A Correlation of

# Population Connection Materials

from

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

to

## California State Board of Education
## Content Standards

**Organized by:**

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

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## English Language Development



## History and Social Science



## Language Arts

## Mathematics



## Science

# English Language Development

## Kindergarten to Grade Two

(ELD.K-2.Beginning) Listening and Speaking: Comprehension

Answer simple questions with one- to two-word responses.
- Creatures in Motion
- Crowding Can Be Seedy
- Go Fish!
- Multiplying Mice
- Web of Life
- Who Polluted the River?
- *Sharing a Small World*

Respond to simple directions and questions by using physical actions and other means of nonverbal communication (e.g., matching objects, pointing to an answer, drawing pictures).
- Creatures in Motion
- Crowding Can Be Seedy
- Earth Cookie
- Multiplying Mice
- Web of Life
- Who Polluted the River?

(ELD.K-2.Beginning) Reading: Comprehension

Respond orally to stories read aloud, using physical actions and other means of nonverbal communication (e.g., matching objects, pointing to an answer, drawing pictures).
- Web of Life
- Who Polluted the River?
- *Sharing a Small World*

Draw pictures from one's own experiences related to a story or topic (e.g., community in social studies).
- Web of Life

Understand and follow simple one-step directions for classroom activities.
- Creatures in Motion
- Crowding Can Be Seedy
- Earth Cookie
- Go Fish!
- Multiplying Mice
- Web of Life
- Who Polluted the River?

(ELD.K-2.Beginning) Writing: Organization and Focus

Write a few words or phrases about an event or character from a story read by the teacher.
- Web of Life

(ELD.K-2.Early Intermediate) Listening and Speaking: Comprehension

Ask and answer questions by using phrases or simple sentences.

Creatures in Motion
Crowding Can Be Seedy
Earth Cookie
Go Fish!
Web of Life
Who Polluted the River?
*Sharing a Small World*

(ELD.K-2.Early Intermediate) Reading: Vocabulary and Concept Development

Read simple vocabulary, phrases, and sentences independently.
Web of Life
Who Polluted the River?

(ELD.K-2.Early Intermediate) Reading: Comprehension

Respond orally to simple stories read aloud, using phrases or simple sentences to answer factual comprehension questions.
Web of Life
Who Polluted the River?
*Sharing a Small World*

Understand and follow simple two-step directions for classroom activities.
Earth Cookie
Go Fish!
Creatures in Motion
Crowding Can Be Seedy
Multiplying Mice
Web of Life
Who Polluted the River?

(ELD.K-2.Early Intermediate) Reading: Comprehension and Analysis of Grade Level-Appropriate Text

Orally identify, using key words or phrases, the basic sequence of events in text read aloud.
Earth Cookie
Web of Life
Who Polluted the River?

Draw logical inferences from a story read aloud.
Web of Life
Who Polluted the River?

(ELD.K-2.Early Intermediate) Reading: Narrative Analysis of Grade-Level-Appropriate Text

Respond orally to factual comprehension questions about stories by answering in simple sentences.
Web of Life
Who Polluted the River?

Recite simple poems.
Crowding Can Be Seedy

(ELD.K-2.Early Intermediate) Writing: Organization and Focus, Evaluation and Revision

Write one to two simple sentences (e.g., I went to the park).
Go Fish!

(ELD.K-2.Intermediate) Listening and Speaking: Comprehension

Ask and answer instructional questions by using simple sentences.
- Creatures in Motion
- Crowding Can Be Seedy
- Earth Cookie
- Go Fish!
- Multiplying Mice
- Web of Life
- Who Polluted the River?

Listen attentively to stories and information and identify important details and concepts by using both verbal and nonverbal responses.
- Creatures in Motion
- Crowding Can Be Seedy
- Earth Cookie
- Go Fish!
- Web of Life
- Who Polluted the River?
- *Sharing a Small World*

(ELD.K-2.Intermediate) Reading: Vocabulary and Concept Development

Use more complex vocabulary and sentences to communicate needs and express ideas in a wider variety of social and academic settings (e.g., classroom discussions, mediation of conflicts).
- Creatures in Motion
- Crowding Can Be Seedy
- Earth Cookie
- Go Fish!
- Web of Life
- Who Polluted the River?
- *Sharing a Small World*

Apply knowledge of content-related vocabulary to discussions and reading.
- Creatures in Motion
- Crowding Can Be Seedy
- Earth Cookie
- Go Fish!
- Web of Life
- Who Polluted the River?
- *Sharing a Small World*

(ELD.K-2.Intermediate) Reading: Comprehension and Analysis of Grade Level-Appropriate Text

Draw inferences about stories read aloud and use simple phrases or sentences to communicate the inferences.
- Web of Life
- Who Polluted the River?

(ELD.K-2.Intermediate) Reading: Comprehension

Understand and follow some multiple-step directions for classroom-related activities.
- Creatures in Motion
- Crowding Can Be Seedy
- Earth Cookie

Go Fish!
Web of Life
Who Polluted the River?

(ELD.K-2.Intermediate) Reading: Narrative Analysis of Grade-Level-Appropriate Text

Use expanded vocabulary and descriptive words in oral and written responses to simple texts.
Web of Life
Who Polluted the River?

(ELD.K-2.Early Advanced) Listening and Speaking: Comprehension

Listen attentively to stories and information and orally identify key details and concepts.
Web of Life
Who Polluted the River?

(ELD.K-2.Advanced) Listening and Speaking: Comprehension

Listen attentively to stories and information on new topics and identify both orally and in writing key details and concepts.
Web of Life
Who Polluted the River?

(ELD.K-2.Advanced) Listening and Speaking: Comprehension and Organization and Delivery of Oral Communication

Narrate and paraphrase events in greater detail by using more extended vocabulary.
Web of Life
Who Polluted the River?

## Grade Three to Grade Five

(ELD.3-5.Beginning) Listening and Speaking: Comprehension

Answer simple questions with one- to two-word responses.
Adding Armadillos
Cougar Hunt
Earth: The Apple of Our Eye (Elementary)
Earth Cookie
Energy Imagery
Everything Counts
Mining for Chocolate
Multiplying Mice
More or Less
People Count
Population Riddles
The Stork and the Grim Reaper
Timber!
Water, Water Everywhere (Elementary/Intermediate)
When the Chips Are Down
Who Polluted the Potomac?

Retell familiar stories and participate in short conversations by using appropriate gestures, expressions, and illustrative objects.
Who Polluted the Potomac?

(ELD.3-5.Early Intermediate) Listening and Speaking: Comprehension

Ask and answer questions by using phrases or simple sentences.
- Adding Armadillos
- Cougar Hunt
- Earth: The Apple of Our Eye (Elementary)
- Earth Cookie
- Energy Imagery
- Everything Counts
- Mining for Chocolate
- More or Less
- Multiplying Mice
- People Count
- Population Riddles
- Timber!
- Water, Water Everywhere (Elementary/Intermediate)
- When the Chips Are Down
- Who Polluted the Potomac?

(ELD.3-5.Early Intermediate) Listening and Speaking: Comprehension and Organization and Delivery of Oral Communication

Orally identify the main points of simple conversations and stories that are read aloud by using phrases or simple sentences.
- Energy Imagery
- Who Polluted the Potomac?

(ELD.3-5.Intermediate) Listening and Speaking: Comprehension

Listen attentively to stories and information and identify important details and concepts by using both verbal and nonverbal responses.
- Energy Imagery
- When the Chips Are Down
- Who Polluted the Potomac?

(ELD.3-5.Intermediate) Listening and Speaking: Comprehension and Organization and Delivery of Oral Communication

Participate in social conversations with peers and adults on familiar topics by asking and answering questions and soliciting information.
- People Count

(ELD.3-5.Early Advanced) Listening and Speaking: Comprehension

Listen attentively to more complex stories and information on new topics across content areas and identify the main points and supporting details.
- Energy Imagery
- Who Polluted the Potomac?

