

A Correlation of  
**Population Connection Materials**

from

**Teaching Population:**  
*Hands-on Activities*

to

**Georgia Performance Standards**

**Organized by:**

*1. Subject*

*2. Grade*

*3. Standard*

*4. Population Connection Activity*

# Table of Contents

## English Language Arts

<i>Kindergarten</i> .....	4
<i>Grade One</i> .....	4
<i>Grade Three</i> .....	4
<i>Grade Four</i> .....	5
<i>Grade Five</i> .....	6
<i>Grade Six</i> .....	8
<i>Grade Seven</i> .....	11
<i>Grade Eight</i> .....	14
<i>Grade Nine</i> .....	17
<i>Grade Ten</i> .....	19
<i>Grade Twelve</i> .....	21

## Mathematics

<i>Kindergarten</i> .....	24
<i>Grade One</i> .....	24
<i>Grade Two</i> .....	26
<i>Grade Three</i> .....	27
<i>Grade Four</i> .....	29
<i>Grade Five</i> .....	31
<i>Grade Six</i> .....	33
<i>Grade Seven</i> .....	39
<i>Grade Eight</i> .....	42
<i>Grades Nine to Twelve:</i>	
<i>Mathematics 1</i> .....	45
<i>Mathematics 2</i> .....	46
<i>Mathematics 3</i> .....	47
<i>Core Mathematics 1</i> .....	49
<i>Core Mathematics 2</i> .....	50
<i>Core Mathematics 3</i> .....	51
<i>Core Mathematics 4</i> .....	52
<i>Accelerated Mathematics 1</i> .....	53
<i>Accelerated Mathematics 2</i> .....	55

## Science

<i>Kindergarten</i> .....	57
<i>Grade One</i> .....	58
<i>Grade Two</i> .....	59
<i>Grade Three</i> .....	61
<i>Grade Four</i> .....	63
<i>Grade Five</i> .....	65
<i>Grade Six</i> .....	67
<i>Grade Seven</i> .....	71
<i>Grade Eight</i> .....	74
<i>Grades Nine to Twelve:</i>	
<i>Biology</i> .....	77

## Social Studies

<i>Kindergarten</i> .....	80
<i>Grade One</i> .....	80
<i>Grade Two</i> .....	80
<i>Grade Three</i> .....	81
<i>Grade Four</i> .....	81
<i>Grade Five</i> .....	82
<i>Grade Six</i> .....	82
<i>Grade Seven</i> .....	83
<i>Grades Nine to Twelve:</i>	
<i>Geography</i> .....	84
<i>Economics</i> .....	86

---

---

# English Language Arts

---

---

## Kindergarten

### COMPREHENSION

ELAKR6. The student gains meaning from orally presented text. The student

- b. Makes predictions from pictures and titles.

Earth Cookie

Web of Life

Who Polluted the River?

- g. Connects life experiences to read-aloud text.

Who Polluted the River?

*Sharing a Small World*

### LISTENING/SPEAKING/VIEWING

ELAKLSV1. The student uses oral and visual skills to communicate. The student

- a. Listens and speaks appropriately with peers and adults.

Go Fish!

Web of Life

Who Polluted the River?

- b. Follows two-part oral directions.

Creatures in Motion

Crowding Can Be Seedy

Earth Cookie

Go Fish!

Web of Life

Who Polluted the River?

- e. Describes people, places, things, locations, and actions.

Earth Cookie

Web of Life

Who Polluted the River?

## Grade One

### LISTENING/SPEAKING/VIEWING

ELA1LSV1. The student uses oral and visual strategies to communicate. The student

- b. Recalls information presented orally.

Earth Cookie

Web of Life

Who Polluted the River?

- c. Responds appropriately to orally presented questions.

Creatures in Motion

Crowding Can Be Seedy

Earth Cookie

Go Fish!

Web of Life

Who Polluted the River?

- e. Communicates effectively when relating experiences and retelling stories read, heard, or viewed.

Web of Life

Who Polluted the River?

## Grade Three

Teaching Population: Hands-on Activities  
Population Connection, 2005

Georgia Performance Standards  
English Language Arts

LISTENING/SPEAKING/VIEWING

ELA3LSV1. The student uses oral and visual strategies to communicate. The student

- a. Adapts oral language to fit the situation by following the rules of conversation with peers and adults.

Energy Imagery

More or Less

When the Chips Are Down

Who Polluted the Potomac?

- b. Recalls, interprets, and summarizes information presented orally.

Who Polluted the Potomac?

**Grade Four**

READING

ELA4R1. The student demonstrates comprehension and shows evidence of a warranted and responsible explanation of a variety of literary and informational texts. For informational texts, the student reads and comprehends in order to develop understanding and expertise and produces evidence of reading that:

- e. Distinguishes cause from effect in context.

*How Do People Use the Earth's Resources?*

*How Many Is Enough?*

*What Are People's Basic Needs?*

*What Is a Population?*

*Why Do People Need Space?*

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.

Cougar Hunt

Earth: The Apple of Our Eye (Elementary)

Energy Imagery

Everything Counts

Mining for Chocolate

More or Less

People Count

Timber!

Water, Water Everywhere (Elementary/Intermediate)

When the Chips Are Down

Who Polluted the Potomac?

- c. Responds to questions with appropriate information.

Adding Armadillos

Cougar Hunt

Earth Cookie

Earth: The Apple of Our Eye (Elementary)

Energy Imagery

Everything Counts

Mining for Chocolate

More or Less

Multiplying Mice

People Count

Population Circle

Population Riddles

The Stork and the Grim Reaper

Timber!

Water, Water Everywhere (Elementary/Intermediate)

When the Chips Are Down

Who Polluted the Potomac?

- g. Actively solicits another person's comments or opinions.
  - People Count
  - When the Chips Are Down

- h. Offers own opinion forcefully without domineering.
  - When the Chips Are Down

- i. Responds appropriately to comments and questions.
  - Cougar Hunt
  - Earth Cookie
  - Earth: The Apple of Our Eye (Elementary)
  - Energy Imagery
  - Mining for Chocolate
  - More or Less
  - People Count
  - Water, Water Everywhere (Elementary/Intermediate)
  - When the Chips Are Down
  - Who Polluted the Potomac?

- j. Volunteers contributions and responds when directly solicited by teacher or discussion leader.
  - Adding Armadillos
  - Cougar Hunt
  - Earth Cookie
  - Earth: The Apple of Our Eye (Elementary)
  - Energy Imagery
  - Everything Counts
  - Mining for Chocolate
  - More or Less
  - Multiplying Mice
  - People Count
  - Population Circle
  - Population Riddles
  - The Stork and the Grim Reaper
  - Timber!
  - Water, Water Everywhere (Elementary/Intermediate)
  - When the Chips Are Down
  - Who Polluted the Potomac?

- k. Gives reasons in support of opinions expressed.
  - More or Less
  - When the Chips Are Down

## Grade Five

### READING

ELA5R1. The student demonstrates comprehension and shows evidence of a warranted and responsible explanation of a variety of literary and informational texts. For informational texts, the student reads and comprehends in order to develop understanding and expertise and produces evidence of reading that:

- e. Distinguishes cause from effect in context.
  - How Do People Use the Earth's Resources?*
  - How Many Is Enough?*
  - What Are People's Basic Needs?*
  - What Is a Population?*
  - Why Do People Need Space?*

- g. Makes perceptive and well-developed connections.

*How Do People Use the Earth's Resources?*

*How Many Is Enough?*

*What Are People's Basic Needs?*

*What Is a Population?*

*Why Do People Need Space?*

#### 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.

Cougar Hunt

Earth: The Apple of Our Eye (Elementary)

Energy Imagery

Everything Counts

Mining for Chocolate

More or Less

People Count

Timber!

Water, Water Everywhere (Elementary/Intermediate)

When the Chips Are Down

Who Polluted the Potomac?

- c. Responds to questions with appropriate information.

Adding Armadillos

Cougar Hunt

Earth Cookie

Earth: The Apple of Our Eye (Elementary)

Energy Imagery

Everything Counts

Mining for Chocolate

More or Less

Multiplying Mice

People Count

Population Circle

Population Riddles

The Stork and the Grim Reaper

Timber!

Water, Water Everywhere (Elementary/Intermediate)

When the Chips Are Down

Who Polluted the Potomac?

- g. Actively solicits another person's comments or opinions.

People Count

When the Chips Are Down

- h. Offers own opinion forcefully without domineering.

When the Chips Are Down

- i. Responds appropriately to comments and questions.

Earth Cookie

Earth: The Apple of Our Eye (Elementary)

Energy Imagery

Mining for Chocolate

More or Less

People Count

The Stork and the Grim Reaper  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)  
When the Chips Are Down  
Who Polluted the Potomac?

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

Adding Armadillos  
Cougar Hunt  
Earth Cookie  
Earth: The Apple of Our Eye (Elementary)  
Everything Counts  
Mining for Chocolate  
More or Less  
Multiplying Mice  
People Count  
Population Circle  
Population Riddles  
The Stork and the Grim Reaper  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)  
When the Chips Are Down  
Who Polluted the Potomac?

k. Gives reasons in support of opinions expressed.

More or Less  
When the Chips Are Down

## Grade Six

### READING ACROSS THE CURRICULUM

ELA6RC2. The student participates in discussions related to curricular learning in all subject areas. The student

c. Relates messages and themes from one subject area to those in another area.

*The Balance of Nature*  
*Global Family Ties*  
*People Count: Facing the Population Challenge*  
*You're One in Six Billion!*  
*Your Place on the Planet*

f. Recognizes and uses the features of disciplinary texts (e.g., charts, graphs, photos, maps, highlighted vocabulary).

*The Balance of Nature*  
*Global Family Ties*  
*People Count: Facing the Population Challenge*  
*You're One in Six Billion!*  
*Your Place on the Planet*

### 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.

All in the Family  
Cougar Hunt  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Eco Ethics  
Educating Wanjiku  
Everything Is Connected

Family Perspective  
Food for Thought  
For the Common Good  
Global Warming Begins at Home  
Growing Pains in Texas Hill Country  
How Much Space Do We Need?  
The Hunger Banquet  
Maria's Education  
Measuring a Million  
Mining for Chocolate  
The More The Merrier?  
Needs vs. Wants  
People on the Move  
Power of the Pyramids  
Something for Everyone  
Stage Stepping  
The Stork and the Grim Reaper  
Take a Stand  
Timber!  
Transportation Tally  
Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the Potomac?  
A World of Difference  
World Population Video

c. Responds to questions with appropriate information.

All in the Family  
Cougar Hunt  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Eco Ethics  
Educating Wanjiku  
Energy Imagery  
Everything Counts  
Everything Is Connected  
Family Perspective  
Food for Thought  
For the Common Good  
Global Warming Begins at Home  
Growing Pains in Texas Hill Country  
How Much Space Do We Need?  
The Hunger Banquet  
Maria's Education  
Measuring a Million  
Mining for Chocolate  
The More The Merrier?  
Needs vs. Wants  
On the Double  
People on the Move  
The Pop Ecology Files  
Pop Quiz  
Population Circle  
Population Clock  
Population Riddles  
Power of the Pyramids  
Something for Everyone  
Stage Stepping

The Stork and the Grim Reaper  
Take a Stand  
Timber!  
Transportation Tally  
Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the Potomac?  
A World of Difference  
World Population Video

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

Eco Ethics  
Educating Wanjiku  
Family Perspective  
Growing Pains in Texas Hill Country  
Needs vs. Wants  
Take a Stand

g. Offers own opinion forcefully without being domineering.

Eco Ethics  
Growing Pains in Texas Hill Country  
Take a Stand

h. Responds appropriately to comments and questions.

Eco Ethics  
Educating Wanjiku  
Energy Imagery  
Family Perspective  
Food for Thought  
For the Common Good  
Growing Pains in Texas Hill Country  
Maria's Education  
Mining for Chocolate  
The More The Merrier?  
Needs vs. Wants  
People on the Move  
Power of the Pyramids  
Something for Everyone  
Stage Stepping  
Take a Stand  
Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the Potomac?  
A World of Difference

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

All in the Family  
Cougar Hunt  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Educating Wanjiku  
Everything Is Connected  
Family Perspective  
Food for Thought  
For the Common Good  
Growing Pains in Texas Hill Country  
The Hunger Banquet  
Maria's Education  
Mining for Chocolate

People on the Move  
Power of the Pyramids  
Something for Everyone  
Take a Stand  
Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the Potomac?  
A World of Difference

j. Gives reasons in support of opinions expressed.

