A Correlation of

Population Connection Materials

from

Multiplying People, Dividing Resources: *Global Math Activities*

to

Georgia Performance Standards

Organized by:

1. Grade
2. Subject
3. Standard
4. Population Connection Activity

Table of Contents

Grade Three

Mathematics

NUMBER AND OPERATIONS

M3N1. Students will further develop their understanding of whole numbers and ways of representing them.

a. Identify place values from tenths through ten thousands.
Everything Counts

M3N2. Students will further develop their skills of addition and subtraction and apply them in problem solving.

c. Solve problems requiring addition and subtraction.
Timber!

M3N3. Students will further develop their understanding of multiplication of whole numbers and develop the ability to apply it in problem solving.

g. Solve problems requiring multiplication.
Everything Counts

M3N4. Students will understand the meaning of division and develop the ability to apply it in problem solving.

f. Solve problems requiring division.
Everything Counts

ALGEBRA

M3A1. Students will use mathematical expressions to represent relationships between quantities and interpret given expressions.

a. Describe and extend numeric and geometric patterns.
The Stork and the Grim Reaper
Timber!

DATA ANALYSIS

M3D1. Students will create and interpret simple tables and graphs.

a. Solve problems by organizing and displaying data in bar graphs and tables.
Timber!

PROCESS SKILLS

M3P1. Students will solve problems that arise in mathematics and in other contexts.

a. Solve non-routine word problems using the strategy of logical reasoning as well as all strategies learned in previous grades.
The Stork and the Grim Reaper
Timber!

b. Solve single and multi-step routine word problems related to all appropriate third grade math standards.
Timber!

M3P2. Students will investigate, develop, and evaluate mathematical arguments.
The Stork and the Grim Reaper

M3P4. Students will understand how mathematical ideas interconnect and build on one another and apply mathematics in other content areas.
The Stork and the Grim Reaper
Timber!

M3P5. Students will create and use pictures, manipulatives, models, and symbols to organize, record, and communicate mathematical ideas.
The Stork and the Grim Reaper
Timber!

Science

HABITS OF MIND

S3CS4. Students will use ideas of system, model, change, and scale in exploring scientific and technological matters.

b. Use geometric figures, number sequences, graphs, diagrams, sketches, number lines, maps, and stories to represent corresponding features of objects, events, and processes in the real world.

The Stork and the Grim Reaper

S3CS5. Students will communicate scientific ideas and activities clearly.

c. Use numerical data in describing and comparing objects and events.

The Stork and the Grim Reaper

THE NATURE OF SCIENCE

S3CS8. Students will understand important features of the process of scientific inquiry. Students will apply the following to inquiry learning practices:

a. Scientific investigations may take many different forms, including observing what things are like or what is happening somewhere, collecting specimens for analysis, and doing experiments.

The Stork and the Grim Reaper

Social Studies

ECONOMIC UNDERSTANDINGS

SS3E1. The student will describe the four types of productive resources.

a. Natural (land).

Timber!

SS3E3. The student will give examples of interdependence and trade and will explain how voluntary exchange benefits both parties.

a. Describe the interdependence of consumers and producers of goods and services.

Timber!

Grade Four

English Language Arts

LISTENING, SPEAKING, AND VIEWING

ELA4LSV1. The student participates in student-to-teacher, student-to-student, and group verbal interactions. The student

b. Asks relevant questions.
Everything Counts
Timber!

c. Responds to questions with appropriate information.
Everything Counts
The Stork and the Grim Reaper
Timber!

j. Volunteers contributions and responds when directly solicited by teacher or discussion leader.
Everything Counts
The Stork and the Grim Reaper
Timber!

Mathematics

NUMBER AND OPERATIONS

M4N1. Students will further develop their understanding of how whole numbers are represented in the base-ten numeration system.

a. Identify place value names and places from hundredths through one million.
Everything Counts
Power of the Pyramids

M4N4. Students will further develop their understanding of division of whole numbers and divide in problem solving situations without calculators.

b. Solve problems involving division by a 2-digit number (including those that generate a remainder).
Everything Counts
Power of the Pyramids
On the Double

ALGEBRA

M4A1. Students will represent and interpret mathematical relationships in quantitative expressions.

a. Understand and apply patterns and rules to describe relationships and solve problems.
The Stork and the Grim Reaper
Timber!

b. Represent unknowns using symbols, such as __ and __.
Everything Counts

c. Write and evaluate mathematical expressions using symbols and different values.
Everything Counts

DATA ANALYSIS

M4D1. Students will gather, organize, and display data according to the situation and compare related features.

a. Represent data in bar, line and pictographs.
Everything Counts
Timber!

PROCESS SKILLS

M4P1. Using the appropriate technology, students will solve problems that arise in mathematics and in other contexts.

a. Solve non-routine word problems using the strategies of work backwards, use or make a table, and make an organized list as well as all strategies learned in previous grades.

Timber!

b. Solve single and multi-step routine word problems related to all appropriate fourth grade math standards.

Everything Counts
Timber!

c. Determine the operation(s) needed to solve a problem.

Everything Counts
The Stork and the Grim Reaper
Timber!

M4P2. Students will investigate, develop, and evaluate mathematical arguments.

Everything Counts
The Stork and the Grim Reaper
Timber!

M4P3. Students will use the language of mathematics to express ideas precisely.

Everything Counts
The Stork and the Grim Reaper
Timber!

M4P4. Students will understand how mathematical ideas interconnect and build on one another and apply mathematics in other content areas.

Everything Counts
The Stork and the Grim Reaper
Timber!

M4P5. Students will create and use pictures, manipulatives, models, and symbols to organize, record, and communicate mathematical ideas.

Everything Counts
The Stork and the Grim Reaper
Timber!

Science

HABITS OF MIND

S4CS1. Students will be aware of the importance of curiosity, honesty, openness, and skepticism in science and will exhibit these traits in their own efforts to understand how the world works.

c. Offer reasons for findings and consider reasons suggested by others.

Everything Counts
The Stork and the Grim Reaper
Timber!

S4CS2. Students will have the computation and estimation skills necessary for analyzing data and following scientific explanations.

a. Add, subtract, multiply, and divide whole numbers mentally, on paper, and with a calculator.

Everything Counts
Timber!

S4CS4. Students will use ideas of system, model, change, and scale in exploring scientific and technological matters.

b. Use geometric figures, number sequences, graphs, diagrams, sketches, number lines, maps, and stories to represent corresponding features of objects, events, and processes in the real world. Identify ways in which the representations do not match their original counterparts.

Everything Counts
The Stork and the Grim Reaper
Timber!

c. Identify patterns of change in things—such as steady, repetitive, or irregular change—using records, tables, or graphs of measurements where appropriate.

The Stork and the Grim Reaper
Timber!