(ELD.3-5.Advanced) Listening and Speaking: Comprehension

Listen attentively to stories and information on topics; identify the main points and supporting details.
- Energy Imagery
- Who Polluted the Potomac?

(ELD.3-5.Advanced) Listening and Speaking: Comprehension and Organization and Delivery of Oral Communication

Consistently use appropriate ways of speaking and writing that vary according to the purpose, audience, and subject matter.

People Count

(ELD.3-5.Early Intermediate) Reading: Vocabulary and Concept Development

Read simple vocabulary, phrases, and sentences independently.

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

(ELD.3-5.Intermediate) Reading: Vocabulary and Concept Development

Read grade-appropriate narrative and expository texts aloud with appropriate pacing, intonation, and expression.

*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?*

Use content-related vocabulary in discussions and reading.

Cougar Hunt
Earth: The Apple of Our Eye (Elementary)
Energy Imagery
Mining for Chocolate
More or Less
People Count
Who Polluted the Potomac?
*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?*

(ELD.3-5.Early Advanced) Reading: Vocabulary and Concept Development

Use decoding skills and knowledge of academic and social vocabulary to begin independent reading.

*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?*

Read aloud with appropriate pacing, intonation, and expression increasingly complex narrative and expository texts.

*How Do People Use the Earth's Resources?*
*How Many Is Enough?*
*What Is a Population?*

*What Are People's Basic Needs?*
*Why Do People Need Space?*

(ELD.3-5.Advanced) Reading: Vocabulary and Concept Development

Apply knowledge of academic and social vocabulary to achieve independent reading.
*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?*

Read aloud with appropriate pacing, intonation, and expression narrative and expository texts.
*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?*

(ELD.3-5.Beginning) Reading: Comprehension

Respond orally to stories read aloud, giving one- or two- word responses (e.g., "brown bear") to factual comprehension questions.
Energy Imagery
Who Polluted the Potomac?

Orally identify the relationship between simple text read aloud and one's own experience by using keywords and/or phrases.
Energy Imagery

Understand and follow simple one-step directions for classroom activities.
Adding Armadillos
Cougar Hunt
Earth: The Apple of Our Eye (Elementary)
Earth Cookie
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?

(ELD.3-5.Beginning) Reading: Comprehension and Analysis of Grade Level-Appropriate Text

Identify, using key words and/or phrases, the main idea in a story read aloud.
Who Polluted the Potomac?

(ELD.3-5.Early Intermediate) Reading: Comprehension

Understand and follow simple two-step directions for classroom activities.

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

(ELD.3-5.Early Intermediate) Reading: Comprehension and Analysis of Grade Level-Appropriate Text

Read text and orally identify the main ideas by using simple sentences and drawing inferences about the text.

*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?*

(ELD.3-5.Intermediate) Reading: Comprehension and Analysis of Grade Level-Appropriate Text

Read text and use detailed sentences to identify orally the main ideas and use them to make predictions and support them with details.

*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?*

Understand and follow some multiple-step directions for classroom-related activities.

Adding Armadillos
Cougar Hunt
Energy Imagery
Everything Counts
Mining for Chocolate
More or Less
Multiplying Mice
People Count
Timber!
When the Chips Are Down

(ELD.3-5.Early Advanced) Reading: Comprehension and Analysis of Grade Level-Appropriate Text

Describe the main ideas and supporting details of a text.

*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?*

Generate and respond to comprehension questions related to the text.
Who Polluted the Potomac?

(ELD.3-5.Beginning) Reading: Narrative Analysis of Grade-Level-Appropriate Text

Listen to a story and respond orally in one or two words to factual comprehension questions.
Who Polluted the Potomac?

## Grade Six to Grade Eight

(ELD.6-8.Beginning) Listening and Speaking: Comprehension

Ask and answer questions by using simple sentences or phrases.
All in the Family
Cougar Hunt
Earth: The Apple of Our Eye (Intermediate/Secondary)
Eco Ethics
Energy Imagery
Everything Counts
Everything Is Connected
Family Perspective
Food for Thought
For the Common Good
Growing Pains in Texas Hill Country
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
Population Circle
Population Riddles
Power of the Pyramids
Something for Everyone
Stage Stepping
Take a Stand
Timber!
Water, Water Everywhere (Elementary/Intermediate)
Who Polluted the Potomac?
A World of Difference

Demonstrate comprehension of oral presentations and instructions through nonverbal responses (e.g., gestures, pointing, drawing).
Growing Pains in Texas Hill Country
Something for Everyone
Who Polluted the Potomac?

(ELD.6-8.Early Intermediate) Listening and Speaking: Comprehension

Ask and answer questions by using phrases or simple sentences.

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
Growing Pains in Texas Hill Country
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
Population Circle
Population Riddles
Power of the Pyramids
Something for Everyone
Stage Stepping
Take a Stand
Timber!
Water, Water Everywhere (Elementary/Intermediate)
Who Polluted the Potomac?
A World of Difference

(ELD.6-8.Early Intermediate) Listening and Speaking: Comprehension and Organization and Delivery of Oral Communication

Restate in simple sentences the main idea of oral presentations in subject-matter content.
Growing Pains in Texas Hill Country
Take a Stand

Prepare and deliver short oral presentations.
Eco Ethics
Global Warming Begins at Home
People on the Move
Take a Stand

(ELD.6-8.Intermediate) Listening and Speaking: Comprehension

Respond to messages by asking simple questions or by briefly restating the message.
Eco Ethics
Take a Stand

Listen attentively to stories and information and identify important details and concepts by using both verbal and nonverbal responses.
Energy Imagery
Who Polluted the Potomac?

(ELD.6-8.Intermediate) Listening and Speaking: Comprehension and Organization and Delivery of Oral Communication

Participate in social conversations with peers and adults on familiar topics by asking and answering questions and soliciting information.
Eco Ethics

Identify the main idea and some supporting details of oral presentations, familiar literature, and key concepts of subject-matter content.
Growing Pains in Texas Hill Country

(ELD.6-8.Intermediate) Listening and Speaking: Organization and Delivery of Oral Communication

Prepare and deliver short presentations on ideas, premises, or images obtained from various common sources.
People on the Move

(ELD.6-8.Early Advanced) Listening and Speaking: Comprehension and Organization and Delivery of Oral Communication

Participate in and initiate more extended social conversations with peers and adults on unfamiliar topics by asking and answering questions and restating and soliciting information.
Eco Ethics

Respond to messages by asking questions, challenging statements, or offering examples that affirm the message.
Eco Ethics
Take a Stand

Prepare and deliver presentations that use various sources.
Growing Pains in Texas Hill Country
People on the Move

(ELD.6-8.Advanced) Listening and Speaking: Comprehension and Organization and Delivery of Oral Communication

Consistently use appropriate ways of speaking and writing that vary according to the purpose, audience, and subject matter.
Eco Ethics
Growing Pains in Texas Hill Country
People on the Move
Take a Stand

Prepare and deliver presentations and reports in various content areas, including a purpose, point of view, introduction, coherent transition, and appropriate conclusions.
People on the Move

(ELD.6-8.Early Intermediate) Reading: Vocabulary and Concept Development

Read simple paragraphs and passages independently.
*The Balance of Nature*
*Global Family Ties*
*People Count: Facing the Population Challenge*
*You're One in Six Billion!*
*Your Place on the Planet*

(ELD.6-8.Intermediate) Reading: Vocabulary and Concept Development

Use decoding skills and knowledge of both academic and social vocabulary to read independently.
Educating Wanjiku
*The Balance of Nature*
*Global Family Ties*
*People Count: Facing the Population Challenge*
*You're One in Six Billion!*
*Your Place on the Planet*