Eco Ethics  
Growing Pains in Texas Hill Country  
Take a Stand

l. Employs a group decision-making technique such as brainstorming or a problem-solving sequence (e.g., recognizes problem, defines problem, identifies possible solutions, selects optimal solution, implements solution, evaluates solution).

Eco Ethics  
For the Common Good  
Something for Everyone

ELA6LSV2. The student listens to and views various forms of text and media in order to gather and share information, persuade others, and express and understand ideas. The student will select and critically analyze messages using rubrics as assessment tools. When delivering or responding to presentations, the student:

a. Gives oral presentations or dramatic interpretations for various purposes.  
Growing Pains in Texas Hill Country

## Grade Seven

### READING ACROSS THE CURRICULUM

ELA7RC2. The student participates in discussions related to curricular learning in all subject areas. The student

c. Relates messages and themes from one subject area to those in another area.

*The Balance of Nature*  
*Global Family Ties*  
*People Count: Facing the Population Challenge*  
*You're One in Six Billion!*  
*Your Place on the Planet*

### 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  
Cougar Hunt  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Eco Ethics  
Educating Wanjiku  
Everything Is Connected  
Family Perspective  
Food for Thought  
For the Common Good  
Global Warming Begins at Home  
Growing Pains in Texas Hill Country  
How Much Space Do We Need?  
The Hunger Banquet  
Maria's Education  
Measuring a Million  
Mining for Chocolate

The More The Merrier?  
Needs vs. Wants  
People on the Move  
Power of the Pyramids  
Something for Everyone  
Stage Stepping  
The Stork and the Grim Reaper  
Take a Stand  
Timber!  
Transportation Tally  
Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the Potomac?  
A World of Difference  
World Population Video

c. Responds to questions with appropriate information.

All in the Family  
Cougar Hunt  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Eco Ethics  
Educating Wanjiku  
Energy Imagery  
Everything Counts  
Everything Is Connected  
Family Perspective  
Food for Thought  
For the Common Good  
Global Warming Begins at Home  
Growing Pains in Texas Hill Country  
How Much Space Do We Need?  
The Hunger Banquet  
Maria's Education  
Measuring a Million  
Mining for Chocolate  
The More The Merrier?  
Needs vs. Wants  
On the Double  
People on the Move  
The Pop Ecology Files  
Pop Quiz  
Population Circle  
Population Clock  
Population Riddles  
Power of the Pyramids  
Something for Everyone  
Stage Stepping  
The Stork and the Grim Reaper  
Take a Stand  
Timber!  
Transportation Tally  
Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the River?  
A World of Difference  
World Population Video

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

Eco Ethics  
Educating Wanjiku  
Family Perspective  
Growing Pains in Texas Hill Country  
Needs vs. Wants  
Take a Stand

g. Offers own opinion forcefully without domineering.

Eco Ethics  
Growing Pains in Texas Hill Country  
Take a Stand

h. Responds appropriately to comments and questions.

Eco Ethics  
Educating Wanjiku  
Energy Imagery  
Family Perspective  
Food for Thought  
For the Common Good  
Growing Pains in Texas Hill Country  
Maria's Education  
Mining for Chocolate  
The More The Merrier?  
Needs vs. Wants  
People on the Move  
Power of the Pyramids  
Something for Everyone  
Stage Stepping  
Take a Stand  
Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the Potomac?  
A World of Difference

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

All in the Family  
Cougar Hunt  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Educating Wanjiku  
Everything Is Connected  
Family Perspective  
Food for Thought  
For the Common Good  
Growing Pains in Texas Hill Country  
The Hunger Banquet  
Maria's Education  
Mining for Chocolate  
People on the Move  
Power of the Pyramids  
Something for Everyone  
Take a Stand  
Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the Potomac?

j. Gives reasons in support of opinions expressed.

Eco Ethics  
Growing Pains in Texas Hill Country

## Take a Stand

1. Employs a group decision-making technique such as brainstorming or a problem-solving sequence (e.g., recognizes problem, defines problem, identifies possible solutions, selects optimal solution, implements solution, evaluates solution).

Eco Ethics

Food for Thought

Something for Everyone

ELA7LSV2. The student listens to and views various forms of text and media in order to gather and share information, persuade others, and express and understand ideas. The student will select and critically analyze messages using rubrics as assessment tools. When delivering and responding to presentations, the student:

a. Gives oral presentations or dramatic interpretations for various purposes.

Growing Pains in Texas Hill Country

## Grade Eight

### READING ACROSS THE CURRICULUM

ELA8RC2. The student participates in discussions related to curricular learning in all subject areas. The student

c. Relates messages and themes from one subject area to those in another area.

*The Balance of Nature*

*Global Family Ties*

*People Count: Facing the Population Challenge*

*You're One in Six Billion!*

*Your Place on the Planet*

### 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

Cougar Hunt

Earth: The Apple of Our Eye (Intermediate/Secondary)

Eco Ethics

Educating Wanjiku

Everything Is Connected

Family Perspective

Food for Thought

For the Common Good

Global Warming Begins at Home

Growing Pains in Texas Hill Country

How Much Space Do We Need?

The Hunger Banquet

Maria's Education

Measuring a Million

Mining for Chocolate

The More The Merrier?

Needs vs. Wants

People on the Move

Power of the Pyramids

Something for Everyone

Stage Stepping

The Stork and the Grim Reaper

Take a Stand

Timber!

Transportation Tally

Water, Water Everywhere (Elementary/Intermediate)

World Population Video  
A World of Difference

c. Responds to questions with appropriate information.

All in the Family  
Cougar Hunt  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Eco Ethics  
Educating Wanjiku  
Energy Imagery  
Everything Counts  
Everything Is Connected  
Family Perspective  
Food for Thought  
For the Common Good  
Global Warming Begins at Home  
Growing Pains in Texas Hill Country  
How Much Space Do We Need?  
The Hunger Banquet  
Maria's Education  
Measuring a Million  
Mining for Chocolate  
Needs vs. Wants  
On the Double  
People on the Move  
The Pop Ecology Files  
Pop Quiz  
Population Circle  
Population Clock  
Population Riddles  
Power of the Pyramids  
Something for Everyone  
Stage Stepping  
The Stork and the Grim Reaper  
Take a Stand  
Timber!  
Transportation Tally  
Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the Potomac?  
A World of Difference  
World Population Video

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

Eco Ethics  
Educating Wanjiku  
Family Perspective  
Growing Pains in Texas Hill Country  
Needs vs. Wants  
Take a Stand

g. Offers own opinion forcefully without domineering.

Eco Ethics  
Growing Pains in Texas Hill Country  
Take a Stand

h. Responds appropriately to comments and questions.

Eco Ethics  
Educating Wanjiku  
Energy Imagery  
Family Perspective  
Food for Thought  
For the Common Good  
Growing Pains in Texas Hill Country  
Maria's Education  
Mining for Chocolate  
The More The Merrier?  
Needs vs. Wants  
People on the Move  
Power of the Pyramids  
Something for Everyone  
Stage Stepping  
Take a Stand  
Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the Potomac?  
A World of Difference

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

All in the Family  
Cougar Hunt  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Educating Wanjiku  
Everything Is Connected  
Family Perspective  
Food for Thought  
For the Common Good  
Growing Pains in Texas Hill Country  
The Hunger Banquet  
Maria's Education  
Mining for Chocolate  
People on the Move  
Power of the Pyramids  
Something for Everyone  
Take a Stand  
Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the Potomac?  
A World of Difference

j. Gives reasons in support of opinions expressed.

Eco Ethics  
Growing Pains in Texas Hill Country  
Take a Stand

l. Employs a group decision-making technique such as brainstorming or a problem solving sequence (e.g., recognizes problem, defines problem, identifies possible solutions, selects optimal solution, implements solution, evaluates solution).

Eco Ethics  
For the Common Good  
Something for Everyone

ELA8LSV2. The student listens to and views various forms of text and media in order to gather and share information, persuade others, and express and understand ideas. The student will select and critically analyze messages using rubrics as assessment tools. When delivering and responding to presentations, the student:

- a. Gives oral presentations or dramatic interpretations for various purposes.  
Growing Pains in Texas Hill Country
- b. Analyzes oral communication by paraphrasing a speaker's purpose and point of view, and asks relevant questions concerning the speaker's content, delivery, and purpose.  
Growing Pains in Texas Hill Country  
Take a Stand

## Grade Nine

### READING ACROSS THE CURRICULUM

ELA9RC2. The student participates in discussions related to curricular learning in all subject areas. The student

- c. Relates messages and themes from one subject area to those in another area.

*Feeding the Global Family*  
*The People Connection*  
*The Rising Tide of Poverty*  
*Troubled Water*  
*A Warm Forecast for the Planet?*  
*Women: The Critical Link*

### 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.  
 All in the Family  
 Baby-O-Matic  
 Earth: The Apple of Our Eye (Intermediate/Secondary)  
 Eco Ethics  
 Educating Wanjiku  
 Family Perspective  
 Food for Thought  
 For the Common Good  
 Global Warming Begins at Home  
 Growing Pains in Texas Hill Country  
 How Much Space Do We Need?  
 The Hunger Banquet  
 Living on \$500 a Year  
 Maria's Education  
 Needs vs. Wants  
 Power of the Pyramids  
 Something for Everyone  
 Stage Stepping  
 Take a Stand  
 Transportation Tally  
 Water, Water Everywhere (Secondary)  
 A Woman's Place  
 A World of Difference  
 World Population Video

- c. Responds to questions with appropriate information.  
 All in the Family  
 Baby-O-Matic  
 Earth: The Apple of Our Eye (Intermediate/Secondary)  
 Eco Ethics  
 Educating Wanjiku  
 Everything Is Connected  
 Family Perspective

Food for Thought  
 For the Common Good  
 Global Warming Begins at Home  
 Growing Pains in Texas Hill Country  
 How Much Space Do We Need?  
 The Hunger Banquet  
 Living on \$500 a Year  
 Maria's Education  
 Needs vs. Wants  
 Pop Quiz  
 Power of the Pyramids  
 Something for Everyone  
 Stage Stepping  
 Take a Stand  
 Water, Water Everywhere (Secondary)  
 A Woman's Place  
 A World of Difference

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

Eco Ethics  
 Educating Wanjiku  
 Family Perspective  
 Growing Pains in Texas Hill Country  
 Needs vs. Wants  
 Take a Stand

e. Offers own opinion forcefully without domineering.

Eco Ethics  
 Growing Pains in Texas Hill Country  
 Take a Stand

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

All in the Family  
 Baby-O-Matic  
 Earth: The Apple of Our Eye (Intermediate/Secondary)  
 Eco Ethics  
 Educating Wanjiku  
 Everything Is Connected  
 Family Perspective  
 Food for Thought  
 For the Common Good  
 Global Warming Begins at Home  
 Growing Pains in Texas Hill Country  
 The Hunger Banquet  
 Living on \$500 a Year  
 Maria's Education  
 Needs vs. Wants  
 Pop Quiz  
 Power of the Pyramids  
 Something for Everyone  
 Stage Stepping  
 Take a Stand  
 Transportation Tally  
 Water, Water Everywhere (Secondary)  
 Who Polluted the Potomac?  
 A Woman's Place

## A World of Difference

- g. Gives reasons in support of opinions expressed.

Eco Ethics  
Growing Pains in Texas Hill Country  
Take a Stand

- i. Employs group decision-making techniques such as brainstorming or a problem solving sequence (e.g., recognizes problem, defines problem, identifies possible solutions, selects optimal solution, implements solution, evaluates solution).

Eco Ethics  
For the Common Good  
Living on \$500 a Year  
Something for Everyone

### LISTENING, SPEAKING, AND VIEWING.

When delivering and responding to presentations, the student:

- a. Delivers narrative, expository, or persuasive presentations that incorporate the same elements found in that mode or genre of writing.

Growing Pains in Texas Hill Country

## Grade Ten

### 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.

All in the Family  
Baby-O-Matic  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Eco Ethics  
Educating Wanjiku  
Family Perspective  
Food for Thought  
For the Common Good  
Global Warming Begins at Home  
Growing Pains in Texas Hill Country  
How Much Space Do We Need?  
The Hunger Banquet  
Living on \$500 a Year  
Maria's Education  
Needs vs. Wants  
Power of the Pyramids  
Something for Everyone  
Stage Stepping  
Take a Stand  
Transportation Tally  
Water, Water Everywhere (Secondary)  
A Woman's Place  
A World of Difference  
World Population Video

- c. Responds to questions with appropriate information.