S4CS5. Students will communicate scientific ideas and activities clearly.

c. Use numerical data in describing and comparing objects and events.

Everything Counts
The Stork and the Grim Reaper
Timber!

THE NATURE OF SCIENCE

S4CS8. Students will understand important features of the process of scientific inquiry. Students will apply the following to inquiry learning practices:

a. Scientific investigations may take many different forms, including observing what things are like or what is happening somewhere, collecting specimens for analysis, and doing experiments.

Everything Counts
The Stork and the Grim Reaper
Timber!

LIFE SCIENCE

S4L1. Students will describe the roles of organisms and the flow of energy within an ecosystem.

d. Predict effects on a population if some of the plants or animals in the community are scarce or if there are too many.

The Stork and the Grim Reaper

Grade Five

English Language Arts

LISTENING, SPEAKING, AND VIEWING

ELA5LSV1. The student participates in student-to-teacher, student-to-student, and group verbal interactions. The student

b. Asks relevant questions.
Everything Counts
Timber!

c. Responds to questions with appropriate information.
Everything Counts
The Stork and the Grim Reaper
Timber!

i. Responds appropriately to comments and questions.
The Stork and the Grim Reaper
Timber!

j. Volunteers contributions and responds when directly solicited by teacher or discussion leader.
Everything Counts
The Stork and the Grim Reaper
Timber!

Mathematics

NUMBER AND OPERATIONS

M5N2. Students will further develop their understanding of decimal fractions as part of the base-ten number system.

a. Understand place value.
Population Clock

M5N3. Students will further develop their understanding of the meaning of multiplication and division with decimal fractions and use them.

a. Model multiplication and division of decimal fractions by another decimal fraction.
On the Double
Power of the Pyramids

MEASUREMENT

M5M3. Students will measure capacity with appropriately chosen units and tools.

a. Use milliliters, liters, fluid ounces, cups, pints, quarts, and gallons to measure capacity.
The Stork and the Grim Reaper

ALGEBRA

M5A1. Students will represent and interpret the relationships between quantities algebraically.

a. Use variables, such as n or x, for unknown quantities in algebraic expressions.
Everything Counts
Transportation Tally

DATA ANALYSIS

M5D1. Students will analyze graphs.

a. Analyze data presented in a graph.
Every Picture Tells a Story
Everything Counts
Power of the Pyramids
Timber!

b. Compare and contrast multiple graphic representations (circle graphs, line graphs, bar graphs, etc.) for a single set of data and discuss the advantages/disadvantages of each.
Every Picture Tells a Story

M5D2. Students will collect, organize, and display data using the most appropriate graph.
Everything Counts
Power of the Pyramids
Timber!

PROCESS SKILLS

M5P1. Using the appropriate technology, students will solve problems that arise in mathematics and in other contexts.

a. Solve non-routine word problems using the strategy of make it simpler as well as all strategies learned in previous grades.
Everything Counts
Timber!

b. Solve single and multi-step routine word problems related to all appropriate fifth grade math standards.
Everything Counts
The Stork and the Grim Reaper
Timber!

c. Determine the operation(s) needed to solve a problem.
Everything Counts
Measuring a Million
Population Clock
The Stork and the Grim Reaper

M5P2. Students will investigate, develop, and evaluate mathematical arguments.
Everything Counts
Timber!
The Stork and the Grim Reaper

M5P3. Students will use the language of mathematics to express ideas precisely.
Everything Counts
The Stork and the Grim Reaper
Timber!

M5P4. Students will understand how mathematical ideas interconnect and build on one another and apply mathematics in other content areas.
Everything Counts
The Stork and the Grim Reaper
Timber!

M5P5. Students will create and use pictures, manipulatives, models, and symbols to organize, record, and communicate mathematical ideas.
Everything Counts
The Stork and the Grim Reaper
Timber!

Science

HABITS OF MIND

S5CS1. Students will be aware of the importance of curiosity, honesty, openness, and skepticism in science and will exhibit these traits in their own efforts to understand how the world works.

a. Keep records of investigations and observations and do not alter the records later.

Everything Counts
Timber!

c. Offer reasons for findings and consider reasons suggested by others.
Everything Counts
Timber!

S5CS2. Students will have the computation and estimation skills necessary for analyzing data and following scientific explanations.
a. Add, subtract, multiply, and divide whole numbers mentally, on paper, and with a calculator.
Everything Counts
The Stork and the Grim Reaper
Timber!

S5CS4. Students will use ideas of system, model, change, and scale in exploring scientific and technological matters.
c. Identify patterns of change in things—such as steady, repetitive, or irregular change—using records, tables, or graphs of measurements where appropriate.
The Stork and the Grim Reaper
Timber!

S5CS5. Students will communicate scientific ideas and activities clearly.
c. Use numerical data in describing and comparing objects and events.
Everything Counts
The Stork and the Grim Reaper
Timber!

THE NATURE OF SCIENCE
S5CS8. Students will understand important features of the process of scientific inquiry. Students will apply the following to inquiry learning practices:
a. Scientific investigations may take many different forms, including observing what things are like or what is happening somewhere, collecting specimens for analysis, and doing experiments.
Everything Counts
The Stork and the Grim Reaper
Timber!

b. Clear and active communication is an essential part of doing science. It enables scientists to inform others about their work, expose their ideas to criticism by other scientists, and stay informed about scientific discoveries around the world.
Timber!

Grade Six

English Language Arts

LISTENING, SPEAKING, AND VIEWING

ELA6LSV1. The student participates in student-to-teacher, student-to-student, and group verbal interactions. The student

b. Asks relevant questions.

Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
Power of the Pyramids
The Stork and the Grim Reaper
Timber!
Transportation Tally
What Do You Think?
A World of Difference
World Real Estate

c. Responds to questions with appropriate information.

Every Picture Tells a Story
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
On the Double
The Pop Ecology Files
Population Clock
Power of the Pyramids
The Stork and the Grim Reaper
Timber!
Transportation Tally
What Do You Think?
A World of Difference

f. Actively solicits another person's comments or opinions.

What Do You Think?

h. Responds appropriately to comments and questions.

Power of the Pyramids
What Do You Think?
A World of Difference
World Real Estate

i. Volunteers contributions and responds when directly solicited by teacher or discussion leader.

Power of the Pyramids
A World of Difference
World Real Estate

Mathematics

NUMBER AND OPERATIONS

M6N1. Students will understand the meaning of the four arithmetic operations as related to positive rational numbers and will use these concepts to solve problems.

g. Solve problems involving fractions, decimals, and percents.