(ELD.6-8.Early Advanced) Reading: Vocabulary and Concept Development

Use decoding skills and knowledge of academic and social vocabulary to begin independent reading.
Educating Wanjiku
*The Balance of Nature*
*Global Family Ties*
*People Count: Facing the Population Challenge*
*You're One in Six Billion!*
*Your Place on the Planet*

(ELD.6-8.Advanced) Reading: Vocabulary and Concept Development

Apply knowledge of academic and social vocabulary to achieve independent reading.
Educating Wanjiku
*The Balance of Nature*
*Global Family Ties*
*People Count: Facing the Population Challenge*
*You're One in Six Billion!*
*Your Place on the Planet*

(ELD.6-8.Beginning) Reading: Comprehension

Read simple text and orally respond to factual comprehension questions by using keywords or phrases.
Educating Wanjiku

Understand and follow simple multiple-step oral directions for classroom or work-related activities.
All in the Family
Cougar Hunt
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
Population Circle
Population Clock
Population Riddles
Power of the Pyramids
Something for Everyone
Stage Stepping
Take a Stand
Timber!
Water, Water Everywhere (Elementary/Intermediate)
Who Polluted the Potomac?
A World of Difference

(ELD.6-8.Beginning) Reading: Comprehension and Analysis of Grade Level-Appropriate Text

Orally identify, using key words or phrases, the main ideas and some details of familiar texts.
Educating Wanjiku
Growing Pains in Texas Hill Country

(ELD.6-8.Early Intermediate) Reading: Comprehension

Read and orally respond to simple literary texts and texts in content areas by using simple sentences to answer factual comprehension questions.
*The Balance of Nature*
*Global Family Ties*
*People Count: Facing the Population Challenge*
*You're One in Six Billion!*
*Your Place on the Planet*

(ELD.6-8.Early Intermediate) Reading: Comprehension and Analysis of Grade Level-Appropriate Text

Read text and orally identify the main ideas and details of informational materials, literary text, and text in content areas by using simple sentences.
Educating Wanjiku
*The Balance of Nature*
*Global Family Ties*
*People Count: Facing the Population Challenge*
*You're One in Six Billion!*
*Your Place on the Planet*

(ELD.6-8.Intermediate) Reading: Comprehension and Analysis of Grade Level-Appropriate Text

Read text and use detailed sentences to explain orally the main ideas and details of informational text, literary text, and text in content areas.
Educating Wanjiku
*The Balance of Nature*
*Global Family Ties*
*People Count: Facing the Population Challenge*
*You're One in Six Billion!*
*Your Place on the Planet*

(ELD.6-8.Early Advanced) Reading: Comprehension and Analysis of Grade Level-Appropriate Text

Identify and explain the main ideas and critical details of informational materials, literary texts, and texts in content areas.

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

(ELD.6-8.Advanced) Reading: Comprehension and Analysis of Grade Level-Appropriate Text

Identify and explain the main ideas and critical details of informational materials, literary text, and text in content areas.

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

(ELD.6-8.Early Intermediate) Reading: Narrative Analysis of Grade-Level-Appropriate Text and Literary Criticism

Describe orally in simple sentences a character in a brief literary text by identifying the thoughts and actions of the character.

Educating Wanjiku

(ELD.6-8.Intermediate) Reading: Narrative Analysis of Grade-Level-Appropriate Text

Use expanded vocabulary and descriptive words in oral and written responses to simple texts.

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

(ELD.6-8.Beginning) Writing: Organization and Focus

Create simple sentences or phrases with some assistance.

Everything Is Connected

Write simple compositions, such as descriptions and comparison and contrast, that have a main idea and some detail.

People on the Move

(ELD.6-8.Early Intermediate) Writing: Organization and Focus

Collect information from various sources (e.g., dictionary, library books, research materials) and take notes on a given topic.

Growing Pains in Texas Hill Country
The More The Merrier?
People on the Move

(ELD.6-8.Intermediate) Writing: Organization and Focus

Write brief expository compositions (e.g., description, comparison and contrast, cause and effect, and problem and solution) that include a thesis and some points of support.

People on the Move

## Grade Nine to Grade Twelve

(ELD.9-12.Beginning) Listening and Speaking: Comprehension

Ask and answer questions by using simple sentences or phrases.

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

Demonstrate comprehension of oral presentations and instructions through nonverbal responses.

Growing Pains in Texas Hill Country
Take a Stand

(ELD.9-12.Beginning) Listening and Speaking: Analysis and Evaluation of Oral and Media Communications and Comprehension

Respond with simple words or phrases to questions about simple written texts.

Educating Wanjiku
Living on $500 a Year
Maria's Education
A Woman's Place

(ELD.9-12.Early Intermediate) Listening and Speaking: Comprehension

Ask and answer questions by using phrases or simple sentences.

All in the Family
Earth: The Apple of Our Eye (Intermediate/Secondary)
Eco Ethics
Educating Wanjiku
Family Perspective
Food for Thought
For the Common Good
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
Water, Water Everywhere (Secondary)
A Woman's Place
A World of Difference

(ELD.9-12.Early Intermediate) Listening and Speaking: Comprehension and Organization and Delivery of Oral Communication

Restate in simple sentences the main idea of oral presentations in subject-matter content.
Growing Pains in Texas Hill Country
Take a Stand

Prepare and deliver short oral presentations.
Growing Pains in Texas Hill Country
Take a Stand

(ELD.9-12.Intermediate) Listening and Speaking: Comprehension

Respond to messages by asking simple questions or by briefly restating the message.
Eco Ethics
Educating Wanjiku
Growing Pains in Texas Hill Country
A Woman's Place

Listen attentively to stories and information and identify important details and concepts by using both verbal and nonverbal responses.
Growing Pains in Texas Hill Country
Take a Stand

(ELD.9-12.Intermediate) Listening and Speaking: Comprehension and Organization and Delivery of Oral Communication

Participate in social conversations with peers and adults on familiar topics by asking and answering questions and soliciting information.
Eco Ethics

Identify the main idea and some supporting details of oral presentations, familiar literature, and key concepts of subject-matter content.
Growing Pains in Texas Hill Country
Take a Stand

(ELD.9-12.Early Advanced) Listening and Speaking: Comprehension and Organization and Delivery of Oral Communication

Participate in and initiate more extended social conversations with peers and adults on unfamiliar topics by asking and answering questions and restating and soliciting information.
Eco Ethics
Living on $500 a Year

Respond to messages by asking questions, challenging statements, or offering examples that affirm the message.

Growing Pains in Texas Hill Country
Take a Stand

Prepare and deliver brief oral presentations/reports on historical investigations, a problem and solution, or a cause and effect.

Growing Pains in Texas Hill Country
Living on $500 a Year

(ELD.9-12.Advanced) Listening and Speaking: Comprehension and Organization and Delivery of Oral Communication

Consistently use appropriate ways of speaking and writing that vary according to the purpose, audience, and subject matter.

Eco Ethics
Growing Pains in Texas Hill Country
Living on $500 a Year
Take a Stand
A Woman's Place

Prepare and deliver presentations and reports in various content areas, including a purpose, point of view, introduction, coherent transition, and appropriate conclusions.

Living on $500 a Year

(ELD.9-12.Early Intermediate) Reading: Vocabulary and Concept Development

Read simple paragraphs and passages independently.

Educating Wanjiku
Growing Pains in Texas Hill Country
Living on $500 a Year
Maria's Education
A Woman's Place

(ELD.9-12.Intermediate) Reading: Vocabulary and Concept Development

Use decoding skills and knowledge of both academic and social vocabulary to read independently.

Educating Wanjiku
Growing Pains in Texas Hill Country
Living on $500 a Year
Maria's Education
A Woman's Place
*Feeding the Global Family*
*The People Connection*
*The Rising Tide of Poverty*
*Troubled Water*
*A Warm Forecast for the Planet?*
*Women: The Critical Link*

(ELD.9-12.Early Advanced) Reading: Vocabulary and Concept Development

Use decoding skills and knowledge of academic and social vocabulary to begin independent reading.