All in the Family  
Baby-O-Matic  
Earth: The Apple of Our Eye (Intermediate/Secondary)

Eco Ethics  
Educating Wanjiku  
Everything Is Connected  
Family Perspective  
Food for Thought  
For the Common Good  
Global Warming Begins at Home  
Growing Pains in Texas Hill Country  
How Much Space Do We Need?  
The Hunger Banquet  
Living on \$500 a Year  
Maria's Education  
Needs vs. Wants  
Pop Quiz  
Power of the Pyramids  
Something for Everyone  
Stage Stepping  
Take a Stand  
Water, Water Everywhere (Secondary)  
A Woman's Place  
A World of Difference

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

Eco Ethics  
Educating Wanjiku  
Family Perspective  
Growing Pains in Texas Hill Country  
Needs vs. Wants  
Take a Stand

e. Offers own opinion forcefully without domineering.

Eco Ethics  
Growing Pains in Texas Hill Country  
Take a Stand

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

All in the Family  
Baby-O-Matic  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Eco Ethics  
Educating Wanjiku  
Family Perspective  
Everything Is Connected  
Food for Thought  
For the Common Good  
Global Warming Begins at Home  
Growing Pains in Texas Hill Country  
The Hunger Banquet  
Living on \$500 a Year  
Maria's Education  
Needs vs. Wants  
Pop Quiz  
Power of the Pyramids  
Something for Everyone  
Stage Stepping  
Take a Stand

Transportation Tally  
Water, Water Everywhere (Secondary)  
Who Polluted the Potomac?  
A Woman's Place  
A World of Difference

g. Gives reasons in support of opinions expressed.

Eco Ethics  
Growing Pains in Texas Hill Country  
Take a Stand

i. Employs group decision-making techniques such as brainstorming or a problemsolving sequence (e.g., recognizes problem, defines problem, identifies possible solutions, selects optimal solution, implements solution, evaluates solution).

Eco Ethics  
For the Common Good  
Something for Everyone

## Grade Twelve

### LISTENING, SPEAKING, AND VIEWING

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

a. Initiates new topics in addition to responding to adult-initiated topics.

Earth: The Apple of Our Eye (Intermediate/Secondary)  
Eco Ethics  
Everything Is Connected  
Family Perspective  
Food for Thought  
For the Common Good  
The Hunger Banquet  
Living on \$500 a Year  
Maria's Education  
Needs vs. Wants  
Something for Everyone  
Take a Stand  
A Woman's Place

b. Asks relevant questions.

All in the Family  
Baby-O-Matic  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Eco Ethics  
Educating Wanjiku  
Family Perspective  
Food for Thought  
For the Common Good  
Global Warming Begins at Home  
Growing Pains in Texas Hill Country  
How Much Space Do We Need?  
The Hunger Banquet  
Living on \$500 a Year  
Maria's Education  
Needs vs. Wants  
Power of the Pyramids  
Something for Everyone  
Stage Stepping

Take a Stand  
Transportation Tally  
Water, Water Everywhere (Secondary)  
A Woman's Place  
A World of Difference  
World Population Video

c. Responds to questions with appropriate information.

All in the Family  
Baby-O-Matic  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Eco Ethics  
Educating Wanjiku  
Everything Is Connected  
Family Perspective  
Food for Thought  
For the Common Good  
Global Warming Begins at Home  
Growing Pains in Texas Hill Country  
How Much Space Do We Need?  
The Hunger Banquet  
Living on \$500 a Year  
Maria's Education  
Needs vs. Wants  
Pop Quiz  
Power of the Pyramids  
Something for Everyone  
Stage Stepping  
Take a Stand  
Water, Water Everywhere (Secondary)  
A Woman's Place  
A World of Difference

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

Eco Ethics  
Educating Wanjiku  
Family Perspective  
Growing Pains in Texas Hill Country  
Needs vs. Wants  
Take a Stand

e. Offers own opinion forcefully without domineering.

Eco Ethics  
Growing Pains in Texas Hill Country  
Take a Stand

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

All in the Family  
Baby-O-Matic  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Eco Ethics  
Educating Wanjiku  
Everything Is Connected  
Family Perspective  
Food for Thought  
For the Common Good

Global Warming Begins at Home  
Growing Pains in Texas Hill Country  
The Hunger Banquet  
Living on \$500 a Year  
Maria's Education  
Needs vs. Wants  
Pop Quiz  
Power of the Pyramids  
Something for Everyone  
Stage Stepping  
Take a Stand  
Transportation Tally  
Water, Water Everywhere (Secondary)  
Who Polluted the Potomac?  
A Woman's Place  
A World of Difference

g. Gives reasons in support of opinions expressed.

Eco Ethics  
Growing Pains in Texas Hill Country  
Take a Stand

i. Employs group decision-making techniques such as brainstorming or a problem solving sequence (e.g., recognizes problem, defines problem, identifies possible solutions, selects optimal solution, implements solution, evaluates solution).

Eco Ethics  
For the Common Good  
Something for Everyone

---

---

# Mathematics

---

---

## Kindergarten

### NUMBERS AND OPERATIONS

MKN1. Students will connect numerals to the quantities they represent.

- a. Count a number of objects up to 30.

Creatures in Motion  
Crowding Can Be Seedy  
Food for Thought  
Go Fish!

- e. Compare two or more sets of objects (1-10) and identify which set is equal to, more than, or less than the other.

Creatures in Motion  
Crowding Can Be Seedy  
Food for Thought  
Go Fish!

### DATA ANALYSIS AND PROBABILITY

MKD1. Students will pose information questions, collect data, organize, and record results using objects, pictures, and picture graphs.

Earth Cookie  
World Population Video

### PROCESS SKILLS

MKP1. Students will solve problems that arise in mathematics and in other contexts.

- a. Solve non-routine word problems using the strategy act out the problem or use objects.

Food for Thought  
Population Circle

MKP2. Students will investigate, develop, and evaluate mathematical arguments.

Go Fish!  
Earth Cookie  
Population Circle

MKP4. Students understand how mathematical ideas interconnect and build on one another and apply mathematics in other content areas.

Creatures in Motion  
Crowding Can Be Seedy  
Go Fish!

MKP5. Students will create and use pictures, manipulatives, models, and symbols to organize, record, and communicate mathematical ideas.

Earth Cookie  
Food for Thought  
Population Circle

## Grade One

### NUMBER AND OPERATIONS

M1N1. Students will estimate, model, compare, order, and represent whole numbers up to 100.

- a. Represent numbers less than 100 using a variety of models, diagrams, and number sentences. Represent numbers larger than 10 in terms of tens and ones using counters and pictures.

Adding Armadillos  
Food for Thought  
Population Circle

- b. Correctly count and represent the number of objects in a set using numerals.

Adding Armadillos  
Creatures in Motion  
Crowding Can Be Seedy  
Go Fish!  
Mining for Chocolate  
Population Circle

M1N3. Students will add and subtract numbers less than 100 as well as understand and use the inverse relationship between addition and subtraction.

- a. Identify one more than, one less than, 10 more than, and 10 less than a given number.

Adding Armadillos

- g. Apply addition and subtraction to 2 digit numbers without regrouping (e.g.  $15 + 4$ ,  $80 - 60$ ,  $56 + 10$ ,  $100 - 30$ ,  $58 + 5$ ).

Adding Armadillos

- h. Solve and create word problems involving addition and subtraction to 100 without regrouping. Use words, pictures and concrete models to interpret story problems and reflect the combining of sets as addition and taking away or comparing elements of sets as subtraction.

Adding Armadillos

#### DATA ANALYSIS AND PROBABILITY

M1D1. Students will create simple tables and graphs and interpret them.

- a. Interpret tally marks, picture graphs and bar graphs.

Earth Cookie

- b. Organize and record data using objects, pictures, tally marks, and picture graphs.

Earth Cookie

#### PROCESS SKILLS

M1P1. Students will solve problems that arise in mathematics and in other contexts.

- a. Solve non-routine word problems using the strategy make a picture or diagram and continue to develop the strategy act out or use objects learned in kindergarten.

Adding Armadillos  
Population Circle

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

Adding Armadillos  
Earth Cookie

M1P2. Students will investigate, develop, and evaluate mathematical arguments.

Earth Cookie  
Go Fish!  
Population Circle

M1P4. Students understand how mathematical ideas interconnect and build on one another and apply mathematics in other content areas.

Adding Armadillos  
Creatures in Motion  
Crowding Can Be Seedy  
Earth Cookie  
Food for Thought  
Go Fish!  
Mining for Chocolate

## Population Circle

M1P5. Students will create and use pictures, manipulatives, models, and symbols to organize, record, and communicate mathematical ideas.

Adding Armadillos  
Earth Cookie  
Food for Thought  
Population Circle

## Grade Two

### NUMBERS AND OPERATIONS

M2N1. Students will understand the place value representation of whole numbers through four digits.

b. Understand the relative magnitudes of numbers using 10 as a unit, 100 as a unit, or 1000 as a unit. Represent 2-digit numbers with drawings of tens and ones and 3-digit numbers with drawings of hundreds, tens, and ones.

Adding Armadillos  
Food for Thought  
Multiplying Mice  
Population Circle

M2N2. Students will build fluency with multi-digit addition and subtraction.

a. Correctly add and subtract two whole numbers up to three digits each with regrouping.

Adding Armadillos  
Multiplying Mice

M2N4. Students will understand and compare common fractions with small denominators.

a. Model, identify, label, and compare fractions (thirds, sixths, eighths, tenths) as a representation of equal parts of a whole or of a set.

Earth Cookie  
Earth: The Apple of Our Eye (Elementary)

### DATA ANALYSIS AND PROBABILITY

M2D1. Students will create simple tables and graphs and interpret their meaning.

a. Organize and display data using picture graphs, Venn diagrams, bar graphs, and simple charts/tables to record results.

Earth Cookie  
Food for Thought

b. Know how to interpret picture graphs, Venn diagrams, and bar graphs.

Earth Cookie  
Food for Thought

### PROCESS SKILLS

M2P1. Students will solve problems that arise in mathematics and in other contexts.

a. Solve non-routine word problems using the strategies of use or look for a pattern or guess and check as well as all strategies learned in previous grades.

Adding Armadillos  
Multiplying Mice  
Population Circle

b. The student will solve single step routine word problems related to all appropriate second grade math standards.

Adding Armadillos  
Earth Cookie  
Multiplying Mice

M2P2. Students will be able to investigate, develop, and evaluate mathematical arguments.

Adding Armadillos  
Earth Cookie  
Go Fish!  
Population Circle

M2P4. Students understand how mathematical ideas interconnect and build on one another and apply mathematics in other content areas.

Adding Armadillos  
Creatures in Motion  
Crowding Can Be Seedy  
Earth Cookie  
Food for Thought  
Go Fish!  
Population Circle

M2P5. Students will be able to create and use pictures, manipulatives, models, and symbols to organize, record, and communicate mathematical ideas.

Adding Armadillos  
Earth Cookie  
Food for Thought  
Multiplying Mice  
Population Circle

### **Grade Three**

#### **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.

Adding Armadillos  
Everything Counts  
Multiplying Mice  
People Count  
Population Riddles

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

b. Use mental math and estimation strategies to add and subtract.

Population Riddles

c. Solve problems requiring addition and subtraction.

Adding Armadillos  
Multiplying Mice  
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

M3N5. Students will understand the meaning of decimal fractions and common fractions in simple cases and apply them in problem-solving situations.

d. Know and use decimal fractions and common fractions to represent the size of parts created by equal divisions of a whole.

Earth Cookie

Earth: The Apple of Our Eye (Elementary)

g. Solve problems involving fractions.

Earth Cookie

Earth: The Apple of Our Eye (Elementary)

#### ALGEBRA

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

a. Describe and extend numeric and geometric patterns.

Adding Armadillos

Multiplying Mice

Population Circle

Population Riddles

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.

People Count

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.

Adding Armadillos

Cougar Hunt

Earth Cookie

Earth: The Apple of Our Eye (Elementary)

Multiplying Mice

People Count

Population Riddles

The Stork and the Grim Reaper

Timber!

Water, Water Everywhere (Elementary/Intermediate)

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

Adding Armadillos

Cougar Hunt

Earth Cookie

Earth: The Apple of Our Eye (Elementary)

Multiplying Mice

People Count

Timber!