Everything Counts
Global Warming Begins at Home

How Much Space Do We Need?
On the Double
Population Clock
Power of the Pyramids
Transportation Tally

MEASUREMENT

M6M2. Students will use appropriate units of measure for finding length, perimeter, area and volume and will express each quantity using the appropriate unit.

a. Measure length to the nearest half, fourth, eighth and sixteenth of an inch.
Measuring a Million

b. Select and use units of appropriate size and type to measure length, perimeter, area and volume.
Measuring a Million
The Stork and the Grim Reaper

c. Compare and contrast units of measure for perimeter, area, and volume.
How Much Space Do We Need?
Measuring a Million
The Stork and the Grim Reaper

M6M3. Students will determine the volume of fundamental solid figures (right rectangular prisms, cylinders, pyramids and cones).

c. Estimate the volumes of simple geometric solids.
Measuring a Million

M6M4. Students will determine the surface area of solid figures (right rectangular prisms and cylinders).

c. Estimate the surface areas of simple geometric solids.
Measuring a Million

ALGEBRA

M6A1. Students will understand the concept of ratio and use it to represent quantitative relationships.
The Stork and the Grim Reaper
World Real Estate

M6A2. Students will consider relationships between varying quantities.

a. Analyze and describe patterns arising from mathematical rules, tables, and graphs.
On the Double
The Pop Ecology Files
Population Clock
The Stork and the Grim Reaper
Timber!

b. Use manipulatives or draw pictures to solve problems involving proportional relationships.
All in the Family
Every Picture Tells a Story
The Stork and the Grim Reaper
Timber!

M6A3. Students will evaluate algebraic expressions, including those with exponents, and solve simple one-step equations using each of the four basic operations.
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
On the Double

Population Clock
Power of the Pyramids
Transportation Tally

DATA ANALYSIS AND PROBABILITY

M6D1. Students will pose questions, collect data, represent and analyze the data, and interpret results.

a. Formulate questions that can be answered by data. Students should collect data by using samples from a larger population (surveys), or by conducting experiments.

All in the Family
Everything Counts
Timber!
What Do You Think?

b. Using data, construct frequency distributions, frequency tables, and graphs.

All in the Family
Every Picture Tells a Story
Everything Counts
The Pop Ecology Files
Power of the Pyramids
Timber!
What Do You Think?
World Real Estate

c. Choose appropriate graphs to be consistent with the nature of the data (categorical or numerical). Graphs should include pictographs, histograms, bar graphs, line graphs, circle graphs, and line plots.

Every Picture Tells a Story

e. Relate the data analysis to the context of the questions posed.

All in the Family
Every Picture Tells a Story
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
On the Double
The Pop Ecology Files
People Count
Power of the Pyramids
Timber!
Transportation Tally
What Do You Think?
A World of Difference

M6D2. Students will use experimental and simple theoretical probability and understand the nature of sampling. They will also make predictions from investigations.

a. Predict the probability of a given event through trials/simulations (experimental probability), and represent the probability as a ratio.

Everything Counts
A World of Difference

b. Determine, and use a ratio to represent, the theoretical probability of a given event.

A World of Difference

PROCESS STANDARDS

M6P1. Students will solve problems (using appropriate technology).

a. Build new mathematical knowledge through problem solving.

All in the Family
Every Picture Tells a Story
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
On the Double
The Pop Ecology Files
Population Clock
Power of the Pyramids
The Stork and the Grim Reaper
Timber!
Transportation Tally
What Do You Think?
A World of Difference
World Real Estate

b. Solve problems that arise in mathematics and in other contexts.
All in the Family
Every Picture Tells a Story
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
On the Double
The Pop Ecology Files
Population Clock
Power of the Pyramids
The Stork and the Grim Reaper
Timber!
Transportation Tally
What Do You Think?
A World of Difference
World Real Estate

c. Apply and adapt a variety of appropriate strategies to solve problems.
All in the Family
Every Picture Tells a Story
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
On the Double
The Pop Ecology Files
Population Clock
Power of the Pyramids
The Stork and the Grim Reaper
Timber!
Transportation Tally
What Do You Think?
A World of Difference
World Real Estate

M6P2. Students will reason and evaluate mathematical arguments.
b. Make and investigate mathematical conjectures.
All in the Family

Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
The Pop Ecology Files
Timber!
A World of Difference

M6P3. Students will communicate mathematically.

a. Organize and consolidate their mathematical thinking through communication.

Every Picture Tells a Story
Everything Counts
The Pop Ecology Files
The Stork and the Grim Reaper
Timber!
A World of Difference
World Real Estate

b. Communicate their mathematical thinking coherently and clearly to peers, teachers, and others.

Every Picture Tells a Story
Everything Counts
The Pop Ecology Files
Timber!
A World of Difference
World Real Estate

d. Use the language of mathematics to express mathematical ideas precisely.

All in the Family
Every Picture Tells a Story
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
On the Double
The Pop Ecology Files
Population Clock
Power of the Pyramids
The Stork and the Grim Reaper
Timber!
Transportation Tally
What Do You Think?
A World of Difference
World Real Estate

M6P4. Students will make connections among mathematical ideas and to other disciplines.

c. Recognize and apply mathematics in contexts outside of mathematics.

All in the Family
Every Picture Tells a Story
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
On the Double
The Pop Ecology Files
Population Clock
Power of the Pyramids

The Stork and the Grim Reaper
Timber!
Transportation Tally
What Do You Think?
A World of Difference
World Real Estate

M6P5. Students will represent mathematics in multiple ways.

a. Create and use representations to organize, record, and communicate mathematical ideas.

All in the Family
Every Picture Tells a Story
Everything Counts
The Stork and the Grim Reaper
A World of Difference
World Real Estate

c. Use representations to model and interpret physical, social, and mathematical phenomena.

All in the Family
Everything Counts
The Stork and the Grim Reaper
A World of Difference
World Real Estate

Science

HABITS OF MIND

S6CS1. Students will explore the importance of curiosity, honesty, openness, and skepticism in science and will exhibit these traits in their own efforts to understand how the world works.

a. Understand the importance of—and keep—honest, clear, and accurate records in science.

All in the Family
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
On the Double
Population Clock
Power of the Pyramids
Timber!
Transportation Tally
A World of Difference
World Real Estate

b. Understand that hypotheses are valuable if they lead to fruitful investigations, even if the hypotheses turn out not to be completely accurate descriptions.

World Real Estate

S6CS3. Students will use computation and estimation skills necessary for analyzing data and following scientific explanations.

a. Analyze scientific data by using, interpreting, and comparing numbers in several equivalent forms, such as integers and decimals.

All in the Family
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
On the Double
Population Clock
Power of the Pyramids
Timber!