Educating Wanjiku
Growing Pains in Texas Hill Country
Living on $500 a Year

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

(ELD.9-12.Advanced) Reading: Vocabulary and Concept Development

Apply knowledge of academic and social vocabulary to achieve independent reading.
Educating Wanjiku
Living on $500 a Year
Growing Pains in Texas Hill Country
Maria's Education
A Woman's Place
*Feeding the Global Family*
*The People Connection*
*The Rising Tide of Poverty*
*Troubled Water*
*A Warm Forecast for the Planet?*
*Women: The Critical Link*

(ELD.9-12.Beginning) Reading: Comprehension

Understand and follow simple multiple-step oral directions for classroom or work-related activities.
All in the Family
Baby-O-Matic
Earth: The Apple of Our Eye (Intermediate/Secondary)
Eco Ethics
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

(ELD.9-12.Beginning) Reading: Comprehension and Analysis of Grade Level-Appropriate Text

Orally identify the main ideas and some details of familiar literature and informational materials/public documents.
Growing Pains in Texas Hill Country

(ELD.9-12.Early Intermediate) Reading: Comprehension

Read and orally respond to simple literary texts and texts in content areas by using simple sentences to answer factual comprehension questions.

Growing Pains in Texas Hill Country
Living on $500 a Year
Maria's Education
A Woman's Place
*Feeding the Global Family*
*The People Connection*
*The Rising Tide of Poverty*
*Troubled Water*
*A Warm Forecast for the Planet?*
*Women: The Critical Link*

(ELD.9-12.Early Intermediate) Reading: Comprehension and Analysis of Grade Level-Appropriate Text

Read and orally identify a few specific facts in simple expository text, such as consumer and workplace documents and content area text.

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

(ELD.9-12.Early Advanced) Reading: Comprehension and Analysis of Grade Level-Appropriate Text

Apply knowledge of language to achieve comprehension of informational materials, literary texts, and texts in content areas.

Educating Wanjiku
Growing Pains in Texas Hill Country
Living on $500 a Year
Maria's Education
A Woman's Place
*Feeding the Global Family*
*The Rising Tide of Poverty*
*The People Connection*
*Troubled Water*
*A Warm Forecast for the Planet?*
*Women: The Critical Link*

(ELD.9-12.Advanced) Reading: Comprehension and Analysis of Grade Level-Appropriate Text

Apply knowledge of language to achieve comprehension of informational materials, literary text, and text in content areas.

Educating Wanjiku
Growing Pains in Texas Hill Country
Living on $500 a Year
Maria's Education
A Woman's Place
*Feeding the Global Family*
*The People Connection*
*The Rising Tide of Poverty*

*Troubled Water*
*A Warm Forecast for the Planet?*
*Women: The Critical Link*

(ELD.9-12.Early Intermediate) Reading: Narrative Analysis of Grade-Level-Appropriate Text and Literary Criticism

Describe briefly in simple sentences a character according to what he or she does in a familiar narration, dialogue, or drama.
Educating Wanjiku
Maria's Education
A Woman's Place

(ELD.9-12.Intermediate) Reading: Narrative Analysis of Grade-Level-Appropriate Text

Use expanded vocabulary and descriptive words in oral and written responses to simple texts.
Educating Wanjiku
Growing Pains in Texas Hill Country
Living on $500 a Year
Maria's Education
A Woman's Place

(ELD.9-12.Beginning) Writing: Penmanship and Organization and Focus

Organize and record information from selected literature and content areas by displaying it on pictures, lists, charts, and tables.
Needs vs. Wants
Stage Stepping

(ELD.9-12.Beginning) Writing: Organization and Focus

Create simple sentences or phrases with some assistance.
Living on $500 a Year
Needs vs. Wants

Write simple compositions, such as descriptions and comparison and contrast, that have a main idea and some detail.
A Woman's Place

(ELD.9-12.Early Intermediate) Writing: Organization and Focus

Collect information from various sources (e.g., dictionary, library books, research materials) and take notes on a given topic.
Growing Pains in Texas Hill Country
A Woman's Place

(ELD.9-12.Intermediate) Writing: Organization and Focus

Write brief expository compositions and reports that
(a) include a thesis and some supporting details;
(b) provide information from primary sources; and
(c) include charts and graphs.
A Woman's Place

# History and Social Science

## Kindergarten

(Social Science.K.1) Students understand that being a good citizen involves acting in certain ways.

1. Follow rules, such as sharing and taking turns, and know the consequences of breaking them.
   Creatures in Motion
   Crowding Can Be Seedy
   Go Fish!

3. Know beliefs and related behaviors of characters in stories from times past and understand the consequences of the characters' actions.
   Who Polluted the River?

(Social Science.K.3) Students match simple descriptions of work that people do and the names of related jobs at the school, in the local community, and from historical accounts.

(Social Science.K.4) Students compare and contrast the locations of people, places, and environments and describe their characteristics.

2. Distinguish between land and water on maps and globes and locate general areas referenced in historical legends and stories.
   Earth Cookie

(Social Science.K.6) Students understand that history relates to events, people, and places of other times.

3. Understand how people lived in earlier times and how their lives would be different today (e.g., getting water from a well, growing food, making clothing, having fun, forming organizations, living by rules and laws).
   Population Circle
   Who Polluted the River?

## Grade One

(Social Science.1.1) Students describe the rights and individual responsibilities of citizenship.

2. Understand the elements of fair play and good sportsmanship, respect for the rights and opinions of others, and respect for rules by which we live, including the meaning of the "Golden Rule."
   Creatures in Motion
   Crowding Can Be Seedy
   Go Fish!

(Social Science.1.2) Students compare and contrast the absolute and relative locations of places and people and describe the physical and/ or human characteristics of places.

4. Describe how location, weather, and physical environment affect the way people live, including the effects on their food, clothing, shelter, transportation, and recreation.
   Earth: The Apple of Our Eye (Elementary)
   Earth Cookie
   Who Polluted the River?

(Social Science.1.5) Students describe the human characteristics of familiar places and the varied backgrounds of American citizens and residents in those places.

1. Recognize the ways in which they are all part of the same community, sharing principles, goals, and traditions despite their varied ancestry; the forms of diversity in their school and community; and the benefits and challenges of a diverse population.
Creatures in Motion
Crowding Can Be Seedy

## Grade Two

(Social Science.2.4) Students understand basic economic concepts and their individual roles in the economy and demonstrate basic economic reasoning skills.

3. Understand how limits on resources affect production and consumption (what to produce and what to consume).
Earth: The Apple of Our Eye (Elementary)
Earth Cookie
Mining for Chocolate
Water, Water Everywhere (Elementary/Intermediate)
*How Do People Use the Earth's Resources?*

## Grade Three

(Social Science.3.1) Students describe the physical and human geography and use maps, tables, graphs, photographs, and charts to organize information about people, places, and environments in a spatial context.

2. Trace the ways in which people have used the resources of the local region and modified the physical environment (e.g., a dam constructed upstream changed a river or coastline).
Who Polluted the Potomac?

(Social Science.3.2) Students describe the American Indian nations in their local region long ago and in the recent past.

4. Discuss the interaction of new settlers with the already established Indians of the region.
Energy Imagery
Who Polluted the Potomac?

(Social Science.3.3) Students draw from historical and community resources to organize the sequence of local historical events and describe how each period of settlement left its mark on the land.

3. Trace why their community was established, how individuals and families contributed to its founding and development, and how the community has changed over time, drawing on maps, photographs, oral histories, letters, newspapers, and other primary sources.
Who Polluted the Potomac?

(Social Science.3.4) Students understand the role of rules and laws in our daily lives and the basic structure of the U.S. government.

2. Discuss the importance of public virtue and the role of citizens, including how to participate in a classroom, in the community, and in civic life.
Earth: The Apple of Our Eye (Elementary)
Earth Cookie
Energy Imagery
Mining for Chocolate

Timber!
Water, Water Everywhere (Elementary/Intermediate)
When the Chips Are Down
Who Polluted the Potomac?