Water, Water Everywhere (Elementary/Intermediate)

M3P2. Students will investigate, develop, and evaluate mathematical arguments.

Adding Armadillos

Earth Cookie

Earth: The Apple of Our Eye (Elementary)

Multiplying Mice

Population Circle  
The Stork and the Grim Reaper  
Water, Water Everywhere (Elementary/Intermediate)

M3P4. Students will understand how mathematical ideas interconnect and build on one another and apply mathematics in other content areas.

Adding Armadillos  
Cougar Hunt  
Earth Cookie  
Earth: The Apple of Our Eye (Elementary)  
Food for Thought  
Multiplying Mice  
People Count  
Population Circle  
Population Riddles  
The Stork and the Grim Reaper  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)

M3P5. Students will create and use pictures, manipulatives, models, and symbols to organize, record, and communicate mathematical ideas.

Adding Armadillos  
Earth Cookie  
Earth: The Apple of Our Eye (Elementary)  
Food for Thought  
Multiplying Mice  
Population Circle  
The Stork and the Grim Reaper  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)

## Grade Four

### 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  
People Count  
Population Riddles  
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  
On the Double  
Power of the Pyramids

M4N6. Students will further develop their understanding of the meaning of common fractions and use them in computations.

- a. Understand representations of simple equivalent fractions.  
Earth: The Apple of Our Eye (Elementary)

### 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.
  - Adding Armadillos
  - Multiplying Mice
  - Population Circle
  - Population Riddles
  - 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.
  - Earth Cookie
  - Earth: The Apple of Our Eye (Elementary)
  - Everything Counts
  - Food for Thought
  - Multiplying Mice
  - People Count
  - 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.
  - Adding Armadillos
  - People Count
  - Timber!
- b. Solve single and multi-step routine word problems related to all appropriate fourth grade math standards.
  - Adding Armadillos
  - Earth: The Apple of Our Eye (Elementary)
  - Everything Counts
  - Multiplying Mice
  - People Count
  - Timber!
  - Water, Water Everywhere (Elementary/Intermediate)
- c. Determine the operation(s) needed to solve a problem.
  - Adding Armadillos
  - Everything Counts
  - Multiplying Mice
  - People Count
  - The Stork and the Grim Reaper
  - Timber!

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

- Adding Armadillos
- Earth: The Apple of Our Eye (Elementary)
- Everything Counts
- Multiplying Mice

People Count  
Population Circle  
Population Riddles  
The Stork and the Grim Reaper  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)

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

Adding Armadillos  
Earth: The Apple of Our Eye (Elementary)  
Everything Counts  
Multiplying Mice  
People Count  
Population Circle  
The Stork and the Grim Reaper  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)

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

Adding Armadillos  
Earth: The Apple of Our Eye (Elementary)  
Everything Counts  
Multiplying Mice  
People Count  
Population Circle  
Population Riddles  
The Stork and the Grim Reaper  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)

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

Adding Armadillos  
Earth: The Apple of Our Eye (Elementary)  
Everything Counts  
Multiplying Mice  
People Count  
Population Circle  
The Stork and the Grim Reaper  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)  
When the Chips Are Down

## Grade Five

### 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  
Water, Water Everywhere (Elementary/Intermediate)

### 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.

Food for Thought  
Population Clock  
Population Riddles

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

#### 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.

Earth: The Apple of Our Eye (Elementary)  
Everything Counts  
People Count  
Power of the Pyramids  
Timber!  
World Population Video

M5D2. Students will collect, organize, and display data using the most appropriate graph.

Everything Counts  
Multiplying Mice  
Population Circle  
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.

Adding Armadillos  
Earth: The Apple of Our Eye (Elementary)  
Everything Counts  
Multiplying Mice  
People Count  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)

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

Adding Armadillos  
Everything Counts  
Multiplying Mice  
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.

Adding Armadillos  
Earth: The Apple of Our Eye (Elementary)  
Everything Counts  
Multiplying Mice  
Population Riddles  
The Stork and the Grim Reaper  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)

M5P3. Students will use the language of mathematics to express ideas precisely.

Adding Armadillos  
Earth: The Apple of Our Eye (Elementary)  
Everything Counts  
Multiplying Mice  
People Count  
Population Riddles  
Seeing Double  
The Stork and the Grim Reaper  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)

M5P4. Students will understand how mathematical ideas interconnect and build on one another and apply mathematics in other content areas.

Adding Armadillos  
Earth: The Apple of Our Eye (Elementary)  
Everything Counts  
Multiplying Mice  
People Count  
Population Circle  
Population Riddles  
Seeing Double  
The Stork and the Grim Reaper  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)

M5P5. Students will create and use pictures, manipulatives, models, and symbols to organize, record, and communicate mathematical ideas.

Adding Armadillos  
Earth: The Apple of Our Eye (Elementary)  
Everything Counts  
Multiplying Mice  
People Count  
Population Circle  
The Stork and the Grim Reaper  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)

## **Grade Six**

### **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.

Earth: The Apple of Our Eye (Intermediate/Secondary)  
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.

Earth: The Apple of Our Eye (Intermediate/Secondary)

The Stork and the Grim Reaper

Water, Water Everywhere (Elementary/Intermediate)

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 Circle

Population Clock

Population Riddles

The Stork and the Grim Reaper

Timber!

- b. Use manipulatives or draw pictures to solve problems involving proportional relationships.

All in the Family

Earth: The Apple of Our Eye (Intermediate/Secondary)

The Stork and the Grim Reaper

Timber!

Water, Water Everywhere (Elementary/Intermediate)

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.

- Adding Armadillos
- All in the Family
- Everything Counts
- Multiplying Mice
- Stage Stepping
- Timber!

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

- All in the Family
- Everything Counts
- Family Perspective
- Global Warming Begins at Home
- How Much Space Do We Need?
- Measuring a Million
- Multiplying Mice
- On the Double
- People Count
- The Pop Ecology Files
- Power of the Pyramids
- Stage Stepping
- Timber!
- Transportation Tally
- A World of Difference

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

- All in the Family
- Cougar Hunt
- Earth: The Apple of Our Eye (Intermediate/Secondary)
- Everything Counts
- The Pop Ecology Files
- Population Circle
- Power of the Pyramids
- Stage Stepping
- Timber!

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  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Everything Counts  
Family Perspective  
Global Warming Begins at Home  
How Much Space Do We Need?  
Measuring a Million  
On the Double  
The Pop Ecology Files  
Population Circle  
Population Clock  
Population Riddles  
Power of the Pyramids  
Stage Stepping  
The Stork and the Grim Reaper  
Timber!  
Transportation Tally  
Water, Water Everywhere (Elementary/Intermediate)  
A World of Difference

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

All in the Family  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Everything Counts  
Family Perspective  
Food for Thought  
Global Warming Begins at Home  
How Much Space Do We Need?  
Measuring a Million  
On the Double  
The Pop Ecology Files  
Population Circle  
Population Clock  
Population Riddles  
Power of the Pyramids  
Stage Stepping  
The Stork and the Grim Reaper  
Timber!  
Transportation Tally  
Water, Water Everywhere (Elementary/Intermediate)  
A World of Difference

- c. Apply and adapt a variety of appropriate strategies to solve problems.

All in the Family  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Everything Counts  
Family Perspective  
Food for Thought

Global Warming Begins at Home  
 How Much Space Do We Need?  
 Measuring a Million  
 On the Double  
 The Pop Ecology Files  
 Population Circle  
 Population Clock  
 Population Riddles  
 Power of the Pyramids  
 Stage Stepping  
 The Stork and the Grim Reaper  
 Timber!  
 Transportation Tally  
 Water, Water Everywhere (Elementary/Intermediate)  
 A World of Difference

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?  
 Multiplying Mice  
 Measuring a Million  
 The Pop Ecology Files  
 Population Circle  
 Population Riddles  
 Stage Stepping  
 Timber!  
 A World of Difference

M6P3. Students will communicate mathematically.

a. Organize and consolidate their mathematical thinking through communication.

Earth: The Apple of Our Eye (Intermediate/Secondary)  
 Everything Counts  
 The Pop Ecology Files  
 Population Circle  
 Stage Stepping  
 The Stork and the Grim Reaper  
 Timber!  
 Water, Water Everywhere (Elementary/Intermediate)  
 A World of Difference  
 World Population Video

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

Earth: The Apple of Our Eye (Intermediate/Secondary)  
 Everything Counts  
 The Pop Ecology Files  
 Population Circle  
 Stage Stepping  
 Timber!  
 Water, Water Everywhere (Elementary/Intermediate)  
 A World of Difference  
 World Population Video

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

All in the Family  
 Earth: The Apple of Our Eye (Elementary)  
 Everything Counts  
 Family Perspective  
 Global Warming Begins at Home  
 How Much Space Do We Need?  
 Measuring a Million  
 On the Double  
 The Pop Ecology Files  
 Population Circle  
 Population Clock  
 Population Riddles  
 Power of the Pyramids  
 Stage Stepping  
 The Stork and the Grim Reaper  
 Timber!  
 Transportation Tally  
 Water, Water Everywhere (Elementary/Intermediate)  
 A World of Difference  
 World Population Video

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  
 Earth: The Apple of Our Eye (Elementary)  
 Everything Counts  
 Family Perspective  
 Global Warming Begins at Home  
 How Much Space Do We Need?  
 Measuring a Million  
 On the Double  
 The Pop Ecology Files  
 Population Circle  
 Population Clock  
 Population Riddles  
 Power of the Pyramids  
 Stage Stepping  
 The Stork and the Grim Reaper  
 Timber!  
 Transportation Tally  
 Water, Water Everywhere (Elementary/Intermediate)  
 A World of Difference  
 World Population Video

M6P5. Students will represent mathematics in multiple ways.

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

All in the Family  
 Earth: The Apple of Our Eye (Intermediate/Secondary)  
 Everything Counts  
 Stage Stepping  
 The Stork and the Grim Reaper  
 Water, Water Everywhere (Elementary/Intermediate)  
 A World of Difference  
 World Population Video

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

All in the Family  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Everything Counts  
Stage Stepping  
The Stork and the Grim Reaper  
Water, Water Everywhere (Elementary/Intermediate)  
A World of Difference  
World Population Video

MRC. Students will enhance reading in all curriculum areas by:

- a. Reading in All Curriculum Areas
- Read both informational and fictional texts in a variety of genres and modes of discourse

*The Balance of Nature*  
*Global Family Ties*  
*You're One in Six Billion!*  
*Your Place on the Planet*

## Grade Seven

### 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  
People Count

- b. Construct frequency distributions.

Cougar Hunt

PROCESS STANDARDS

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

a. Build new mathematical knowledge through problem solving.

- All in the Family
- Earth: The Apple of Our Eye (Elementary)
- Everything Counts
- Family Perspective
- Global Warming Begins at Home
- How Much Space Do We Need?
- Measuring a Million
- On the Double
- The Pop Ecology Files
- Population Circle
- Population Clock
- Population Riddles
- Power of the Pyramids
- Stage Stepping
- The Stork and the Grim Reaper
- Timber!
- Transportation Tally
- Water, Water Everywhere (Elementary/Intermediate)
- A World of Difference
- World Population Video

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

- All in the Family
- Earth: The Apple of Our Eye (Elementary)
- Everything Counts
- Family Perspective
- Global Warming Begins at Home
- How Much Space Do We Need?
- Measuring a Million
- On the Double
- The Pop Ecology Files
- Population Circle
- Population Clock
- Population Riddles
- Power of the Pyramids
- Stage Stepping
- The Stork and the Grim Reaper
- Timber!
- Transportation Tally
- Water, Water Everywhere (Elementary/Intermediate)
- A World of Difference
- World Population Video

M7P3. Students will communicate mathematically.

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

- All in the Family
- Earth: The Apple of Our Eye (Elementary)
- Everything Counts
- Family Perspective
- Global Warming Begins at Home
- How Much Space Do We Need?
- Measuring a Million

On the Double  
 The Pop Ecology Files  
 Population Circle  
 Population Clock  
 Population Riddles  
 Power of the Pyramids  
 Stage Stepping  
 The Stork and the Grim Reaper  
 Timber!  
 Transportation Tally  
 Water, Water Everywhere (Elementary/Intermediate)  
 A World of Difference  
 World Population Video

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  
 Earth: The Apple of Our Eye (Elementary)  
 Everything Counts  
 Family Perspective  
 Global Warming Begins at Home  
 How Much Space Do We Need?  
 Measuring a Million  
 On the Double  
 The Pop Ecology Files  
 Population Circle  
 Population Clock  
 Population Riddles  
 Power of the Pyramids  
 Stage Stepping  
 The Stork and the Grim Reaper  
 Timber!  
 Transportation Tally  
 Water, Water Everywhere (Elementary/Intermediate)  
 A World of Difference  
 World Population Video

M7P5. Students will represent mathematics in multiple ways.

