Use representations to promote the communication of mathematical ideas (e.g., number lines, rectangular coordinate systems, scales to illustrate the balance of equations).
6 - 8	5.4	Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).
7	5.1	Compare, translate, and interpret between displays of data (e.g., multiple sets of data on the same graph, data from subsets of the same population, combinations of diagrams, tables, charts, and graphs).
7	5.3	Compute the mean, median, mode, and range for data sets and understand how additional data or outliers in a set may affect the measures of central tendency.
8	1.1.d	Apply appropriate formulas to solve problems (e.g., d=rt, I=prt).
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.
8	5.3	Find the measures of central tendency (mean, median, mode, and range) of a set of data and understand why a specific measure provides the most useful information in a given context.

UNIT 26: Web Browsing

Browsing Basics LESSON

Grade	Code	Standard
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.

History of Western America ACTIVITY

Grade	Code	Standard
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.

Searching for Scientists ACTIVITY

Grade	Code	Standard
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.

URLs LESSON

Grade	Code	Standard
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.

6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.

Validating Information ACTIVITY

Grade	Code	Standard
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.

Validity and Sourcing LESSON

Grade	Code	Standard
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.

Web Browsing Unit Quiz QUIZ

Grade	Code	Standard
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.

Web Searches LESSON

Grade	Code	Standard
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.

UNIT 27: Multimedia and Databases

Class Survey Report ACTIVITY

Grade	Code	Standard
6	5.1	Organize, construct displays, and interpret data to solve problems (e.g., data from student experiments, tables, diagrams, charts, graphs).
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	1.4	Evaluate results to determine their reasonableness.
6 - 8	1.6	Use oral, written, concrete, pictorial, graphical, and/or algebraic methods to model mathematical situations.
6 - 8	2.1	Discuss, interpret, translate (from one to another) and evaluate mathematical ideas (e.g., oral, written, pictorial, concrete, graphical, algebraic).
6 - 8	3.1	Identify and extend patterns and use experiences and observations to make suppositions.
6 - 8	3.3	Develop and evaluate mathematical arguments (e.g., agree or disagree with the reasoning of other classmates and explain why).
6 - 8	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.
6 - 8	4.2	Connect one area or idea of mathematics to another (e.g., relates equivalent number representations to each other, relate experiences with geometric shapes to understanding ratio and proportion).
6 - 8	5.1	Use a variety of representations to organize and record data (e.g., use concrete, pictorial, and symbolic representations).
6 - 8	5.2	Use representations to promote the communication of mathematical ideas (e.g., number lines, rectangular coordinate systems, scales to illustrate the balance of equations).
6 - 8	5.4	Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).
7	5.1	Compare, translate, and interpret between displays of data (e.g., multiple sets of data on the same graph, data from subsets of the same population, combinations of diagrams, tables, charts, and graphs).
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.
8	5.2	Determine how samples are chosen (random, limited, biased) to draw and support conclusions about generalizing a sample to a population (e.g., is the average height of a men's college basketball team a good representative sample for height predictions?).

Completing a Task ACTIVITY

Grade	Code	Standard
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.

Databases LESSON

Grade	Code	Standard
6	5.1	Organize, construct displays, and interpret data to solve problems (e.g., data from student experiments, tables, diagrams, charts, graphs).
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.

6 - 8	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.
6 - 8	5.4	Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).
7	5.1	Compare, translate, and interpret between displays of data (e.g., multiple sets of data on the same graph, data from subsets of the same population, combinations of diagrams, tables, charts, and graphs).
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.

Event Letter Mail Merge ACTIVITY

Grade	Code	Standard
6	5.1	Organize, construct displays, and interpret data to solve problems (e.g., data from student experiments, tables, diagrams, charts, graphs).
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.
6 - 8	5.4	Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).
7	5.1	Compare, translate, and interpret between displays of data (e.g., multiple sets of data on the same graph, data from subsets of the same population, combinations of diagrams, tables, charts, and graphs).
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.

Geometry Study Sheet ACTIVITY

Grade	Code	Standard
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	2.1	Discuss, interpret, translate (from one to another) and evaluate mathematical ideas (e.g., oral, written, pictorial, concrete, graphical, algebraic).
6 - 8	2.3	Select and use appropriate terminology when discussing mathematical concepts and ideas.
6 - 8	5.1	Use a variety of representations to organize and record data (e.g., use concrete, pictorial, and symbolic representations).
6 - 8	5.2	Use representations to promote the communication of mathematical ideas (e.g., number lines, rectangular coordinate systems, scales to illustrate the balance of equations).
6 - 8	5.4	Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).
7	3.1	Classify regular and irregular geometric figures including triangles and quadrilaterals according to their sides and angles.

Graphics LESSON

Grade	Code	Standard
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	5.1	Use a variety of representations to organize and record data (e.g., use concrete, pictorial, and symbolic representations).
7	3.1	Classify regular and irregular geometric figures including triangles and quadrilaterals according to their sides and angles.
8	3.1	Construct models, sketch (from different perspectives), and classify solid figures such as rectangular solids, prisms, cones, cylinders, pyramids, and combined forms.

History Database ACTIVITY

Grade	Code	Standard
6	5.1	Organize, construct displays, and interpret data to solve problems (e.g., data from student experiments, tables, diagrams, charts, graphs).
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.
6 - 8	5.4	Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).
7	5.1	Compare, translate, and interpret between displays of data (e.g., multiple sets of data on the same graph, data from subsets of the same population, combinations of diagrams, tables, charts, and graphs).
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.

Image Quality and File Size ACTIVITY

Grade	Code	Standard
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.