(Social Science.3.5) Students demonstrate basic economic reasoning skills and an understanding of the economy of the local region.

1. Describe the ways in which local producers have used and are using natural resources, human resources, and capital resources to produce goods and services in the past and the present.
Earth: The Apple of Our Eye (Elementary)
Mining for Chocolate
Timber!

3. Understand that individual economic choices involve trade-offs and the evaluation of benefits and costs.
Energy Imagery
When the Chips Are Down

## Grade Four

(Social Science.4.4) Students explain how California became an agricultural and industrial power, tracing the transformation of the California economy and its political and cultural development since the 1850s.

4. Describe rapid American immigration, internal migration, settlement, and the growth of towns and cities (e.g., Los Angeles).
Earth: The Apple of Our Eye (Elementary)
Who Polluted the Potomac?

## Grades K to Five

(Social Science.K-5) Chronological and Spatial Thinking

1. Students place key events and people of the historical era they are studying in a chronological sequence and within a spatial context; they interpret time lines.
Energy Imagery
Population Circle
Who Polluted the Potomac?
Who Polluted the River?

2. Students correctly apply terms related to time, including past, present, future, decade, century, and generation.
Adding Armadillos
Energy Imagery
Multiplying Mice
Population Circle
Who Polluted the Potomac?
Who Polluted the River?

3. Students explain how the present is connected to the past, identifying both similarities and differences between the two, and how some things change over time and some things stay the same.
Adding Armadillos
Energy Imagery
Population Circle
Who Polluted the Potomac?
Who Polluted the River?

4. Students use map and globe skills to determine the absolute locations of places and interpret information available through a map's or globe's legend, scale, and symbolic representations.
Earth: The Apple of Our Eye (Elementary)
Earth Cookie

(Social Science.K-5) Historical Interpretation
2. Students identify the human and physical characteristics of the places they are studying and explain how those features form the unique character of those places.
Earth: The Apple of Our Eye (Elementary)
Earth Cookie
Energy Imagery
The Stork and the Grim Reaper
Water, Water Everywhere (Elementary/Intermediate)
Who Polluted the Potomac?
Who Polluted the River?

3. Students identify and interpret the multiple causes and effects of historical events.
Population Circle
Who Polluted the Potomac?
Who Polluted the River?

## Grade Eight

(Social Science.8.6) Students analyze the divergent paths of the American people from 1800 to the mid-1800s and the challenges they faced, with emphasis on the Northeast.

1. Discuss the influence of industrialization and technological developments on the region, including human modification of the landscape and how physical geography shaped human actions (e.g., growth of cities, deforestation, farming, mineral extraction).
Earth: The Apple of Our Eye (Intermediate/Secondary)
Mining for Chocolate
Timber!
Who Polluted the Potomac?
*You're One in Six Billion!*
*People Count: Facing the Population Challenge*

3. List the reasons for the wave of immigration from Northern Europe to the United States and describe the growth in the number, size, and spatial arrangements of cities (e.g., Irish immigrants and the Great Irish Famine).
People on the Move
World Population Video

(Social Science.8.12) Students analyze the transformation of the American economy and the changing social and political conditions in the United States in response to the Indus-trial Revolution.

5. Examine the location and effects of urbanization, renewed immigration, and industrialization (e.g., the effects on social fabric of cities, wealth and economic opportunity, the conservation movement).
Everything Is Connected
People on the Move
Who Polluted the Potomac?
World Population Video
*Global Family Ties*

(Social Science.6-8) Chronological and Spatial Thinking

3. Students use a variety of maps and documents to identify physical and cultural features of neighborhoods, cities, states, and countries and to explain the historical migration of people, expansion and disintegration of empires, and the growth of economic systems.

People on the Move
World Population Video
*Global Family Ties*

(Social Science.6-8) Historical Interpretation

2. Students understand and distinguish cause, effect, sequence, and correlation in historical events, including the long-and short-term causal relations.

Everything Is Connected
Who Polluted the Potomac?
World Population Video
*Global Family Ties*
*People Count: Facing the Population Challenge*
*You're One in Six Billion!*

3. Students explain the sources of historical continuity and how the combination of ideas and events explains the emergence of new patterns.

World Population Video
*People Count: Facing the Population Challenge*
*You're One in Six Billion!*

## Grade Ten

(Social Science.10.3) Students analyze the effects of the Industrial Revolution in England, France, Germany, Japan, and the United States.

2. Examine how scientific and technological changes and new forms of energy brought about massive social, economic, and cultural change (e.g., the inventions and discoveries of James Watt, Eli Whitney, Henry Bessemer, Louis Pasteur, Thomas Edison).

World Population Video
*The People Connection*

3. Describe the growth of population, rural to urban migration, and growth of cities associated with the Industrial Revolution.

Food for Thought
Pop Quiz
World Population Video
*The People Connection*

(Social Science.10.10) Students analyze instances of nation-building in the contemporary world in at least two of the following regions or countries: the Middle East, Africa, Mexico and other parts of Latin America, and China.

1. Understand the challenges in the regions, including their geopolitical, cultural, military, and economic significance and the international relationships in which they are involved.

Educating Wanjiku
Food for Thought
Living on $500 a Year
Power of the Pyramids
A Woman's Place
A World of Difference
*The People Connection*
*The Rising Tide of Poverty*

*Women: The Critical Link*

2. Describe the recent history of the regions, including political divisions and systems, key leaders, religious issues, natural features, resources, and population patterns.

Educating Wanjiku
Food for Thought
Power of the Pyramids
A Woman's Place
A World of Difference
World Population Video
*The People Connection*
*Women: The Critical Link*

## Grade Eleven

(Social Science.11.2) Students analyze the relationship among the rise of industrialization, large-scale rural-to-urban migration, and massive immigration from Southern and Eastern Europe.

2. Describe the changing landscape, including the growth of cities linked by industry and trade, and the development of cities divided according to race, ethnicity, and class.

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

(Social Science.11.5) Students analyze the major political, social, economic, technological, and cultural developments of the 1920s.

7. Discuss the rise of mass production techniques, the growth of cities, the impact of new technologies (e.g., the automobile, electricity), and the resulting prosperity and effect on the American landscape.

Earth: The Apple of Our Eye (Intermediate/Secondary)
Global Warming Begins at Home
*Troubled Water*
*A Warm Forecast for the Planet?*

(Social Science.11.8) Students analyze the economic boom and social transformation of post-World War II America.

7. Describe the effects on society and the economy of technological developments since 1945, including the computer revolution, changes in communication, advances in medicine, and improvements in agricultural technology.

Earth: The Apple of Our Eye (Intermediate/Secondary)
Power of the Pyramids
*The People Connection*
*A Warm Forecast for the Planet?*

(Social Science.11.11) Students analyze the major social problems and domestic policy issues in contemporary American society.

1. Discuss the reasons for the nation's changing immigration policy, with emphasis on how the Immigration Act of 1965 and successor acts have transformed American society.

Take a Stand

3. Describe the changing roles of women in society as reflected in the entry of more women into the labor force and the changing family structure.

Educating Wanjiku
Maria's Education
*Women: The Critical Link*

5. Trace the impact of, need for, and controversies associated with environmental conservation, expansion of the national park system, and the development of environmental protection laws, with particular attention to the interaction between environmental protection advocates and property rights advocates.

For the Common Good
Growing Pains in Texas Hill Country
Something for Everyone
Take a Stand
*Troubled Water*

6. Analyze the persistence of poverty and how different analyses of this issue influence welfare reform, health insurance reform, and other social policies.

*The Rising Tide of Poverty*

7. Explain how the federal, state, and local governments have responded to demographic and social changes such as population shifts to the suburbs, racial concentrations in the cities, Frostbelt-to-Sunbelt migration, international migration, decline of family farms, increases in out-of-wedlock births, and drug abuse.