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

All in the Family  
 Earth: The Apple of Our Eye (Intermediate/Secondary)  
 Everything Counts  
 Stage Stepping  
 The Stork and the Grim Reaper  
 Water, Water Everywhere (Elementary/Intermediate)  
 A World of Difference  
 World Population Video

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

All in the Family  
 Earth: The Apple of Our Eye (Intermediate/Secondary)  
 Everything Counts  
 Stage Stepping  
 The Stork and the Grim Reaper  
 Water, Water Everywhere (Elementary/Intermediate)  
 A World of Difference

## World Population Video

MRC. Students will enhance reading in all curriculum areas by:

- a. Reading in all curriculum areas
  - Read both informational and fictional texts in a variety of genres and modes of discourse
    - The Balance of Nature*
    - Global Family Ties*
    - You're One in Six Billion!*
    - Your Place on the Planet*

## Grade Eight

### 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
    - 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
  - 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.
    - Adding Armadillos
    - Global Warming Begins at Home
    - The Pop Ecology Files
    - Timber!
  - c. Interpret solutions in problem contexts.
    - All in the Family
    - 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
    - Earth: The Apple of Our Eye (Intermediate/Secondary)
    - Everything Counts
    - Global Warming Begins at Home
    - How Much Space Do We Need?
    - Measuring a Million
    - On the Double
    - The Pop Ecology Files
    - Population Circle
    - Population Clock
    - Population Riddles
    - Power of the Pyramids
    - Stage Stepping
    - The Stork and the Grim Reaper
    - Timber!
    - Transportation Tally
    - Water, Water Everywhere (Secondary)
    - A World of Difference
    - World Population Video
  - b. Solve problems that arise in mathematics and in other contexts.
    - All in the Family
    - Earth: The Apple of Our Eye (Intermediate/Secondary)
    - Everything Counts
    - Family Perspective
    - Global Warming Begins at Home
    - How Much Space Do We Need?
    - Measuring a Million
    - On the Double
    - The Pop Ecology Files
    - Population Circle
    - Population Clock
    - Population Riddles
    - Power of the Pyramids
    - Stage Stepping
    - The Stork and the Grim Reaper
    - Timber!
    - Transportation Tally
    - Water, Water Everywhere (Secondary)
    - A World of Difference
    - World Population Video

M8P3. Students will communicate mathematically.

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

- All in the Family
- Earth: The Apple of Our Eye (Intermediate/Secondary)
- Everything Counts
- Global Warming Begins at Home
- How Much Space Do We Need?
- Measuring a Million
- On the Double
- The Pop Ecology Files
- Population Circle
- Population Clock
- Population Riddles
- Power of the Pyramids
- Stage Stepping
- The Stork and the Grim Reaper
- Timber!
- Transportation Tally
- Water, Water Everywhere (Secondary)
- A World of Difference
- World Population Video

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
- Earth: The Apple of Our Eye (Intermediate/Secondary)
- Everything Counts
- Family Perspective
- Global Warming Begins at Home
- How Much Space Do We Need?
- Measuring a Million
- On the Double
- The Pop Ecology Files
- Population Circle
- Population Clock
- Population Riddles
- Power of the Pyramids
- Stage Stepping
- The Stork and the Grim Reaper
- Timber!
- Transportation Tally
- Water, Water Everywhere (Secondary)
- A World of Difference
- World Population Video

M8P5. Students will represent mathematics in multiple ways.

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

- All in the Family
- Earth: The Apple of Our Eye (Intermediate/Secondary)
- Everything Counts
- Stage Stepping
- The Stork and the Grim Reaper
- Water, Water Everywhere (Secondary)
- A World of Difference
- World Population Video

- c. Use representations to model and interpret physical, social, and mathematical phenomena.
  - All in the Family
  - Earth: The Apple of Our Eye (Intermediate/Secondary)
  - Everything Counts
  - Stage Stepping
  - The Stork and the Grim Reaper
  - Water, Water Everywhere (Secondary)
  - A World of Difference
  - World Population Video

MRC. Students will enhance reading in all curriculum areas by:

- a. Reading in all curriculum areas
  - Read both informational and fictional texts in a variety of genres and modes of discourse
    - The Balance of Nature*
    - Feeding the Global Family*
    - Global Family Ties*
    - The People Connection*
    - The Rising Tide of Poverty*
    - Troubled Water*
    - A Warm Forecast for the Planet?*
    - Women: The Critical Link*
    - Your Place on the Planet*
    - You're One in Six Billion!*

## **Grades Nine to Twelve**

### **(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

#### **PROCESS STANDARDS**

MMPI1. 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?
  - Stage Stepping
  - Transportation Tally
  - A World of Difference
  
- b. Solve problems that arise in mathematics and in other contexts.
  - All in the Family
  - Family Perspective
  - Global Warming Begins at Home
  - How Much Space Do We Need?
  - The Pop Ecology Files
  - Stage Stepping
  - Transportation Tally
  - A World of Difference
  - World Population Video

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  
Family Perspective  
Global Warming Begins at Home  
How Much Space Do We Need?  
The Pop Ecology Files  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

MMIP5. Students will represent mathematics in multiple ways.

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

All in the Family  
Stage Stepping  
A World of Difference  
World Population Video

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

All in the Family  
Everything Counts  
Stage Stepping  
A World of Difference  
World Population Video

MMIR. Students will enhance reading in all curriculum areas by:

a. Reading in All Curriculum Areas

• Read both informational and fictional texts in a variety of genres and modes of discourse

*Feeding the Global Family*  
*The People Connection*  
*The Rising Tide of Poverty*  
*Troubled Water*  
*A Warm Forecast for the Planet?*  
*Women: The Critical Link*

## (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

### PROCESS STANDARDS

MMIIP1. 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?  
The Pop Ecology Files  
Stage Stepping  
Transportation Tally  
A World of Difference

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

All in the Family  
Family Perspective  
Global Warming Begins at Home  
How Much Space Do We Need?  
The Pop Ecology Files  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

MMIIP3. Students will communicate mathematically.

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

All in the Family  
Global Warming Begins at Home  
How Much Space Do We Need?  
The Pop Ecology Files  
Stage Stepping  
Transportation Tally  
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  
Family Perspective  
Global Warming Begins at Home  
How Much Space Do We Need?  
People on the Move  
The Pop Ecology Files  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

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  
Stage Stepping  
A World of Difference  
World Population Video

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

All in the Family  
Everything Counts  
Stage Stepping  
A World of Difference  
World Population Video

### (Mathematics III)

#### PROCESS STANDARDS

MMIIP1. Students will solve problems.

a. Build new mathematical knowledge through problem solving.

All in the Family  
Family Perspective  
Global Warming Begins at Home  
How Much Space Do We Need?

The Pop Ecology Files  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

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

All in the Family  
Family Perspective  
Global Warming Begins at Home  
How Much Space Do We Need?  
The Pop Ecology Files  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

MMIIP3. Students will communicate mathematically.

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

All in the Family  
Global Warming Begins at Home  
How Much Space Do We Need?  
The Pop Ecology Files  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

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  
Family Perspective  
Global Warming Begins at Home  
How Much Space Do We Need?  
The Pop Ecology Files  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

MMIIP5. Students will represent mathematics in multiple ways.

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

All in the Family  
Stage Stepping  
A World of Difference  
World Population Video

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

All in the Family  
Stage Stepping  
A World of Difference  
World Population Video

MMIIR. Students will enhance reading in all curriculum areas by:

a. Reading in All Curriculum Areas

- Read both informational and fictional texts in a variety of genres and modes of discourse

*Feeding the Global Family*  
*The People Connection*  
*The Rising Tide of Poverty*  
*Troubled Water*  
*A Warm Forecast for the Planet?*  
*Women: The Critical Link*

(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  
Global Warming Begins at Home  
How Much Space Do We Need?  
The Pop Ecology Files  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

- 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  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

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  
Global Warming Begins at Home  
How Much Space Do We Need?  
The Pop Ecology Files  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

MC1P5. Students will represent mathematics in multiple ways.

- a. Create and use representations to organize, record, and communicate mathematical ideas.  
All in the Family

Stage Stepping  
A World of Difference  
World Population Video

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

All in the Family  
Stage Stepping  
A World of Difference  
World Population Video

## (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

### PROCESS STANDARDS

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

a. Build new mathematical knowledge through problem solving.

All in the Family  
Global Warming Begins at Home  
How Much Space Do We Need?  
The Pop Ecology Files  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

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  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

MC2P3. Students will communicate mathematically.

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

All in the Family  
Global Warming Begins at Home  
How Much Space Do We Need?  
The Pop Ecology Files  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

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  
Global Warming Begins at Home  
How Much Space Do We Need?  
The Pop Ecology Files

Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

MC2P5. Students will represent mathematics in multiple ways.

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

All in the Family  
Stage Stepping  
A World of Difference  
World Population Video

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

All in the Family  
Stage Stepping  
A World of Difference  
World Population Video

### (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

#### PROCESS STANDARDS

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

a. Build new mathematical knowledge through problem solving.

All in the Family  
Global Warming Begins at Home  
How Much Space Do We Need?  
The Pop Ecology Files  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

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  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

MC3P3. Students will communicate mathematically.

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

All in the Family  
Global Warming Begins at Home  
Growing Pains in Texas Hill Country  
The Pop Ecology Files  
Stage Stepping  
Transportation Tally  
A World of Difference

## World Population Video

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  
Global Warming Begins at Home  
How Much Space Do We Need?  
The Pop Ecology Files  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

MC3P5. Students will represent mathematics in multiple ways.

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

All in the Family  
Stage Stepping  
A World of Difference  
World Population Video

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

All in the Family  
Stage Stepping  
A World of Difference  
World Population Video

## (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  
Family Perspective  
Global Warming Begins at Home  
How Much Space Do We Need?  
The Pop Ecology Files  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

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

All in the Family  
Family Perspective  
Global Warming Begins at Home  
How Much Space Do We Need?  
The Pop Ecology Files  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

MC4P3. Students will communicate mathematically.

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

All in the Family  
Family Perspective  
Global Warming Begins at Home

How Much Space Do We Need?  
The Pop Ecology Files  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

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  
Family Perspective  
Global Warming Begins at Home  
How Much Space Do We Need?  
The Pop Ecology Files  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

MC4P5. Students will represent mathematics in multiple ways.

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

All in the Family  
Stage Stepping  
A World of Difference  
World Population Video

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

All in the Family  
Stage Stepping  
World Population Video  
A World of Difference

MRC. Students will enhance reading in all curriculum areas by:

a. Reading in all curriculum areas

• Read both informational and fictional texts in a variety of genres and modes of discourse

*Feeding the Global Family*  
*The People Connection*  
*The Rising Tide of Poverty*  
*Troubled Water*  
*A Warm Forecast for the Planet?*  
*Women: The Critical Link*

(Accelerated Mathematics I)

DATA ANALYSIS AND PROBABILITY

MA1D2. Students will use the basic laws of probability.

a. Find the probabilities of mutually exclusive events.

A Woman's Place

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

PROCESS STANDARDS

MA1P1. Students will solve problems (using appropriate technology).

a. Build new mathematical knowledge through problem solving.

All in the Family  
Global Warming Begins at Home  
How Much Space Do We Need?  
The Pop Ecology Files  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

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  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

MA1P3. Students will communicate mathematically.

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

All in the Family  
Global Warming Begins at Home  
How Much Space Do We Need?  
The Pop Ecology Files  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

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  
Global Warming Begins at Home  
How Much Space Do We Need?  
The Pop Ecology Files  
Stage Stepping  
Transportation Tally  
A World of Difference  
World Population Video

MA1P5. Students will represent mathematics in multiple ways.

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

All in the Family  
Stage Stepping  
A World of Difference  
World Population Video

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

All in the Family  
Stage Stepping  
A World of Difference  
World Population Video

(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

PROCESS STANDARDS

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

- a. Build new mathematical knowledge through problem solving.

- All in the Family
- Global Warming Begins at Home
- How Much Space Do We Need?
- The Pop Ecology Files
- Stage Stepping
- Transportation Tally
- A World of Difference
- World Population Video

- 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
- Stage Stepping
- Transportation Tally
- A World of Difference
- World Population Video

MA2P3. Students will communicate mathematically.