Transportation Tally
A World of Difference
World Real Estate

b. Use metric input units (such as seconds, meters, or grams per milliliter) of scientific calculations to determine the proper unit for expressing the answer.
How Much Space Do We Need?
Measuring a Million
Population Clock

d. Draw conclusions based on analyzed data.
All in the Family
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
On the Double
The Pop Ecology Files
Population Clock
Power of the Pyramids
The Stork and the Grim Reaper
Timber!
Transportation Tally
A World of Difference
World Real Estate

S6CS4. Students will use tools and instruments for observing, measuring, and manipulating equipment and materials in scientific activities.
b. Estimate the effect of making a change in one part of a system on the system as a whole.
All in the Family

S6CS5. Students will use the ideas of system, model, change, and scale in exploring scientific and technological matters.
b. Identify several different models (such as physical replicas, pictures, and analogies) that could be used to represent the same thing, and evaluate their usefulness, taking into account such things as the model's purpose and complexity.
All in the Family
Every Picture Tells a Story
Everything Counts
The Stork and the Grim Reaper
Timber!
A World of Difference
World Real Estate

S6CS6. Students will communicate scientific ideas and activities clearly.
c. Organize scientific information using appropriate tables, charts, and graphs, and identify relationships they reveal.
All in the Family
Every Picture Tells a Story
Everything Counts
On the Double
The Pop Ecology Files
Population Clock
Power of the Pyramids
Timber!
What Do You Think?
World Real Estate

S6CS7. Students will question scientific claims and arguments effectively.
b. Recognize that there may be more than one way to interpret a given set of findings.
Every Picture Tells a Story

THE NATURE OF SCIENCE
S6CS9. Students will investigate the features of the process of scientific inquiry. Students will apply the following to inquiry learning practices:
a. Scientific investigations are conducted for different reasons. They usually involve collecting evidence, reasoning, devising hypotheses, and formulating explanations.
All in the Family
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Power of the Pyramids
The Stork and the Grim Reaper
Timber!
A World of Difference
World Real Estate

EARTH SCIENCE
S6E3. Students will recognize the significant role of water in earth processes.
a. Explain that a large portion of the Earth's surface is water, consisting of oceans, rivers, lakes, underground water, and ice.
World Real Estate

PROCESSES THAT SHAPE THE EARTH
S6E5h and S6E5i. Human activities, such as reducing the amount of forest cover, increasing the amount and variety of chemicals released into the atmosphere, and intensive farming, have changed the earth's land, oceans, and atmosphere. Some of these changes have decreased the capacity of the environment to support some life forms.
All in the Family
Global Warming Begins at Home
How Much Space Do We Need?
On the Double
The Pop Ecology Files
The Stork and the Grim Reaper
Timber!
Transportation Tally
A World of Difference
World Real Estate

Social Studies

LATIN AMERICA & CANADA
ECONOMIC UNDERSTANDINGS
SS6E3. The student will describe the factors that influence economic growth and examine their presence or absence in countries such as Canada, Mexico, Brazil, and Argentina.
c. Describe the role of natural resources, including land, air, water, minerals, time, and other gifts of nature.
Every Picture Tells a Story

EUROPE
HISTORICAL UNDERSTANDING
SS6H4. The student will describe the important developments in Europe between 1400 CE.
f. Describe the Industrial Revolution including the impact on cities, life styles, and agriculture.
The Stork and the Grim Reaper

ECONOMIC UNDERSTANDING

SS6E7. The student will describe the factors that cause economic growth and examine their presence or absence in countries such as England, Germany, Russia, Poland, and Romania.

c. Describe the role of natural resources, including land, air, water, minerals, time, and other gifts of nature.

Every Picture Tells a Story

Grade Seven

English Language Arts

LISTENING, SPEAKING, AND VIEWING

ELA7LSV1. The student participates in student-to-teacher, student-to-student, and group verbal interactions. The student

b. Asks relevant questions.

All in the Family
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
Power of the Pyramids
The Stork and the Grim Reaper
Timber!
What Do You Think?
A World of Difference
World Real Estate

c. Responds to questions with appropriate information.

All in the Family
Everything Counts
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
The Pop Ecology Files
Population Clock
Power of the Pyramids
The Stork and the Grim Reaper
Timber!
What Do You Think?
A World of Difference

f. Actively solicits another person's comments or opinions.

What Do You Think?

h. Responds appropriately to comments and questions.

Power of the Pyramids
What Do You Think?
A World of Difference
World Real Estate

i. Volunteers contributions and responds when directly solicited by teacher or discussion leader.

All in the Family
Power of the Pyramids
World Real Estate

Mathematics

ALGEBRA

M7A1. Students will represent and evaluate quantities using algebraic expressions.

a. Translate verbal phrases to algebraic expressions.

Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million

On the Double
Population Clock
Power of the Pyramids
Transportation Tally

b. Simplify and evaluate algebraic expressions, using commutative, associative, and distributive properties as appropriate.

Everything Counts
How Much Space Do We Need?
Measuring a Million
On the Double
Population Clock
Power of the Pyramids
Transportation Tally

M7A2. Students will understand and apply linear equations in one variable.

a. Given a problem, define a variable, write an equation, solve the equation, and interpret the solution.

Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million

DATA ANALYSIS AND PROBABILITY

M7D1. Students will pose questions, collect data, represent and analyze the data, and interpret results.

a. Formulate questions and collect data from a census of at least 30 objects and from samples of varying sizes.

Everything Counts
What Do You Think?

b. Construct frequency distributions.

Every Picture Tells a Story
What Do You Think?

c. Analyze data using measures of central tendency (mean, median, and mode), including recognition of outliers.

Every Picture Tells a Story
What Do You Think?

d. Analyze data with respect to measures of variation (range, quartiles, interquartilerange).

Every Picture Tells a Story
What Do You Think?

f. Analyze data using appropriate graphs, including pictographs, histograms, bar graphs, line graphs, circle graphs, and line plots introduced earlier, and using box-and-whisker plots and scatter plots..

Every Picture Tells a Story
What Do You Think?

PROCESS STANDARDS

M7P1. Students will solve problems (using appropriate technology).

a. Build new mathematical knowledge through problem solving.

All in the Family
Every Picture Tells a Story
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
On the Double

The Pop Ecology Files
Population Clock
Power of the Pyramids
The Stork and the Grim Reaper
Timber!
Transportation Tally
What Do You Think?
A World of Difference
World Real Estate

b. Solve problems that arise in mathematics and in other contexts.
All in the Family
Every Picture Tells a Story
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
On the Double
The Pop Ecology Files
Population Clock
Power of the Pyramids
The Stork and the Grim Reaper
Timber!
Transportation Tally
What Do You Think?
A World of Difference
World Real Estate

M7P3. Students will communicate mathematically.
d. Use the language of mathematics to express mathematical ideas precisely.
All in the Family
Every Picture Tells a Story
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
On the Double
The Pop Ecology Files
Population Clock
Power of the Pyramids
The Stork and the Grim Reaper
Timber!
Transportation Tally
What Do You Think?
A World of Difference
World Real Estate

M7P4. Students will make connections among mathematical ideas and to other disciplines.
c. Recognize and apply mathematics in contexts outside of mathematics.
All in the Family
Every Picture Tells a Story
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
On the Double

The Pop Ecology Files
Population Clock
Power of the Pyramids
The Stork and the Grim Reaper
Timber!
Transportation Tally
What Do You Think?
A World of Difference
World Real Estate

M7P5. Students will represent mathematics in multiple ways.

a. Create and use representations to organize, record, and communicate mathematical ideas.