Growing Pains in Texas Hill Country

## Grade Twelve

(Social Science.12) Principles of American Democracy

12.2 Students evaluate and take and defend positions on the scope and limits of rights and obligations as democratic citizens, the relationships among them, and how they are secured.

4. Understand the obligations of civic-mindedness, including voting, being informed on civic issues, volunteering and performing public service, and serving in the military or alternative service.

For the Common Good
Something for Everyone

5. Describe the reciprocity between rights and obligations; that is, why enjoyment of one's rights entails respect for the rights of others.

For the Common Good
Something for Everyone

12.7 Students analyze and compare the powers and procedures of the national, state, tribal, and local governments.

5. Explain how public policy is formed, including the setting of the public agenda and implementation of it through regulations and executive orders.

Growing Pains in Texas Hill Country

12.10 Students formulate questions about and defend their analyses of tensions within our constitutional democracy and the importance of maintaining a balance between the following concepts: majority rule and individual rights; liberty and equality; state and national authority in a federal system; civil disobedience and the rule of law; freedom of the press and the right to a fair trial; the relationship of religion and government.

Take a Stand

(Social Science.12) Principles of Economics

12.1 Students understand common economic terms and concepts and economic reasoning.

1. Examine the causal relationship between scarcity and the need for choices.

Earth: The Apple of Our Eye (Intermediate/Secondary)
Everything Is Connected
For the Common Good

Living on $500 a Year
Needs vs. Wants
Something for Everyone
Water, Water Everywhere (Secondary)
A World of Difference
*Troubled Water*
*The People Connection*

4. Evaluate the role of private property as an incentive in conserving and improving scarce resources, including renewable and nonrenewable natural resources.
Eco Ethics
Take a Stand

12.6 Students analyze issues of international trade and explain how the U.S. economy affects, and is affected by, economic forces beyond the United States' borders.

3. Understand the changing role of international political borders and territorial sovereignty in a global economy.
Food for Thought
The Hunger Banquet
Living on $500 a Year
*The Rising Tide of Poverty*
*A Warm Forecast for the Planet?*

## Grades Nine to Twelve

(Social Science.9-12) Chronological and Spatial Thinking

1. Students compare the present with the past, evaluating the consequences of past events and decisions and determining the lessons that were learned.
Family Perspective
Power of the Pyramids
World Population Video
*The People Connection*
*A Warm Forecast for the Planet?*

2. Students analyze how change happens at different rates at different times; understand that some aspects can change while others remain the same; and understand that change is complicated and affects not only technology and politics but also values and beliefs.
Family Perspective
Growing Pains in Texas Hill Country
Power of the Pyramids
World Population Video
*The People Connection*
*The Rising Tide of Poverty*
*Troubled Water*
*A Warm Forecast for the Planet?*

3. Students use a variety of maps and documents to interpret human movement, including major patterns of domestic and international migration, changing environmental preferences and settlement patterns, the frictions that develop between population groups, and the diffusion of ideas, technological innovations, and goods.
World Population Video

4. Students relate current events to the physical and human characteristics of places and regions.
Earth: The Apple of Our Eye (Intermediate/Secondary)

Food for Thought
Growing Pains in Texas Hill Country
Take a Stand
A Woman's Place
*Feeding the Global Family*
*The People Connection*
*The Rising Tide of Poverty*
*Troubled Water*
*A Warm Forecast for the Planet?*
*Women: The Critical Link*

(Social Science.9-12) Historical Interpretation

5. Students analyze human modifications of landscapes and examine the resulting environmental policy issues.

Earth: The Apple of Our Eye (Intermediate/Secondary)
Everything Is Connected
Growing Pains in Texas Hill Country
A World of Difference
*Troubled Water*
*A Warm Forecast for the Planet?*

6. Students conduct cost-benefit analyses and apply basic economic indicators to analyze the aggregate economic behavior of the U.S. economy.

Growing Pains in Texas Hill Country
Take a Stand

# Language Arts

## Kindergarten

(Language Arts.K) Reading

1.0. Word Analysis, Fluency, and Systematic Vocabulary Development: Students know about letters, words, and sounds. They apply this knowledge to read simple sentences.

Vocabulary and Vocabulary Development

1.18. Describe common objects and events in both general and specific language.
- Crowding Can Be Seedy
- Web of Life
- Who Polluted the River?

2.0. Reading Comprehension: Students identify the basic facts and ideas in what they have read, heard, or viewed. They use comprehension strategies (e.g., generating and responding to questions, comparing new information to what is already known). The selections in Recommended Readings in Literature, Kindergarten Through Grade Eight (California Department of Education, 1996) illustrate the quality and complexity of the materials to be read by students.

Comprehension and Analysis of Grade-Level-Appropriate Text

2.2. Use pictures and context to make predictions about story content.
- Web of Life
- Who Polluted the River?

2.3. Connect to life experiences the information and events in texts.
- Who Polluted the River?
- *Sharing a Small World*

2.4. Retell familiar stories.
- Who Polluted the River?
- Web of Life

2.5. Ask and answer questions about essential elements of a text.
- Web of Life
- Who Polluted the River?
- *Sharing a Small World*

(Language Arts.K) Written and Oral English Language Conventions

1.0. Written and Oral English Language Conventions: The standards for written and oral English language conventions have been placed between those for writing and for listening and speaking because these conventions are essential to both sets of skills.

Sentence Structure

1.1. Recognize and use complete, coherent sentences when speaking.
- Creatures in Motion
- Crowding Can Be Seedy
- Earth Cookie
- Go Fish!
- Multiplying Mice
- Web of Life
- Who Polluted the River?

(Language Arts.K) Listening and Speaking

1.0. Listening and Speaking Strategies: Students listen and respond to oral communication. They speak in clear and coherent sentences.

Comprehension

1.1. Understand and follow one-and two-step oral directions.
Creatures in Motion
Crowding Can Be Seedy
Earth Cookie
Go Fish!
Who Polluted the River?
Web of Life

1.2. Share information and ideas, speaking audibly in complete, coherent sentences.
Creatures in Motion
Crowding Can Be Seedy
Earth Cookie
Go Fish!
Web of Life
Who Polluted the River?

(Language Arts.K) Listening and Speaking

2.0. Speaking Applications (Genres and Their Characteristics): Students deliver brief recitations and oral presentations about familiar experiences or interests, demonstrating command of the organization and delivery strategies outlined in Listening and Speaking Standard 1.0.

2.1. Describe people, places, things (e.g., size, color, shape), locations, and actions.
Crowding Can Be Seedy
Earth Cookie
Web of Life
Who Polluted the River?

2.2. Recite short poems, rhymes, and songs.
Crowding Can Be Seedy

2.3. Relate an experience or creative story in a logical sequence.
Web of Life
Who Polluted the River?

## Grade One

(Language Arts.1) Reading Comprehension

2.0. Reading Comprehension: Students read and understand grade-level-appropriate material. They draw upon a variety of comprehension strategies as needed (e.g., generating and responding to essential questions, making predictions, comparing information from several sources). The selections in Recommended Readings in Literature, Kindergarten Through Grade Eight illustrate the quality and complexity of the materials to be read by students. In addition to their regular school reading, by grade four, students read one-half million words annually, including a good representation of grade-level-appropriate narrative and expository text (e.g., classic and contemporary literature, magazines, newspapers, online information). In grade one, students begin to make progress toward this goal.

Comprehension and Analysis of Grade-Level-Appropriate Text

2.3. Follow one-step written instructions.
Multiplying Mice

(Language Arts.1) Written and Oral English Language Conventions

1.0. Written and Oral English Language Conventions: Students write and speak with a command of standard English conventions appropriate to this grade level.

Sentence Structure

1.1. Write and speak in complete, coherent sentences.
- Creatures in Motion
- Crowding Can Be Seedy
- Earth Cookie
- Go Fish!
- Web of Life
- Who Polluted the River?