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

- All in the Family
- Global Warming Begins at Home
- How Much Space Do We Need?
- The Pop Ecology Files
- Stage Stepping
- Transportation Tally
- A World of Difference
- World Population Video

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
- Global Warming Begins at Home
- How Much Space Do We Need?
- The Pop Ecology Files
- Stage Stepping
- Transportation Tally
- A World of Difference
- World Population Video

MA2P5. Students will represent mathematics in multiple ways.

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

- All in the Family
- Stage Stepping

A World of Difference  
World Population Video

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

---

---

# Science

---

---

## Kindergarten

### HABITS OF MIND

SKCS1. 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. Raise questions about the world around you and be willing to seek answers to some of the questions by making careful observations (5 senses) and trying things out.

- Creatures in Motion
- Crowding Can Be Seedy
- Mining for Chocolate
- Population Circle
- Web of Life
- Who Polluted the River?

SKCS2. Students will have the computation and estimation skills necessary for analyzing data and following scientific explanations.

- a. Use whole numbers for counting, identifying, and describing things and experiences.

- Creatures in Motion
- Crowding Can Be Seedy
- Go Fish!
- Mining for Chocolate
- Population Circle

SKCS4. Students will use the ideas of system, model, change, and scale in exploring scientific and technological matters.

- a. Use a model—such as a toy or a picture—to describe a feature of the primary thing.

- Earth Cookie
- Mining for Chocolate
- Who Polluted the River?

- b. Describe changes in size, weight, color, or movement, and note which of their other qualities remains the same. (For example, playing “Follow the Leader” and noting the changes.)

- Creatures in Motion
- Crowding Can Be Seedy
- Population Circle
- Web of Life
- Who Polluted the River?

SKCS5. Students will communicate scientific ideas and activities clearly.

- a. Describe and compare things in terms of number, shape, texture, size, weight, color, and motion.

- Creatures in Motion
- Crowding Can Be Seedy
- Go Fish!
- Mining for Chocolate
- Population Circle
- Web of Life
- Who Polluted the River?

### NATURE OF SCIENCE

SKCS6. Students will understand the important features of the process of scientific inquiry. Students will apply the following to inquiry learning practices:

- a. In doing science, it is often helpful to work with a team and to share findings with others.

- Creatures in Motion
- Crowding Can Be Seedy

Go Fish!  
Population Circle  
Web of Life  
Who Polluted the River?

## Grade One

### HABITS OF MIND

S1CS1. 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. Raise questions about the world around them and be willing to seek answers to some of the questions by making careful observations and measurements and trying to figure things out.

Adding Armadillos  
Cougar Hunt  
Crowding Can Be Seedy  
Earth Cookie  
Go Fish!  
Mining for Chocolate  
Population Circle  
Web of Life  
Who Polluted the River?

S1CS2. Students will have the computation and estimation skills necessary for analyzing data and following scientific explanations.

a. Use whole numbers in ordering, counting, identifying, measuring, and describing things and experiences.

Adding Armadillos  
Cougar Hunt  
Creatures in Motion  
Crowding Can Be Seedy  
Go Fish!  
Mining for Chocolate  
Population Circle

b. Readily give the sums and differences of single-digit numbers in ordinary, practical contexts and judge the reasonableness of the answer.

Adding Armadillos  
Crowding Can Be Seedy

S1CS4. Students will use the ideas of system, model, change, and scale in exploring scientific and technological matters.

a. Use a model—such as a toy or a picture—to describe a feature of the primary thing.

Earth Cookie  
Mining for Chocolate  
Web of Life  
Who Polluted the River?

b. Describe changes in the size, weight, color, or movement of things, and note which of their other qualities remain the same during a specific change.

Creatures in Motion  
Crowding Can Be Seedy  
Population Circle  
Web of Life  
Who Polluted the River?

S1CS5. Students will communicate scientific ideas and activities clearly.

a. Describe and compare things in terms of number, shape, texture, size, weight, color, and motion.

Creatures in Motion

Crowding Can Be Seedy  
Go Fish!  
Mining for Chocolate  
Population Circle  
Web of Life  
Who Polluted the River?

- c. Use simple pictographs and bar graphs to communicate data.  
Cougar Hunt  
Earth Cookie

#### LIFE SCIENCE

S1L1. Students will investigate the characteristics and basic needs of plants and animals.

- a. Identify the basic needs of a plant.

- Air
- Water
- Light
- Nutrients

Crowding Can Be Seedy  
Web of Life

- b. Identify the basic needs of an animal.

- Air
- Water
- Food
- Shelter

Cougar Hunt  
Web of Life

#### INTERDEPENDENCE OF LIFE

S1L1a,b,c. Animals eat plants or other animals for food and may also use plants (or even other animals) for shelter and nesting.

Cougar Hunt  
Web of Life

## Grade Two

#### HABITS OF MIND

S2CS1. 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. Raise questions about the world around them and be willing to seek answers to some of the questions by making careful observations and measurements and trying to figure things out.

Adding Armadillos  
Cougar Hunt  
Creatures in Motion  
Crowding Can Be Seedy  
Earth Cookie  
Go Fish!  
Mining for Chocolate  
Multiplying Mice  
Population Circle  
Web of Life  
Who Polluted the River?

S2CS2. Students will have the computation and estimation skills necessary for analyzing data and following scientific explanations.

- a. Use whole numbers in ordering, counting, identifying, measuring, and describing things and experiences.

Adding Armadillos  
Cougar Hunt  
Creatures in Motion  
Crowding Can Be Seedy  
Go Fish!  
Mining for Chocolate  
Population Circle

b. Readily give the sums and differences of single-digit numbers in ordinary, practical contexts and judge the reasonableness of the answer.

Adding Armadillos  
Multiplying Mice

S2CS4. Students will use the ideas of system, model, change, and scale in exploring scientific and technological matters.

b. Use a model—such as a toy or a picture—to describe a feature of the primary thing.

Earth Cookie  
Mining for Chocolate  
Web of Life  
Who Polluted the River?

c. Describe changes in the size, weight, color, or movement of things, and note which of their other qualities remain the same during a specific change.

Creatures in Motion  
Crowding Can Be Seedy  
Population Circle  
Web of Life  
Who Polluted the River?

S2CS5. Students will communicate scientific ideas and activities clearly.

a. Describe and compare things in terms of number, shape, texture, size, weight, color, and motion.

Creatures in Motion  
Crowding Can Be Seedy  
Go Fish!  
Mining for Chocolate  
Web of Life  
Who Polluted the River?

c. Use simple pictographs and bar graphs to communicate data.

Earth Cookie  
Multiplying Mice

#### THE NATURE OF SCIENCE

S2CS7. Students will understand important features of the process of scientific inquiry. Students will apply the following to inquiry learning practices:

b. In doing science, it is often helpful to work as a team. All team members should reach their own individual conclusions and share their understandings with other members of the team in order to develop a consensus.

Cougar Hunt  
Creatures in Motion  
Crowding Can Be Seedy  
Go Fish!  
Population Circle  
Web of Life  
Who Polluted the River?

#### EARTH SCIENCE

- S2E3. Students will observe and record changes in their surroundings and infer the causes of the changes.
- Recognize effects that occur in a specific area caused by weather, plants, animals, and/or people.  
Web of Life  
Who Polluted the River?

#### PHYSICAL SCIENCE

- S2P2. Students will identify sources of energy and how the energy is used.
- Identify sources of light energy, heat energy, and energy of motion.  
Web of Life
  - Describe how light, heat, and motion energy are used.  
Web of Life  
Who Polluted the River?

#### FLOW OF MATTER AND ENERGY

- S1L3b. Many materials can be recycled and used again, sometimes in different forms.  
Web of Life

### Grade Three

#### HABITS OF MIND

- S3CS1. 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.

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

Adding Armadillos  
Multiplying Mice

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

Cougar Hunt  
Creatures in Motion  
Crowding Can Be Seedy  
Earth Cookie  
Go Fish!  
Mining for Chocolate  
Population Circle  
Web of Life  
Who Polluted the River?

- S3CS2. Students will have the computation and estimation skills necessary for analyzing data and following scientific explanations.

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

Adding Armadillos  
Multiplying Mice

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

- Observe and describe how parts influence one another in things with many parts.

Web of Life

- 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.

Adding Armadillos  
Cougar Hunt  
Crowding Can Be Seedy  
Earth Cookie  
Mining for Chocolate  
Multiplying Mice

Population Circle  
The Stork and the Grim Reaper  
Web of Life  
Who Polluted the River?

S3CS5. Students will communicate scientific ideas and activities clearly.

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

Adding Armadillos  
Earth Cookie  
Multiplying Mice  
Population Circle  
The Stork and the Grim Reaper

S3CS6. Students will question scientific claims and arguments effectively.

a. Support statements with facts found in books, articles, and databases, and identify the sources used.

*Sharing a Small World*

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.

Adding Armadillos  
Cougar Hunt  
Creatures in Motion  
Crowding Can Be Seedy  
Earth Cookie  
Go Fish!  
Mining for Chocolate  
Multiplying Mice  
Population Circle  
The Stork and the Grim Reaper  
Web of Life  
Who Polluted the River?

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.

Crowding Can Be Seedy  
Go Fish!  
Mining for Chocolate  
Population Circle  
Web of Life  
Who Polluted the River?

#### LIFE SCIENCE

S3L1. Students will investigate the habitats of different organisms and the dependence of organisms on their habitat.

d. Explain what will happen to an organism if the habitat is changed.

Cougar Hunt  
Web of Life  
Who Polluted the River?

S3L2. Students will recognize the effects of pollution and humans on the environment.

a. Explain the effects of pollution (such as littering) to the habitats of plants and animals.

Web of Life  
Who Polluted the River?

b. Identify ways to protect the environment.

- Conservation of resources
- Recycling of materials
  - Earth: The Apple of Our Eye (Elementary)
  - Mining for Chocolate
  - Water, Water Everywhere (Elementary/Intermediate)
  - Web of Life
  - Who Polluted the River?

#### INTERDEPENDENCE OF LIFE

S3L1b and S4L1a. Changes in an organism's habitat are sometimes beneficial to it and sometimes harmful.

- Cougar Hunt
- Web of Life
- Who Polluted the Potomac?
- Who Polluted the River?

### Grade Four

#### 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.

- Cougar Hunt
- Crowding Can Be Seedy
- Earth Cookie
- Earth: The Apple of Our Eye (Elementary)
- Energy Imagery
- Everything Counts
- Mining for Chocolate
- More or Less
- Population Circle
- Something for Everyone
- The Stork and the Grim Reaper
- Timber!
- Water, Water Everywhere (Elementary/Intermediate)
- Who Polluted the Potomac?

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.

- Adding Armadillos
- Earth Cookie
- Earth: The Apple of Our Eye (Elementary)
- Everything Counts
- Multiplying Mice
- Population Riddles
- Something for Everyone
- 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.

- Adding Armadillos
- Earth Cookie

Earth: The Apple of Our Eye (Elementary)  
Everything Counts  
Multiplying Mice  
Population Circle  
Population Riddles  
The Stork and the Grim Reaper  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)

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

Adding Armadillos  
Crowding Can Be Seedy  
Multiplying Mice  
Population Circle  
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.

Adding Armadillos  
Crowding Can Be Seedy  
Earth Cookie  
Earth: The Apple of Our Eye (Elementary)  
Everything Counts  
Multiplying Mice  
Population Circle  
Population Riddles  
Something for Everyone  
The Stork and the Grim Reaper  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)

S4CS6. Students will question scientific claims and arguments effectively.

a. Support statements with facts found in books, articles, and databases, and identify the sources used.

*How Do People Use the Earth's Resources?*  
*How Many Is Enough?*  
*What Are People's Basic Needs?*  
*What Is a Population?*  
*Why Do People Need Space?*

#### 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.

Adding Armadillos  
Cougar Hunt  
Crowding Can Be Seedy  
Earth Cookie  
Earth: The Apple of Our Eye (Elementary)  
Energy Imagery  
Everything Counts  
Mining for Chocolate  
More or Less  
Multiplying Mice

Population Circle  
Something for Everyone  
The Stork and the Grim Reaper  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the Potomac?

#### LIFE SCIENCE

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

b. Demonstrate the flow of energy through a food web/food chain beginning with sunlight and including producers, consumers, and decomposers.