All in the Family
Every Picture Tells a Story
Everything Counts
The Stork and the Grim Reaper
A World of Difference
World Real Estate

c. Use representations to model and interpret physical, social, and mathematical phenomena.

All in the Family
Everything Counts
The Stork and the Grim Reaper
A World of Difference
World Real Estate

Science

HABITS OF MIND

S7CS1. Students will explore of the importance of curiosity, honesty, openness, and skepticism in science and will exhibit these traits in their own efforts to understand how the world works.

b. Understand that hypotheses can be valuable, even if they turn out not to be completely accurate.

World Real Estate

S7CS3. Students will have the computation and estimation skills necessary for analyzing data and following scientific explanations.

a. Analyze scientific data by using, interpreting, and comparing numbers in several equivalent forms, such as integers, fractions, decimals, and percents.

All in the Family
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
On the Double
Population Clock
Power of the Pyramids
Timber!
Transportation Tally
A World of Difference
World Real Estate

b. Use the mean, median, and mode to analyze a set of scientific data.

What Do You Think?

c. Apply the metric system to a scientific investigation that includes metric to metric conversion. (i.e. centimeters to meters)

How Much Space Do We Need?
Measuring a Million

d. Draw conclusions based on analyzed data.
All in the Family
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
On the Double
The Pop Ecology Files
Population Clock
Power of the Pyramids
The Stork and the Grim Reaper
Timber!
Transportation Tally
A World of Difference
World Real Estate

S7CS5. Students will use the ideas of system, model, change, and scale in exploring scientific and technological matters.

a. Observe and explain how parts can be related to other parts in a system such as predator/prey relationships in a community/ecosystem.
The Pop Ecology Files
A World of Difference

b. Understand that different models (such as physical replicas, pictures, and analogies) can be used to represent the same thing.
All in the Family
Every Picture Tells a Story
Everything Counts
The Stork and the Grim Reaper
Timber!
A World of Difference
World Real Estate

S7CS6. Students will communicate scientific ideas and activities clearly.

c. Organize scientific information using appropriate simple tables, charts, and graphs, and identify relationships they reveal.
All in the Family
Every Picture Tells a Story
Everything Counts
On the Double
The Pop Ecology Files
Population Clock
Power of the Pyramids
Stage Stepping
Timber!
What Do You Think?
World Real Estate

S7CS7. Students will question scientific claims and arguments effectively.

c. Question the value of arguments based on small samples of data, biased samples, or samples for which there was no control.
Everything Counts
What Do You Think?
A World of Difference

d. Recognize that there may be more than one way to interpret a given set of findings.

Every Picture Tells a Story

THE NATURE OF SCIENCE

S7CS9. Students will investigate the features of the process of scientific inquiry. Students will apply the following to inquiry learning practices:

b. Scientific investigations usually involve collecting evidence, reasoning, devising hypotheses, and formulating explanations to make sense of collected evidence.

All in the Family
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Power of the Pyramids
The Stork and the Grim Reaper
Timber!
A World of Difference
World Real Estate

LIFE SCIENCE

S7L4. Students will examine the dependence of organisms on one another and their environments.

c. Recognize that changes in environmental conditions can affect the survival of both individuals and entire species.

The Pop Ecology Files
A World of Difference

INTERDEPENDENCE OF LIFE

S7L4de and S7L4f. In all environments-freshwater, marine, forest, desert, grassland, mountain, and others-organisms with similar needs may compete with one another for resources, including food, space, water, air, and shelter. In any particular environment, the growth and survival of organisms depend on the physical conditions.

A World of Difference

Social Studies

AFRICA

ECONOMIC UNDERSTANDING

SS7E3. The student will describe the factors that influence economic growth and examine their presence or absence in such African countries as Chad, South Africa, Nigeria, and Kenya.

c. Describe how natural resources, including land, air, water, minerals, time, and other gifts of nature have affected economic development.

Every Picture Tells a Story

SOUTHWEST ASIA (MIDDLE EAST)

ECONOMIC UNDERSTANDING

SS7E7. The student will describe the factors that influence economic growth and examine their presence or absence in Middle Eastern countries such as Israel, Lebanon, Turkey, Israel, Saudi Arabia and Iran.

c. Describe the role of natural resources, including land, air, water, minerals, time, and other gifts of nature.

Every Picture Tells a Story

SOUTHERN AND EASTERN ASIA

GEOGRAPHIC UNDERSTANDING

SS7G10. The student will evaluate the impact of government policies and individual behaviors on Southern and Eastern Asia's environment

c. Describe the environmental problems, such as over population, industrial pollution, and flooding, facing countries in Eastern Asia including China, Japan, and South Korea.

Every Picture Tells a Story
On the Double

Power of the Pyramids
The Stork and the Grim Reaper

d. Explain efforts by governments and industries in China, Japan, and South Korea to meet environmental problems such as over population, industrial pollution, and flooding.
Power of the Pyramids

ECONOMIC UNDERSTANDING

SS7E10. The student will describe the factors that cause economic growth and examine their presence or absence in Southern and Eastern Asian countries such as Pakistan, India, China, and Indonesia.

c. Describe the role of natural resources, including land, air, water, minerals, time, and other gifts of nature.
Every Picture Tells a Story

Grade Eight

English Language Arts

LISTENING, SPEAKING, AND VIEWING

ELA8LSV1. The student participates in student-to-teacher, student-to-student, and group verbal interactions. The student

b. Asks relevant questions.

All in the Family
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
Power of the Pyramids
The Stork and the Grim Reaper
Timber!
Transportation Tally
What Do You Think?
A World of Difference
World Real Estate

c. Responds to questions with appropriate information.

All in the Family
Every Picture Tells a Story
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
On the Double
The Pop Ecology Files
Population Clock
Power of the Pyramids
The Stork and the Grim Reaper
Timber!
Transportation Tally
What Do You Think?
A World of Difference

f. Actively solicits another person's comments or opinions.

What Do You Think?

h. Responds appropriately to comments and questions.

Power of the Pyramids
What Do You Think?
A World of Difference
World Real Estate

i. Volunteers contributions and responds when directly solicited by teacher or discussion leader.