(Language Arts.1) Listening and Speaking

1.0. Listening and Speaking Strategies: Students listen critically and respond appropriately to oral communication. They speak in a manner that guides the listener to understand important ideas by using proper phrasing, pitch, and modulation.

Comprehension

1.1. Listen attentively.
- Creatures in Motion
- Crowding Can Be Seedy
- Earth Cookie
- Go Fish!
- Multiplying Mice
- Web of Life
- Who Polluted the River?

1.2. Ask questions for clarification and understanding.
- Creatures in Motion
- Crowding Can Be Seedy
- Earth Cookie
- Go Fish!
- Web of Life
- Who Polluted the River?

1.3. Give, restate, and follow simple two-step directions.
- Creatures in Motion
- Crowding Can Be Seedy
- Earth Cookie
- Go Fish!
- Web of Life
- Who Polluted the River?

(Language Arts.1) Listening and Speaking

2.0. Speaking Applications (Genres and Their Characteristics): Students deliver brief recitations and oral presentations about familiar experiences or interests that are organized around a coherent thesis statement. Student speaking demonstrates a command of standard American English and the organizational and delivery strategies outlined in Listening and Speaking Standard 1.0.

2.1. Recite poems, rhymes, songs, and stories.
- Crowding Can Be Seedy

2.2. Retell stories using basic story grammar and relating the sequence of story events by answering who, what, when, where, why, and how questions.

Web of Life
Who Polluted the River?

## Grade Two

(Language Arts.2) Listening and Speaking
1.0. Listening and Speaking Strategies: Students listen critically and respond appropriately to oral communication. They speak in a manner that guides the listener to understand important ideas by using proper phrasing, pitch, and modulation.

Organization and Delivery of Oral Communication
1.7. Recount experiences in a logical sequence.
Web of Life
Who Polluted the River?

1.8. Retell stories, including characters, setting, and plot.
Web of Life
Who Polluted the River?

(Language Arts.2) Listening and Speaking
2.0. Speaking Applications (Genres and Their Characteristics): Students deliver brief recitations and oral presentations about familiar experiences or interests that are organized around a coherent thesis statement. Student speaking demonstrates a command of standard American English and the organizational and delivery strategies outlined in Listening and Speaking Standard 1.0.

2.1. Recount experiences or present stories:
a. Move through a logical sequence of events.
Web of Life
Who Polluted the River?

## Grade Three

(Language Arts.3) Reading
2.0. Reading Comprehension: Students read and understand grade-level-appropriate material. They draw upon a variety of comprehension strategies as needed (e.g., generating and responding to essential questions, making predictions, comparing information from several sources). The selections in Recommended Readings in Literature, Kindergarten Through Grade Eight illustrate the quality and complexity of the materials to be read by students. In addition to their regular school reading, by grade four, students read one-half million words annually, including a good representation of grade-level-appropriate narrative and expository text (e.g., classic and contemporary literature, magazines, newspapers, online information). In grade three, students make substantial progress toward this goal.

Comprehension and Analysis of Grade-Level-Appropriate Text
2.3. Demonstrate comprehension by identifying answers in the text.
*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?*

2.5. Distinguish the main idea and supporting details in expository text.
*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?*

2.6. Extract appropriate and significant information from the text, including problems and solutions.
*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?*

2.7. Follow simple multiple-step written instructions (e.g., how to assemble a product or play a board game).
Adding Armadillos
Everything Counts
Mining for Chocolate
People Count
Timber!

(Language Arts.3) Writing
2.0. Writing Applications (Genres and Their Characteristics): Students write compositions that describe and explain familiar objects, events, and experiences. Student writing demonstrates a command of standard American English and the drafting, research, and organizational strategies outlined in Writing Standard 1.0.

2.2. Write descriptions that use concrete sensory details to present and support unified impressions of people, places, things, or experiences.
Energy Imagery

(Language Arts.3) Listening and Speaking
1.0. Listening and Speaking Strategies: Students listen critically and respond appropriately to oral communication. They speak in a manner that guides the listener to understand important ideas by using proper phrasing, pitch, and modulation.

Comprehension
1.2. Connect and relate prior experiences, insights, and ideas to those of a speaker.
Energy Imagery

1.3. Respond to questions with appropriate elaboration.
Cougar Hunt
Earth: The Apple of Our Eye (Elementary)
Energy Imagery
Everything Counts
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?

1.7. Use clear and specific vocabulary to communicate ideas and establish the tone.
Energy Imagery
More or Less
When the Chips Are Down
Who Polluted the Potomac?

## Grade Four

(Language Arts.4) Reading

1.0. Word Analysis, Fluency, and Systematic Vocabulary Development: Students understand the basic features of reading. They select letter patterns and know how to translate them into spoken language by using phonics, syllabication, and word parts. They apply this knowledge to achieve fluent oral and silent reading.

Word Recognition

1.1. Read narrative and expository text aloud with grade-appropriate fluency and accuracy and with appropriate pacing, intonation, and expression.

*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?*

(Language Arts.4) Reading

2.0. Reading Comprehension: Students read and understand grade-level-appropriate material. They draw upon a variety of comprehension strategies as needed (e.g., generating and responding to essential questions, making predictions, comparing information from several sources). The selections in Recommended Readings in Literature, Kindergarten Through Grade Eight illustrate the quality and complexity of the materials to be read by students. In addition to their regular school reading, students read one-half million words annually, including a good representation of grade-level-appropriate narrative and expository text (e.g., classic and contemporary literature, magazines, newspapers, online information).

Comprehension and Analysis of Grade-Level-Appropriate Text

2.6. Distinguish between cause and effect and between fact and opinion in expository text.

*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?*

(Language Arts.4) Written and Oral English Language Conventions

1.0. Written and Oral English Language Conventions: Students write and speak with a command of standard English conventions appropriate to this grade level.

Sentence Structure

1.1. Use simple and compound sentences in writing and speaking.

Cougar Hunt
Earth: The Apple of Our Eye (Elementary)
Energy Imagery
Everything Counts
Mining for Chocolate
People Count
The Stork and the Grim Reaper
Timber!
Water, Water Everywhere (Elementary/Intermediate)
When the Chips Are Down
Who Polluted the Potomac?

(Language Arts.4) Listening and Speaking

1.0. Listening and Speaking Strategies: Students listen critically and respond appropriately to oral communication. They speak in a manner that guides the listener to understand important ideas by using proper phrasing, pitch, and modulation.

Comprehension

1.1. Ask thoughtful questions and respond to relevant questions with appropriate elaboration in oral settings.

Cougar Hunt
Earth: The Apple of Our Eye (Elementary)
Earth Cookie
Energy Imagery
Everything Counts
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?

Organization and Delivery of Oral Communication

1.6 Use traditional structures for conveying information (e.g., cause and effect, similarity and difference, and posing and answering a question).

Cougar Hunt
Energy Imagery
When the Chips Are Down
Who Polluted the Potomac?

1.8. Use details, examples, anecdotes, or experiences to explain or clarify information.

Energy Imagery
More or Less

## Grade Five

(Language Arts.5) Listening and Speaking

1.0. Listening and Speaking Strategies: Students deliver focused, coherent presentations that convey ideas clearly and relate to the background and interests of the audience. They evaluate the content of oral communication.

Comprehension

1.1. Ask questions that seek information not already discussed.

Cougar Hunt
Earth: The Apple of Our Eye (Elementary)
Earth Cookie
Energy Imagery
Mining for Chocolate
People Count
Water, Water Everywhere (Elementary/Intermediate)
When the Chips Are Down
Who Polluted the Potomac?

## Grade Six

(Language Arts.6) Reading

1.0. Word Analysis, Fluency, and Systematic Vocabulary Development: Students use their knowledge of word origins and word relationships, as well as historical and literary context clues, to determine the meaning of specialized vocabulary and to understand the precise meaning of grade-level-appropriate words.