Web of Life

c. Predict how changes in the environment would affect a community (ecosystem) of organisms.

Cougar Hunt

Mining for Chocolate

Web of Life

Who Polluted the Potomac?

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

Cougar Hunt

Crowding Can Be Seedy

The Stork and the Grim Reaper

Web of Life

#### INTERDEPENDENCE OF LIFE

S3L1b and S4L1a. Changes in an organism's habitat are sometimes beneficial to it and sometimes harmful.

Cougar Hunt

Web of Life

Who Polluted the Potomac?

Who Polluted the River?

### Grade Five

#### 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.

Adding Armadillos

Earth Cookie

Earth: The Apple of Our Eye (Elementary)

Everything Counts

Population Circle

Timber!

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

Cougar Hunt

Crowding Can Be Seedy

Earth Cookie

Earth: The Apple of Our Eye (Elementary)

Everything Counts

Mining for Chocolate

More or Less

Population Circle

Population Riddles

Something for Everyone

Timber!  
Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the Potomac?

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.

Adding Armadillos  
Earth Cookie  
Earth: The Apple of Our Eye (Elementary)  
Everything Counts  
Multiplying Mice  
Population Circle  
Population Riddles  
The Stork and the Grim Reaper  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)

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.

Adding Armadillos  
Crowding Can Be Seedy  
Multiplying Mice  
Population Circle  
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.

Adding Armadillos  
Earth Cookie  
Earth: The Apple of Our Eye (Elementary)  
Everything Counts  
Multiplying Mice  
Population Circle  
Population Riddles  
Something for Everyone  
The Stork and the Grim Reaper  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)

S5CS6. Students will question scientific claims and arguments effectively.

a. Support statements with facts found in books, articles, and databases, and identify the sources used.

*How Do People Use the Earth's Resources?*  
*How Many Is Enough?*  
*What Are People's Basic Needs?*  
*What Is a Population?*  
*Why Do People Need Space?*

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.

Adding Armadillos

Cougar Hunt  
Crowding Can Be Seedy  
Earth Cookie  
Earth: The Apple of Our Eye (Elementary)  
Energy Imagery  
Everything Counts  
Mining for Chocolate  
More or Less  
Multiplying Mice  
Population Circle  
Population Riddles  
Something for Everyone  
The Stork and the Grim Reaper  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the Potomac?

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.

Earth Cookie  
Earth: The Apple of Our Eye (Elementary)  
Energy Imagery  
Mining for Chocolate  
More or Less  
Population Circle  
Population Riddles  
Something for Everyone  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the Potomac?

## Grade Six

### 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  
Cougar Hunt  
Everything Counts  
Family Perspective  
Global Warming Begins at Home  
How Much Space Do We Need?  
On the Double  
Population Clock  
Power of the Pyramids  
Stage Stepping  
Timber!  
Transportation Tally  
A World of Difference

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

Earth: The Apple of Our Eye (Intermediate/Secondary)  
For the Common Good  
Pop Quiz

Population Riddles  
Something for Everyone  
Take a Stand  
Water, Water Everywhere (Elementary/Intermediate)

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  
Stage Stepping  
Timber!  
Transportation Tally  
A World of Difference

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  
Water, Water Everywhere (Secondary)

d. Draw conclusions based on analyzed data.

All in the Family  
Cougar Hunt  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Everything Counts  
Food for Thought  
For the Common Good  
Global Warming Begins at Home  
Growing Pains in Texas Hill Country  
How Much Space Do We Need?  
On the Double  
The Pop Ecology Files  
Population Circle  
Population Clock  
Power of the Pyramids  
Something for Everyone  
Stage Stepping  
The Stork and the Grim Reaper  
Timber!  
Transportation Tally  
Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the River?  
A World of Difference  
World Population Video

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  
Cougar Hunt  
Stage Stepping  
Who Polluted the River?

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  
Cougar Hunt  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Everything Counts  
Food for Thought  
For the Common Good  
Mining for Chocolate  
Population Circle  
Something for Everyone  
Stage Stepping  
The Stork and the Grim Reaper  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the River?  
A World of Difference  
World Population Video

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  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Everything Counts  
On the Double  
The Pop Ecology Files  
Population Clock  
Power of the Pyramids  
Stage Stepping  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)

S6CS7. Students will question scientific claims and arguments effectively.

a. Question claims based on vague attributions (such as "Leading doctors say...") or on statements made by people outside the area of their particular expertise.

Take a Stand

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

Take a Stand

#### 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  
Cougar Hunt

Earth: The Apple of Our Eye (Intermediate/Secondary)  
Everything Counts  
Family Perspective  
Food for Thought  
For the Common Good  
Global Warming Begins at Home  
Growing Pains in Texas Hill Country  
How Much Space Do We Need?  
Mining for Chocolate  
The Pop Ecology Files  
Population Circle  
Population Riddles  
Power of the Pyramids  
Something for Everyone  
Stage Stepping  
The Stork and the Grim Reaper  
Take a Stand  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the River?  
A World of Difference  
World Population Video

S6CS10. Students will enhance reading in all curriculum areas by:

- a. Reading in All Curriculum Areas
  - Read both informational and fictional texts in a variety of genres and modes of discourse
    - The Balance of Nature*
    - Global Family Ties*
    - Your Place on the Planet*
    - You're One in Six Billion!*

#### 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.

Earth: The Apple of Our Eye (Intermediate/Secondary)  
Water, Water Everywhere (Elementary/Intermediate)

S6E6. Students will describe various sources of energy and with their uses and conservation.

- b. Identify renewable and nonrenewable resources.

Energy Imagery  
For the Common Good  
Mining for Chocolate  
Something for Everyone  
*The Balance of Nature*

#### THE EARTH

S6E3b. Fresh water, limited in supply, is essential for life and also for most industrial processes. Rivers, lakes, and groundwater can be depleted or polluted, becoming unavailable or unsuitable for life.

Earth: The Apple of Our Eye (Intermediate/Secondary)  
Growing Pains in Texas Hill Country  
Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the River?

S6E5i. The benefits of the earth's resources-such as fresh water, air, soil, and trees-can be reduced by using them wastefully or by deliberately or inadvertently destroying them. The atmosphere and the oceans have a limited

capacity to absorb wastes and recycle materials naturally. Cleaning up polluted air, water, or soil or restoring depleted soil, forests, or fishing grounds can be very difficult and costly.

Earth: The Apple of Our Eye (Intermediate/Secondary)

Who Polluted the River?

*The Balance of Nature*

#### 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

Earth: The Apple of Our Eye (Intermediate/Secondary)

Eco Ethics

Energy Imagery

Everything Is Connected

Food for Thought

For the Common Good

Global Warming Begins at Home

Growing Pains in Texas Hill Country

How Much Space Do We Need?

Mining for Chocolate

On the Double

The Pop Ecology Files

Pop Quiz

Population Circle

Something for Everyone

Stage Stepping

The Stork and the Grim Reaper

Timber!

Transportation Tally

Water, Water Everywhere (Elementary/Intermediate)

Who Polluted the River?

A World of Difference

World Population Video

*The Balance of Nature*

*You're One in Six Billion!*

### Grade Seven

#### 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.

Earth: The Apple of Our Eye (Intermediate/Secondary)

For the Common Good

Pop Quiz

Population Riddles

Something for Everyone

Take a Stand

Water, Water Everywhere (Elementary/Intermediate)

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  
Stage Stepping  
Timber!  
Transportation Tally  
A World of Difference

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  
Cougar Hunt  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Everything Counts  
Food for Thought  
For the Common Good  
Global Warming Begins at Home  
Growing Pains in Texas Hill Country  
How Much Space Do We Need?  
On the Double  
The Pop Ecology Files  
Population Circle  
Population Clock  
Power of the Pyramids  
Something for Everyone  
Stage Stepping  
The Stork and the Grim Reaper  
Timber!  
Transportation Tally  
Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the River?  
A World of Difference  
World Population Video

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.

Cougar Hunt  
Everything Is Connected  
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  
Cougar Hunt  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Everything Counts

Food for Thought  
For the Common Good  
Mining for Chocolate  
Population Circle  
Something for Everyone  
Stage Stepping  
The Stork and the Grim Reaper  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the River?  
A World of Difference  
World Population Video

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  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Everything Counts  
On the Double  
The Pop Ecology Files  
Population Clock  
Power of the Pyramids  
Stage Stepping  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)

S7CS7. Students will question scientific claims and arguments effectively.

a. Question claims based on vague attributions (such as “Leading doctors say...”) or on statements made by people outside the area of their particular expertise.

Take a Stand

b. Identify the flaws of reasoning that are based on poorly designed research (i.e., facts intermingled with opinion, conclusions based on insufficient evidence).

Eco Ethics  
Needs vs. Wants  
Take a Stand

c. Question the value of arguments based on small samples of data, biased samples, or samples for which there was no control.

Everything Counts  
A World of Difference

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

Take a Stand

#### 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  
Cougar Hunt  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Everything Counts  
Family Perspective

Food for Thought  
For the Common Good  
Global Warming Begins at Home  
Growing Pains in Texas Hill Country  
How Much Space Do We Need?  
Mining for Chocolate  
The Pop Ecology Files  
Population Circle  
Population Riddles  
Power of the Pyramids  
Something for Everyone  
Stage Stepping  
The Stork and the Grim Reaper  
Take a Stand  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the River?  
A World of Difference  
World Population Video

S7CS10. Students will enhance reading in all curriculum areas by:

- a. Reading in All Curriculum Areas
- Read both informational and fictional texts in a variety of genres and modes of discourse

*The Balance of Nature*  
*Feeding the Global Family*  
*You're One in Six Billion!*  
*Your Place on the Planet*

#### 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.

Growing Pains in Texas Hill Country  
The Pop Ecology Files  
A World of Difference  
*The Balance of Nature*

#### 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.

Cougar Hunt  
Growing Pains in Texas Hill Country  
Who Polluted the River?  
A World of Difference

## Grade Eight

#### 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.

Earth: The Apple of Our Eye (Intermediate/Secondary)  
For the Common Good  
Pop Quiz  
Population Riddles

Something for Everyone  
Take a Stand  
Water, Water Everywhere (Elementary/Intermediate)

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  
Stage Stepping  
Timber!  
Transportation Tally  
A World of Difference

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  
Stage Stepping  
The Stork and the Grim Reaper  
Timber!

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  
Cougar Hunt  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Everything Counts  
Food for Thought  
For the Common Good  
Mining for Chocolate  
Population Circle  
Something for Everyone  
Stage Stepping  
The Stork and the Grim Reaper  
Timber!  
Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the River?  
A World of Difference  
World Population Video

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
- Earth: The Apple of Our Eye (Intermediate/Secondary)
- Everything Counts
- On the Double
- The Pop Ecology Files
- Population Clock
- Power of the Pyramids
- Stage Stepping
- Timber!
- Water, Water Everywhere (Elementary/Intermediate)

S8CS7. Students will question scientific claims and arguments effectively.

a. Question claims based on vague attributions (such as “Leading doctors say...”) or on statements made by people outside the area of their particular expertise.

- Take a Stand

b. Identify the flaws of reasoning in arguments that are based on poorly designed research (e.g., facts intermingled with opinion, conclusions based on insufficient evidence).

- Eco Ethics
- Needs vs. Wants
- Take a Stand

c. Question the value of arguments based on small samples of data, biased samples, or samples for which there was no control.

- Everything Counts
- A World of Difference

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

- Take a Stand

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
- Cougar Hunt
- Earth: The Apple of Our Eye (Intermediate/Secondary)
- Everything Counts
- Family Perspective
- Food for Thought
- For the Common Good
- Global Warming Begins at Home
- Growing Pains in Texas Hill Country
- How Much Space Do We Need?
- Mining for Chocolate
- The Pop Ecology Files
- Population Circle
- Population Riddles
- Power of the Pyramids
- Something for Everyone
- Stage Stepping
- The Stork and the Grim Reaper
- Take a Stand
- Timber!

Water, Water Everywhere (Elementary/Intermediate)  
Who Polluted the River?  
A World of Difference  
World Population Video

S8CS10. Students will enhance reading in all curriculum areas by:

- a. Reading in All Curriculum Areas
- Read both informational and fictional texts in a variety of genres and modes of discourse

*The Balance of Nature*  
*Global Family Ties*  
*You're One in Six Billion!*  
*Your Place on the Planet*

## Grades Nine to Twelve

### HABITS OF MIND

SCSh3. Students will identify and investigate problems scientifically.

- a. Suggest reasonable hypotheses for identified problems.