All in the Family
Power of the Pyramids
A World of Difference
World Real Estate

Mathematics

ALGEBRA

M8A1. Students will use algebra to represent, analyze, and solve problems.

a. Represent a given situation using algebraic expressions or equations in one variable.
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
On the Double
Population Clock
Power of the Pyramids
Transportation Tally

b. Simplify and evaluate algebraic expressions.
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
Transportation Tally

c. Solve algebraic equations in one variable, including equations involving absolute values.
Everything Counts
How Much Space Do We Need?
Global Warming Begins at Home
Measuring a Million
On the Double
Population Clock
Power of the Pyramids
Transportation Tally

d. Interpret solutions in problem contexts.
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
On the Double
Population Clock
Power of the Pyramids
Transportation Tally

M8A3. Students will understand relations and linear functions.
h. Identify relations and functions as linear or nonlinear.
The Pop Ecology Files
Timber!

M8A5. Students will understand systems of linear equations and use them to solve problems.
b. Solve systems of equations graphically and algebraically, using technology as appropriate.
Every Picture Tells a Story
Global Warming Begins at Home
The Pop Ecology Files
Timber!

c. Interpret solutions in problem contexts.
All in the Family
Every Picture Tells a Story
The Pop Ecology Files
Timber!

PROCESS STANDARDS

M8P1. Students will solve problems (using appropriate technology).

a. Build new mathematical knowledge through problem solving.

All in the Family
Every Picture Tells a Story
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
On the Double
The Pop Ecology Files
Population Clock
Power of the Pyramids
The Stork and the Grim Reaper
Timber!
Transportation Tally
What Do You Think?
A World of Difference
World Real Estate

b. Solve problems that arise in mathematics and in other contexts.

All in the Family
Every Picture Tells a Story
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
On the Double
The Pop Ecology Files
Population Clock
Power of the Pyramids
The Stork and the Grim Reaper
Timber!
Transportation Tally
What Do You Think?
A World of Difference
World Real Estate

M8P3. Students will communicate mathematically.

d. Use the language of mathematics to express mathematical ideas precisely.

All in the Family
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
On the Double
The Pop Ecology Files
Population Clock
Power of the Pyramids
The Stork and the Grim Reaper
Timber!
Transportation Tally
What Do You Think?
A World of Difference
World Real Estate

M8P4. Students will make connections among mathematical ideas and to other disciplines.

c. Recognize and apply mathematics in contexts outside of mathematics.
All in the Family
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
On the Double
The Pop Ecology Files
Population Clock
Power of the Pyramids
The Stork and the Grim Reaper
Timber!
Transportation Tally
What Do You Think?
A World of Difference
World Real Estate

M8P5. Students will represent mathematics in multiple ways.
a. Create and use representations to organize, record, and communicate mathematical ideas.
All in the Family
Every Picture Tells a Story
Everything Counts
The Stork and the Grim Reaper
A World of Difference
World Real Estate

c. Use representations to model and interpret physical, social, and mathematical phenomena.
All in the Family
Everything Counts
The Stork and the Grim Reaper
A World of Difference
World Real Estate

Science

HABITS OF MIND
S8CS1. Students will explore the importance of curiosity, honesty, openness, and skepticism in science and will exhibit these traits in their own efforts to understand how the world works.
b. Understand that hypotheses can be valuable even if they turn out not to be completely accurate.
World Real Estate

S8CS3. Students will have the computation and estimation skills necessary for analyzing data and following scientific explanations.
a. Analyze scientific data by using, interpreting, and comparing numbers in several equivalent forms, such as integers, fractions, decimals, and percents.
All in the Family
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
On the Double
Population Clock
Power of the Pyramids
Timber!
Transportation Tally
A World of Difference
World Real Estate

c. Apply the metric system to scientific investigations that include metric to metric conversions (i.e., centimeters to meters).
How Much Space Do We Need?
Measuring a Million

f. Use ratios and proportions, including constant rates, in appropriate problems.
All in the Family
On the Double
The Pop Ecology Files
Population Clock
The Stork and the Grim Reaper
Timber!

b. Find the mean, median, and mode and use them to analyze a set of scientific data.
What Do You Think?

S8CS5. Students will use the ideas of system, model, change, and scale in exploring scientific and technological matters.
b. Understand that different models (such as physical replicas, pictures, and analogies) can be used to represent the same thing.
All in the Family
Every Picture Tells a Story
Everything Counts
The Stork and the Grim Reaper
Timber!
A World of Difference
World Real Estate

S8CS6. Students will communicate scientific ideas and activities clearly.
c. Organize scientific information in appropriate tables, charts, and graphs, and identify relationships they reveal.
All in the Family
Every Picture Tells a Story
Everything Counts
On the Double
The Pop Ecology Files
Population Clock
Power of the Pyramids
Timber!
What Do You Think?
World Real Estate

S8CS7. Students will question scientific claims and arguments effectively.
c. Question the value of arguments based on small samples of data, biased samples, or samples for which there was no control.
Everything Counts
What Do You Think?
A World of Difference

d. Recognize that there may be more than one way to interpret a given set of findings.
Every Picture Tells a Story

THE NATURE OF SCIENCE
S8CS9. Students will understand the features of the process of scientific inquiry. Students will apply the following to inquiry learning practices:

b. Scientific investigations usually involve collecting evidence, reasoning, devising hypotheses, and formulating explanations to make sense of collected evidence.

All in the Family
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Power of the Pyramids
The Stork and the Grim Reaper
Timber!
A World of Difference
World Real Estate

Grades Nine to Twelve

Mathematics

(Mathematics I)

DATA ANALYSIS AND PROBABILITY

MMID2. Students will use the basic laws of probability

a. Find the probabilities of mutually exclusive events.

A World of Difference

b. Find the probabilities of dependent events.

A World of Difference

MMID3. Students will relate samples to a population.

a. Compare summary statistics (mean, median, quartiles, and inter-quartile range) from samples to the corresponding population parameters.

Every Picture Tells a Story
What Do You Think?

PROCESS STANDARDS

MMIP1. Students will solve problems.

a. Build new mathematical knowledge through problem solving.

All in the Family
Global Warming Begins at Home
How Much Space Do We Need?
Transportation Tally
What Do You Think?
A World of Difference

b. Solve problems that arise in mathematics and in other contexts.

All in the Family
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MMIP4. Students will make connections among mathematical ideas and to other disciplines.

c. Recognize and apply mathematics in contexts outside of mathematics.

All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MMIP5. Students will represent mathematics in multiple ways.

a. Create and use representations to organize, record, and communicate mathematical ideas.

All in the Family
Every Picture Tells a Story
A World of Difference

c. Use representations to model and interpret physical, social, and mathematical phenomena.

All in the Family
Everything Counts
A World of Difference

(Mathematics II)

DATA ANALYSIS AND PROBABILITY

MMIID1. Students will make informal inferences about population means and standard deviations from sample data.

a. Pose a question and collect sample data from at least two different populations.
Everything Counts
What Do You Think?

b. Understand and calculate the means and standard deviations of sets of data.
What Do You Think?

c. Use the means and standard deviations to compare data sets.
What Do You Think?