Movie Database ACTIVITY

Grade	Code	Standard
6	5.1	Organize, construct displays, and interpret data to solve problems (e.g., data from student experiments, tables, diagrams, charts, graphs).
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.
6 - 8	5.4	Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).
7	5.1	Compare, translate, and interpret between displays of data (e.g., multiple sets of data on the same graph, data from subsets of the same population, combinations of diagrams, tables, charts, and graphs).
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.

Multimedia and Databases Unit Quiz QUIZ

Grade	Code	Standard
6	5.1	Organize, construct displays, and interpret data to solve problems (e.g., data from student experiments, tables, diagrams, charts, graphs).
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.

6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.

Rock Database ACTIVITY

Grade	Code	Standard
6	5.1	Organize, construct displays, and interpret data to solve problems (e.g., data from student experiments, tables, diagrams, charts, graphs).
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.
6 - 8	5.4	Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).
7	5.1	Compare, translate, and interpret between displays of data (e.g., multiple sets of data on the same graph, data from subsets of the same population, combinations of diagrams, tables, charts, and graphs).
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.

Science Database ACTIVITY

Grade	Code	Standard
6	5.1	Organize, construct displays, and interpret data to solve problems (e.g., data from student experiments, tables, diagrams, charts, graphs).
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.3	Formulate problems from situations within and outside of mathematics and generalize solutions and strategies to new problem situations.
6 - 8	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.
6 - 8	5.4	Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).
7	5.1	Compare, translate, and interpret between displays of data (e.g., multiple sets of data on the same graph, data from subsets of the same population, combinations of diagrams, tables, charts, and graphs).
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.

Vacation Letter Mail Merge ACTIVITY

Grade	Code	Standard
6	5.1	Organize, construct displays, and interpret data to solve problems (e.g., data from student experiments, tables, diagrams, charts, graphs).
6 - 8	1.1	Develop and test strategies to solve practical, everyday problems which may have single or multiple answers.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	4.1	Apply mathematical strategies to solve problems that arise from other disciplines and the real world.
6 - 8	5.4	Use a variety of representations to model and solve physical, social, and mathematical problems (e.g., geometric objects, pictures, charts, tables, graphs).

7	5.1	Compare, translate, and interpret between displays of data (e.g., multiple sets of data on the same graph, data from subsets of the same population, combinations of diagrams, tables, charts, and graphs).
8	5.1	Select, analyze and apply data displays in appropriate formats to draw conclusions and solve problems.

UNIT 29: Basic HTML

Math Web Page ACTIVITY

Grade	Code	Standard
1 - 5	2.1	Express mathematical ideas coherently and clearly to peers, teachers, and others (e.g., with verbal ideas, models or manipulatives, pictures, or symbols).
1 - 5	2.3	Relate manipulatives, pictures, diagrams, and symbols to mathematical ideas.
1 - 5	2.4	Represent, discuss, write, and read mathematical ideas and concepts. Start by relating everyday language to mathematical language and symbols and progress toward the use of appropriate terminology (e.g., "add more" becomes "plus", "repeated addition" becomes "multiplication", "fair share" becomes "divide", "balance the equation" becomes "solve the equation").
1 - 5	3.1	Explain mathematical situations using patterns and relationships (e.g., identify patterns in situations, represent patterns in a variety of ways, extend patterns to connect with more general cases).
1 - 5	3.2	Demonstrate thinking processes using a variety of age-appropriate materials and reasoning processes (e.g., manipulatives, models, known facts, properties and relationships, inductive [specific to general], deductive [general to specific], spatial, proportional, logical reasoning ["and" "or" "not"] and recursive reasoning).
1 - 5	4.1	Relate various concrete and pictorial models of concepts and procedures to one another (e.g., use two colors of cubes to represent addition facts for the number 5, relate patterns on a hundreds chart to multiples, use base-10 blocks to represent decimals).
1 - 5	5.1	Create and use a variety of representations appropriately and with flexibility to organize, record, and communicate mathematical ideas (e.g., dramatizations, manipulatives, drawings, diagrams, tables, graphs, symbolic representations).
1 - 5	5.2	Use representations to model and interpret physical, social, and mathematical situations (e.g., counters, pictures, tally marks, number sentences, geometric models; translate between diagrams, tables, charts, graphs).
5	2.1.b	Represent with models the connection between fractions and decimals, compare and order fractions and decimals, and be able to convert from one representation to the other to solve problems. (e.g., use 10x10 grids, base 10 blocks).
5	2.2.a	Estimate, add, or subtract decimal numbers with same and different place values to solve problems (e.g., 3.72 + 1.4, $4.56 - $2.12).
5	2.2.b	Estimate add, or subtract fractions (including mixed numbers) to solve problems using a variety of methods (e.g., use fraction strips, use area models, find a common denominator).
6	2.1	Convert compare, and order decimals, fractions, and percents using a variety of methods.
6 - 8	1.2	Use technology to generate and analyze data to solve problems.
6 - 8	1.6	Use oral, written, concrete, pictorial, graphical, and/or algebraic methods to model mathematical situations.
6 - 8	2.1	Discuss, interpret, translate (from one to another) and evaluate mathematical ideas (e.g., oral, written, pictorial, concrete, graphical, algebraic).
6 - 8	2.3	Select and use appropriate terminology when discussing mathematical concepts and ideas.
6 - 8	3.3	Develop and evaluate mathematical arguments (e.g., agree or disagree with the reasoning of other classmates and explain why).
6 - 8	4.2	Connect one area or idea of mathematics to another (e.g., relates equivalent number representations to each other, relate experiences with geometric shapes to understanding ratio and proportion).
6 - 8	5.2	Use representations to promote the communication of mathematical ideas (e.g., number lines, rectangular coordinate systems, scales to illustrate the balance of equations).