Eco Ethics  
Everything Is Connected  
Global Warming Begins at Home  
How Much Space Do We Need?  
Needs vs. Wants  
Take a Stand

- c. Collect, organize and record appropriate data.

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

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

All in the Family  
Family Perspective  
The Pop Ecology Files  
Power of the Pyramids  
Stage Stepping

- e. Develop reasonable conclusions based on data collected.

All in the Family  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Family Perspective  
Global Warming Begins at Home  
How Much Space Do We Need?  
The Pop Ecology Files  
Power of the Pyramids  
Stage Stepping  
Water, Water Everywhere (Secondary)  
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.

Eco Ethics

Food for Thought  
The Pop Ecology Files  
Take a Stand

- d. Participate in group discussions of scientific investigation and current scientific issues.  
Eco Ethics  
Food for Thought  
For the Common Good  
Something for Everyone  
Take a Stand

SCSh9. Students will enhance reading in all curriculum areas by:

- a. Reading in all curriculum areas  
• Read both informational and fictional texts in a variety of genres and modes of discourse.

*The Balance of Nature*  
*Feeding the Global Family*  
*Global Family Ties*  
*The People Connection*  
*The Rising Tide of Poverty*  
*Troubled Water*  
*A Warm Forecast for the Planet?*  
*Women: The Critical Link*

#### 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.

Everything Is Connected  
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.

Earth: The Apple of Our Eye (Intermediate/Secondary)  
Everything Is Connected  
Global Warming Begins at Home  
How Much Space Do We Need?  
Take a Stand  
Water, Water Everywhere (Secondary)  
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?

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  
Earth: The Apple of Our Eye (Intermediate/Secondary)  
Food for Thought  
Global Warming Begins at Home  
How Much Space Do We Need?

Pop Quiz  
Stage Stepping  
Take a Stand  
Water, Water Everywhere (Secondary)  
A World of Difference  
World Population Video

---

---

# Social Studies

---

---

## Kindergarten

### HISTORICAL UNDERSTANDINGS

SSKH3. The student will correctly use words and phrases related to chronology and time to explain how things change.

- a. Now, long ago.  
Population Circle  
Who Polluted the River?
  
- b. Before, after.  
Population Circle  
Who Polluted the River?
  
- g. Past, present, future.  
Population Circle  
Who Polluted the River?

### GEOGRAPHIC UNDERSTANDINGS

SSKG2. The student will explain that a map is a drawing of a place and a globe is a model of the Earth.

- a. Differentiate land and water features on simple maps and globes.  
Earth Cookie
  
- c. Explain that maps and globes show features in a smaller size.  
Earth Cookie

### GOVERNMENT/CIVIC UNDERSTANDINGS

SSKCG1. The student will demonstrate an understanding of good citizenship.

- a. Explain how rules are made and why.  
Go Fish!
  
- b. Explain why rules should be followed.  
Go Fish!

### ECONOMIC UNDERSTANDINGS

SSKE4. The student will explain that people must make choices because they cannot have everything they want.

*Sharing a Small World*

## Grade One

### GEOGRAPHIC UNDERSTANDINGS

SS1G3. The student will locate major topographical features on the earth's surface.

- c. Identify and describe landforms (mountains, deserts, valleys, plains, plateaus, and coasts).  
Earth Cookie

### ECONOMIC UNDERSTANDINGS

SS1E2. The student will explain that people have to make choices about goods and services because of scarcity.

Earth Cookie  
Go Fish!  
*How Do People Use the Earth's Resources?*  
*How Many Is Enough?*  
*What Are People's Basic Needs?*

## Grade Two

### GOVERNMENT/CIVIC UNDERSTANDINGS

SS2CG1. The student will define the concept of government and the need for rules and laws.  
Go Fish!

#### ECONOMIC UNDERSTANDINGS

SS2E2. The student will identify ways in which good and services are allocated (by price, majority rule, contests, force, sharing, lottery, command, first-come, first-served, personal characteristics, and others).

Go Fish!

*What Are People's Basic Needs?*

*Why Do People Need Space?*

### Grade Three

#### ECONOMIC UNDERSTANDINGS

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

a. Natural (land).

Earth Cookie

Earth: The Apple of Our Eye (Elementary)

Mining for Chocolate

Timber!

*How Many Is Enough?*

*How Do People Use the Earth's Resources?*

*What Is a Population?*

*Why Do People Need Space?*

b. Human (labor).

*What Are People's Basic Needs?*

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.

Earth Cookie

Earth: The Apple of Our Eye (Elementary)

Mining for Chocolate

Timber!

When the Chips Are Down

c. Explain that some things are made locally, some elsewhere in the country, and some in other countries

Earth Cookie

Earth: The Apple of Our Eye (Elementary)

When the Chips Are Down

### Grade Four

#### GEOGRAPHIC UNDERSTANDINGS

SS4G2. The student will describe how physical systems affect human systems.

b. Describe how the early explorers (SS4H2.a) adapted, or failed to adapt to the various physical environments in which they traveled.

Who Polluted the Potomac?

#### CIVIC/GOVERNMENT UNDERSTANDINGS

SS4CG4. The student will explain the importance for Americans to share certain central democratic beliefs and principles both personal and civic.

a. Explain the necessity of respecting the rights of others and promoting the common good.

Cougar Hunt

Crowding Can Be Seedy

Who Polluted the Potomac?

*How Do People Use the Earth's Resources?*

*What Are People's Basic Needs?*

*Why Do People Need Space?*

b. Explain the necessity of obeying reasonable laws/rules voluntarily, and explain why it is important for citizens in a democratic society participate to in public (civic) life (staying informed, voting, volunteering, communicating with public officials).

Who Polluted the Potomac?

## **Grade Five**

### HISTORICAL UNDERSTANDINGS

SS5H3. The student will describe how life changed in America at the turn of the Century.

d. Describe the reasons people emigrated to the United States, from where they emigrated, and where they settled.

People on the Move

Who Polluted the Potomac?

*Why Do People Need Space?*

## **Grade Six**

### LATIN AMERICA & CANADA

#### GEOGRAPHIC UNDERSTANDINGS

SS6G4. The student will describe the cultural characteristic of Latin America and the Caribbean and Canada.

d. Explain how the literacy rate in Canada, Mexico, Brazil, and Chile affects each nations development in the modern world.

Educating Wanjiku

Maria's Education

#### 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.

Food for Thought

*People Count: Facing the Population Challenge*

### 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

World Population Video

*People Count: Facing the Population Challenge*

*You're One in Six Billion!*

#### GEOGRAPHIC UNDERSTANDING

SS6G8. The student will describe the cultural characteristics of Europe.

c. Explain how the literacy rate in Europe has impacted its development in the modern world.

Educating Wanjiku

Maria's Education

#### 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.

Food for Thought

*The Balance of Nature*

*People Count: Facing the Population Challenge*

## **Grade Seven**

### **AFRICA**

#### **GEOGRAPHIC UNDERSTANDING**

SS7G4. The student will describe the cultural characteristic of different people who live in Africa.

- b. Evaluate how the literacy rate of the countries such as Sudan, South Africa, and Egypt has affected their development.

Educating Wanjiku

Maria's Education

#### **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.

Food for Thought

### **SOUTHWEST ASIA (MIDDLE EAST)**

#### **GEOGRAPHIC UNDERSTANDING**

SS7G8. The student will describe the diverse cultural characteristic of the people who live in Southwestern Asia.

- b. Evaluate the effect of the literacy rate on the development of Middle Eastern countries such as Syria, Iran, Israel, and Saudi Arabia.

Educating Wanjiku

Maria's Education

*The Rising Tide of Poverty*

#### **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.

Food for Thought

### **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.

Food for Thought

On the Double

Power of the Pyramids

The Stork and the Grim Reaper

*People Count: Facing the Population Challenge*

- 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

*People Count: Facing the Population Challenge*

SS7G12. The student will describe the diverse cultural characteristic of the people who live in Southern and Eastern Asia.

- b. Evaluate the effect of the literacy rate on the development of countries such as India, Indonesia, China, and Japan.

Educating Wanjiku

Maria's Education

## 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.  
Food for Thought

## Grades Nine to Twelve

### (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.

Earth: The Apple of Our Eye (Intermediate/Secondary)

Food for Thought

How Much Space Do We Need?

World Population Video

*Troubled Water*

*A Warm Forecast for the Planet?*

- b. Explain how human characteristics including population settlement patterns and human activities such as agriculture and industry can describe a place.

Food for Thought

Growing Pains in Texas Hill Country

World Population Video

*Feeding the Global Family*

*The People Connection*

*The Rising Tide of Poverty*

*Troubled Water*

*A Warm Forecast for the Planet?*

*Women: The Critical Link*

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

Earth: The Apple of Our Eye (Intermediate/Secondary)

Growing Pains in Texas Hill Country

Water, Water Everywhere (Secondary)

A World of Difference

World Population Video

*Feeding the Global Family*

*The People Connection*

*The Rising Tide of Poverty*

*Troubled Water*

*A Warm Forecast for the Planet?*

SSWG3. The student will describe the interaction of physical and human systems that have shaped contemporary North Africa/Southwest Asia

- a. Describe the location of major physical features and their impact on North Africa/Southwest Asia.

Food for Thought

World Population Video

SSWG4. The student will describe the interaction of physical and human systems that have shaped contemporary Sub-Saharan Africa

- a. Describe the location of major physical features and their impact on Sub-Saharan Africa.

Food for Thought

World Population Video

- d. Explain how Sub-Saharan Africa's physical features have impacted the distribution of its population.  
Food for Thought  
World Population Video

SSWG5. The student will describe the interaction of physical and human systems that have shaped contemporary South Asia, Southeastern Asia, and Eastern Asia

- a. Describe the location of major physical features and their impact on the regions of Asia.  
Food for Thought  
World Population Video

- c. Analyze the impact of the topography and climate on population distribution in the regions.  
Food for Thought  
World Population Video

- e. Analyze the impact of population growth in the region on both the region and on other regions of the world including China, India, and Japan.

Food for Thought  
World Population Video  
*Feeding the Global Family*  
*The Rising Tide of Poverty*

SSWG6. The student will describe the interaction of physical and human systems that have shaped contemporary Europe.

- a. Describe the location of major physical features and their impact on Europe.  
Food for Thought  
World Population Video

- c. Analyze the importance of Europe's coastal location, climatic characteristics, and river systems regarding population, economic development, and world influence.

Food for Thought  
World Population Video

SSWG7. The student will describe the interaction of physical and human systems that have shaped contemporary Latin America.

- b. Describe the location of major physical features and their impact on Latin America.  
Food for Thought  
World Population Video

SSWG8. The student will describe the interaction of physical and human systems that have shaped contemporary Canada and the United States

- a. Describe the location of major physical features and their impact on the Canada and the United States.  
Food for Thought  
World Population Video

- c. Explain the reasons for the population distribution in Canada and the United States.  
Food for Thought  
Growing Pains in Texas Hill Country  
Maria's Education  
Take a Stand  
World Population Video

- f. Analyze how transportation and communications improvements led to the growth of industry in the United States and the consequences of such growth especially environmentally for both Canada and the United States.

Global Warming Begins at Home  
Transportation Tally  
*A Warm Forecast for the Planet?*

d. Explain how the physical geography of Canada and the United States contributed to regional growth and development.

Growing Pains in Texas Hill Country

World Population Video

*Troubled Water*

SSWG9. The student will describe the interaction of physical and human systems that have shaped contemporary Oceania, including Australia, New Zealand, and Antarctica

a. Describe the location of major physical features and their impact on the region.

World Population Video

## (Economics)

### FUNDAMENTAL ECONOMIC CONCEPTS

SSEF5. The student will describe the roles of government in a market economy.

b. Give examples of government regulation and deregulation and their effects on consumers and producers.

Take a Stand

*Troubled Water*

*A Warm Forecast for the Planet?*

SSEF6. The student will explain how productivity, economic growth and future standards of living are influenced by investment in factories, machinery, new technology and the health, education and training of people.

c. Give examples of how investment in education can lead to a higher standard of living.

Baby-O-Matic

Educating Wanjiku

Food for Thought

Maria's Education

A Woman's Place

*The Rising Tide of Poverty*

*Women: The Critical Link*

### PERSONAL FINANCE ECONOMICS

SSEPF1. The student will apply rational decision to the making of personal spending and savings choices.

a. Explain that people respond to positive and negative incentives in predictable ways.

For the Common Good

Something for Everyone