PROCESS STANDARDS

MMIIP1. Students will solve problems.

a. Build new mathematical knowledge through problem solving.
All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

b. Solve problems that arise in mathematics and in other contexts.
All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MMIIP3. Students will communicate mathematically.

d. Use the language of mathematics to express mathematical ideas precisely.
All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MMIIP4. Students will make connections among mathematical ideas and to other disciplines.

c. Recognize and apply mathematics in contexts outside of mathematics.
All in the Family
Every Picture Tells a Story
Global Warming Begins at Home

How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MMIIP5. Students will represent mathematics in multiple ways.

a. Create and use representations to organize, record, and communicate mathematical ideas.
All in the Family
Everything Counts
A World of Difference

c. Use representations to model and interpret physical, social, and mathematical phenomena.
All in the Family
Everything Counts
A World of Difference

(Mathematics III)

PROCESS STANDARDS

MMIIIP1. Students will solve problems.

a. Build new mathematical knowledge through problem solving.
All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

b. Solve problems that arise in mathematics and in other contexts.
All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MMIIIP3. Students will communicate mathematically.

d. Use the language of mathematics to express mathematical ideas precisely.
All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MMIIIP4. Students will make connections among mathematical ideas and to other disciplines.

c. Recognize and apply mathematics in contexts outside of mathematics.
All in the Family
Every Picture Tells a Story
Global Warming Begins at Home

How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MMIIIP5. Students will represent mathematics in multiple ways.

a. Create and use representations to organize, record, and communicate mathematical ideas.
All in the Family
Every Picture Tells a Story
A World of Difference

c. Use representations to model and interpret physical, social, and mathematical phenomena.
All in the Family
A World of Difference

(Core Mathematics I)

DATA ANALYSIS AND PROBABILITY

MC1D1. Students will determine the number of outcomes related to a given event

a. Apply addition and multiplication principles of counting.
A World of Difference

MC1D2. Students will use the basic laws of probability

a. Find the probabilities of mutually exclusive events.
A World of Difference

b. Find the probabilities of dependent events.
A World of Difference

PROCESS STANDARDS

MC1P1. Students will solve problems (using appropriate technology).

a. Build new mathematical knowledge through problem solving.
All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

b. Solve problems that arise in mathematics and in other contexts.
All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MC1P4. Students will make connections among mathematical ideas and to other disciplines

c. Recognize and apply mathematics in contexts outside of mathematics.
All in the Family
Every Picture Tells a Story
Global Warming Begins at Home

How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MC1P5. Students will represent mathematics in multiple ways.

a. Create and use representations to organize, record, and communicate mathematical ideas.
All in the Family
Every Picture Tells a Story
A World of Difference

c. Use representations to model and interpret physical, social, and mathematical phenomena.
All in the Family
A World of Difference

(Core Mathematics II)

DATA ANALYSIS AND PROBABILITY

MC2D1. Students will relate samples to a population.

a. Compare summary statistics (mean, median, quartiles, and interquartile range) from one sample data distribution to another sample data distribution in describing center and variability of the data distributions.
Everything Counts
What Do You Think?

PROCESS STANDARDS

MC2P1. Students will solve problems (using appropriate technology).

a. Build new mathematical knowledge through problem solving.
All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

b. Solve problems that arise in mathematics and in other contexts.
All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MC2P3. Students will communicate mathematically.

d. Use the language of mathematics to express mathematical ideas precisely.
All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MC2P4. Students will make connections among mathematical ideas and to other disciplines.

c. Recognize and apply mathematics in contexts outside of mathematics.

All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MC2P5. Students will represent mathematics in multiple ways.

a. Create and use representations to organize, record, and communicate mathematical ideas.

All in the Family
Every Picture Tells a Story
A World of Difference

c. Use representations to model and interpret physical, social, and mathematical phenomena.

All in the Family
A World of Difference

(Core Mathematics III)

DATA ANALYSIS AND PROBABILITY

MC3D1. Using sample data, students will make informal inferences about population means and standard deviations.

a. Pose a question and collect sample data from at least two different populations.

Everything Counts
What Do You Think?

b. Understand and calculate the means and standard deviations of sets of data.

What Do You Think?

c. Use means and standard deviations to compare data sets.

What Do You Think?

PROCESS STANDARDS

MC3P1. Students will solve problems (using appropriate technology).

a. Build new mathematical knowledge through problem solving.

All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

b. Solve problems that arise in mathematics and in other contexts.

All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?

A World of Difference

d. Use the language of mathematics to express mathematical ideas precisely.
All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MC3P4. Students will make connections among mathematical ideas and to other disciplines.
c. Recognize and apply mathematics in contexts outside of mathematics.
All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MC3P5. Students will represent mathematics in multiple ways.
a. Create and use representations to organize, record, and communicate mathematical ideas.
All in the Family
Every Picture Tells a Story
A World of Difference

c. Use representations to model and interpret physical, social, and mathematical phenomena.
All in the Family
A World of Difference

(Core Mathematics IV)

PROCESS STANDARDS
MC4P1. Students will solve problems (using appropriate technology).
a. Build new mathematical knowledge through problem solving.
All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

b. Solve problems that arise in mathematics and in other contexts.
All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MC4P3. Students will communicate mathematically.

d. Use the language of mathematics to express mathematical ideas precisely.
All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MC4P4. Students will make connections among mathematical ideas and to other disciplines.
c. Recognize and apply mathematics in contexts outside of mathematics.
All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MC4P5. Students will represent mathematics in multiple ways.
a. Create and use representations to organize, record, and communicate mathematical ideas.
All in the Family
Every Picture Tells a Story
A World of Difference

c. Use representations to model and interpret physical, social, and mathematical phenomena.
All in the Family
A World of Difference

(Accelerated Mathematics I)

DATA ANALYSIS AND PROBABILITY
MA1D2. Students will use the basic laws of probability.
b. Find the probabilities of dependent events.
A World of Difference

MA1D3. Students will relate samples to a population.
a. Compare summary statistics (mean, median, quartiles, and interquartile range) from one sample data distribution to another sample data distribution in describing center and variability of the data distributions.
Everything Counts
What Do You Think?

PROCESS STANDARDS
MA1P1. Students will solve problems (using appropriate technology).
a. Build new mathematical knowledge through problem solving.
All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

b. Solve problems that arise in mathematics and in other contexts.

All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MA1P3. Students will communicate mathematically.

d. Use the language of mathematics to express mathematical ideas precisely.

All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MA1P4. Students will make connections among mathematical ideas and to other disciplines.

c. Recognize and apply mathematics in contexts outside of mathematics.

All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MA1P5. Students will represent mathematics in multiple ways.

a. Create and use representations to organize, record, and communicate mathematical ideas.

All in the Family
Every Picture Tells a Story
A World of Difference

c. Use representations to model and interpret physical, social, and mathematical phenomena.

All in the Family
A World of Difference

(Accelerated Mathematics II)

DATA ANALYSIS AND PROBABILITY

MA2D1. Using sample data, students will make informal inferences about population means and standard deviations.

a. Pose a question and collect sample data from at least two different populations.

Everything Counts
What Do You Think?

b. Understand and calculate the means and standard deviations of sets of data.

What Do You Think?

c. Use means and standard deviations to compare data sets.

What Do You Think?

PROCESS STANDARDS

MA2P1. Students will solve problems (using appropriate technology).

a. Build new mathematical knowledge through problem solving.

All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

b. Solve problems that arise in mathematics and in other contexts.

All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MA2P3. Students will communicate mathematically.

d. Use the language of mathematics to express mathematical ideas precisely.

All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MA2P4. Students will make connections among mathematical ideas and to other disciplines.

c. Recognize and apply mathematics in contexts outside of mathematics.

All in the Family
Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Transportation Tally
What Do You Think?
A World of Difference

MA2P5. Students will represent mathematics in multiple ways.

a. Create and use representations to organize, record, and communicate mathematical ideas.

All in the Family
Every Picture Tells a Story
A World of Difference

c. Use representations to model and interpret physical, social, and mathematical phenomena.

All in the Family
A World of Difference

Science

(Biology)

HABITS OF MIND

SCSh3. Students will identify and investigate problems scientifically.

a. Suggest reasonable hypotheses for identified problems.

Global Warming Begins at Home
How Much Space Do We Need?

c. Collect, organize and record appropriate data.

All in the Family
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Power of the Pyramids
A World of Difference

d. Graphically compare and analyze data points and/or summary statistics.

All in the Family
Every Picture Tells a Story
The Pop Ecology Files
Power of the Pyramids

e. Develop reasonable conclusions based on data collected.

All in the Family
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Power of the Pyramids
A World of Difference

SCSh6. Students will communicate scientific investigations and information clearly.

c. Use data as evidence to support scientific arguments and claims in written or oral presentations.

The Pop Ecology Files

INTERDEPENDENCE OF LIFE

SB4a and SB4c. Ecosystems can be reasonably stable over hundreds or thousands of years. As any population of organisms grows, it is held in check by one or more environmental factors: depletion of food or nesting sites, increased loss to increased numbers of predators, or parasites. If a disaster such as flood or fire occurs, the damaged ecosystem is likely to recover in stages that eventually result in a system similar to the original one.

The Pop Ecology Files

SB4d. Human beings are part of the earth's ecosystems. Human activities can, deliberately or inadvertently, alter the equilibrium in ecosystems.

Global Warming Begins at Home
How Much Space Do We Need?
A World of Difference

SB4. Students will assess the dependence of all organisms on one another and the flow of energy and matter within their ecosystems.

d. Assess and explain human activities that influence and modify the environment such as global warming, population growth, pesticide use, and water and power consumption.

All in the Family
Global Warming Begins at Home
How Much Space Do We Need?
A World of Difference

FLOW OF MATTER AND ENERGY

SB4b. The amount of life any environment can support is limited by the available energy, water, oxygen, and minerals, and by the ability of ecosystems to recycle the residue of dead organic materials. Human activities and technology can change the flow and reduce the fertility of the land.

How Much Space Do We Need?

Social Studies

(World Geography)

SSWG1. The student will explain the physical aspects of geography.

a. Describe the concept of place by explaining how physical characteristics such as landforms, bodies of water, climate, soils, natural vegetation, and animal life are used to describe a place.

How Much Space Do We Need?

c. Analyze the interrelationship between physical and human characteristics of a place.

A World of Difference

Grade Nine

English Language Arts

LISTENING, SPEAKING, AND VIEWING

ELA9LSV1. The student participates in student-to-teacher, student-to-student, and group verbal interactions. The student

b. Asks relevant questions.

Global Warming Begins at Home
Power of the Pyramids
Transportation Tally
What Do You Think?
A World of Difference

c. Responds to questions with appropriate information.

Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
Power of the Pyramids
What Do You Think?
A World of Difference

d. Actively solicits another person's comments or opinions.

What Do You Think?

f. Volunteers contributions and responds when directly solicited by teacher or discussion leader.

Global Warming Begins at Home
Power of the Pyramids
Transportation Tally
A World of Difference
World Real Estate

LISTENING, SPEAKING, AND VIEWING. When delivering and responding to presentations, the student:

b. Applies appropriate interviewing techniques (e.g., prepares and asks relevant questions; makes notes of responses; uses language that conveys maturity, sensitivity and respect; responds correctly and effectively to questions).

What Do You Think?

Grade Ten

English Language Arts

LISTENING, SPEAKING, AND VIEWING

ELA10LSV1. The student participates in student-to-teacher, student-to-student, and group verbal interactions. The student

b. Asks relevant questions.

Global Warming Begins at Home
How Much Space Do We Need?
Power of the Pyramids
Transportation Tally
What Do You Think?
A World of Difference

c. Responds to questions with appropriate information.

Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
Power of the Pyramids
What Do You Think?
A World of Difference

d. Actively solicits another person's comments or opinion.

What Do You Think?

f. Contributes voluntarily and responds directly when solicited by teacher or discussion leader.

Global Warming Begins at Home
Power of the Pyramids
Transportation Tally
A World of Difference
World Real Estate

Grade Eleven

English Language Arts

LISTENING, SPEAKING, AND VIEWING

ELA11LSV1. The student participates in student-to-teacher, student-to-student, and group verbal interactions. The student

b. Asks relevant questions.

Global Warming Begins at Home
How Much Space Do We Need?
Power of the Pyramids
Transportation Tally
What Do You Think?
A World of Difference

c. Responds to questions with appropriate information.

Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
Power of the Pyramids
What Do You Think?
A World of Difference

f. Volunteers contributions and responds when directly solicited by teacher or discussion leader.

Global Warming Begins at Home
Power of the Pyramids
Transportation Tally
A World of Difference
World Real Estate

Grade Twelve

English Language Arts

LISTENING, SPEAKING, AND VIEWING

ELA12LSV1. The student participates in student-to-teacher, student-to-student, and group verbal interactions. The student

b. Asks relevant questions.

Global Warming Begins at Home
How Much Space Do We Need?
Power of the Pyramids
Transportation Tally
What Do You Think?
A World of Difference

c. Responds to questions with appropriate information.

Every Picture Tells a Story
Global Warming Begins at Home
How Much Space Do We Need?
Power of the Pyramids
A World of Difference

d. Actively solicits another person's comments or opinion.

What Do You Think?

f. Volunteers contributions and responds when directly solicited by teacher or discussion leader.

Global Warming Begins at Home
Power of the Pyramids
Transportation Tally
A World of Difference
World Real Estate