Word Recognition

1.1. Read aloud narrative and expository text fluently and accurately and with appropriate pacing, intonation, and expression.

Eco Ethics
Educating Wanjiku
Growing Pains in Texas Hill Country
Maria's Education
*The Balance of Nature*
*Global Family Ties*
*People Count: Facing the Population Challenge*
*You're One in Six Billion!*
*Your Place on the Planet*

(Language Arts.6) Reading

2.0 Reading Comprehension (Focus on Informational Materials)
Students read and understand grade-level-appropriate material. They describe and connect the essential ideas, arguments, and perspectives of the text by using their knowledge of text structure, organization, and purpose. The selections in Recommended Readings in Literature, Kindergarten Through Grade Eight illustrate the quality and complexity of the materials to be read by students. In addition, by grade eight, students read one million words annually on their own, including a good representation of grade level-appropriate narrative and expository text (e.g., classic and contemporary literature, magazines, newspapers, online information). In grade six, students continue to make progress toward this goal.

Structural Features of Informational Materials

2.1 Identify the structural features of popular media (e.g., newspapers, magazines, online information) and use the features to obtain information.

Growing Pains in Texas Hill Country

(Language Arts.6) Writing

1.0. Writing Strategies: Students write clear, coherent, and focused essays. The writing exhibits students' awareness of the audience and purpose. Essays contain formal introductions, supporting evidence, and conclusions. Students progress through the stages of the writing process as needed.

Organization and Focus

1.3. Use a variety of effective and coherent organizational patterns, including comparison and contrast; organization by categories; and arrangement by spatial order, order of importance, or climactic order.

Eco Ethics
Growing Pains in Texas Hill Country
People on the Move

(Language Arts.6) Writing

2.0. Writing Applications (Genres and Their Characteristics): Students write narrative, expository, persuasive, and descriptive texts of at least 500 to 700 words in each genre. Student writing demonstrates a command of standard American English and the research, organizational, and drafting strategies outlined in Writing Standard 1.0.

2.2 Write expository compositions (e.g., description, explanation, comparison and contrast, problem and solution):

a. State the thesis or purpose.

Growing Pains in Texas Hill Country
People on the Move

b. Explain the situation.

Growing Pains in Texas Hill Country
People on the Move

c. Follow an organizational pattern appropriate to the type of composition.

Growing Pains in Texas Hill Country
People on the Move

d. Offer persuasive evidence to validate arguments and conclusions as needed.
Growing Pains in Texas Hill Country
People on the Move

(Language Arts.6) Listening and Speaking
1.0. Listening and Speaking Strategies: Students deliver focused, coherent presentations that convey ideas clearly and relate to the background and interests of the audience. They evaluate the content of oral communication.

Comprehension
1.3. Restate and execute multiple-step oral instructions and directions.
All in the Family
Cougar Hunt
Eco Ethics
Educating Wanjiku
Everything Is Connected
Food for Thought
For the Common Good
Growing Pains in Texas Hill Country
The Hunger Banquet
Maria's Education
Measuring a Million
Mining for Chocolate
The More The Merrier?
Needs vs. Wants
People on the Move
The Pop Ecology Files
Population Riddles
Power of the Pyramids
Something for Everyone
Stage Stepping
Take a Stand
Timber!
Water, Water Everywhere (Elementary/Intermediate)
Who Polluted the Potomac?
A World of Difference

(Language Arts.6) Listening and Speaking
1.0. Listening and Speaking Strategies: Students deliver focused, coherent presentations that convey ideas clearly and relate to the background and interests of the audience. They evaluate the content of oral communication.

Organization and Delivery of Oral Communication
1.4. Select a focus, an organizational structure, and a point of view, matching the purpose, message, occasion, and vocal modulation to the audience.
Growing Pains in Texas Hill Country
Take a Stand

1.5. Emphasize salient points to assist the listener in following the main ideas and concepts.
Growing Pains in Texas Hill Country
Take a Stand

1.6. Support opinions with detailed evidence and with visual or media displays that use appropriate technology.

Growing Pains in Texas Hill Country

(Language Arts.6) Listening and Speaking

2.0 Speaking Applications (Genres and Their Characteristics): Students deliver well-organized formal presentations employing traditional rhetorical strategies (e.g., narration, exposition, persuasion, description). Student speaking demonstrates a command of standard American English and the organizational and delivery strategies outlined in Listening and Speaking Standard 1.0.

2.2 Deliver informative presentations:

b. Develop the topic with facts, details, examples, and explanations from multiple authoritative sources (e.g., speakers, periodicals, online information).

Growing Pains in Texas Hill Country
People on the Move

2.4. Deliver persuasive presentations:

a. Provide a clear statement of the position.

Growing Pains in Texas Hill Country
Take a Stand

b. Include relevant evidence.

Growing Pains in Texas Hill Country

c. Offer a logical sequence of information.

Growing Pains in Texas Hill Country

d. Engage the listener and foster acceptance of the proposition or proposal.

Growing Pains in Texas Hill Country
Take a Stand

## Grade Seven

(Language Arts.7) Writing

1.0. Writing Strategies

Students write clear, coherent, and focused essays. The writing exhibits students' awareness of the audience and purpose. Essays contain formal introductions, supporting evidence, and conclusions. Students progress through the stages of the writing process as needed.

Research and Technology

1.4. Identify topics; ask and evaluate questions; and develop ideas leading to inquiry, investigation, and research.

People on the Move

(Language Arts.7) Listening and Speaking

1.0. Listening and Speaking Strategies: Deliver focused, coherent presentations that convey ideas clearly and relate to the background and interests of the audience. Students evaluate the content of oral communication.

Comprehension

1.1. Ask probing questions to elicit information, including evidence to support the speaker's claims and conclusions.

Growing Pains in Texas Hill Country
Take a Stand

1.3. Respond to persuasive messages with questions, challenges, or affirmations.

Take a Stand
Growing Pains in Texas Hill Country

1.4. Organize information to achieve particular purposes and to appeal to the background and interests of the audience.
Growing Pains in Texas Hill Country
People on the Move

1.5. Arrange supporting details, reasons, descriptions, and examples effectively and persuasively in relation to the audience.
Growing Pains in Texas Hill Country

1.6. Use speaking techniques, including voice modulation, inflection, tempo, enunciation, and eye contact, for effective presentations.
Growing Pains in Texas Hill Country
Take a Stand

(Language Arts.7) Listening and Speaking
2.0 Speaking Applications (Genres and Their Characteristics): Students deliver well-organized formal presentations employing traditional rhetorical strategies (e.g., narration, exposition, persuasion, description). Student speaking demonstrates a command of standard American English and the organizational and delivery strategies outlined in Listening and Speaking Standard 1.0. Using the speaking strategies of grade seven outlined in Listening and Speaking Standard 1.0, students:

2.2 Deliver oral summaries of articles and books:
a. Include the main ideas of the event or article and the most significant details.
Growing Pains in Texas Hill Country

b. Use the student's own words, except for material quoted from sources.
Growing Pains in Texas Hill Country

c. Convey a comprehensive understanding of sources, not just superficial details
Growing Pains in Texas Hill Country

2.4. Deliver persuasive presentations:
a. State a clear position or perspective in support of an argument or proposal.
Growing Pains in Texas Hill Country

b. Describe the points in support of the argument and employ well-articulated evidence.
Growing Pains in Texas Hill Country

## Grade Eight

(Language Arts.8) Listening and Speaking
2.0. Speaking Applications (Genres and Their Characteristics): Students deliver well-organized formal presentations employing traditional rhetorical strategies (e.g., narration, exposition, persuasion, description). Student speaking demonstrates a command of standard American English and the organizational and delivery strategies outlined in Listening and Speaking Standard 1.0.

2.4. Deliver persuasive presentations:
b. Differentiate fact from opinion and support arguments with detailed evidence, examples, and reasoning.
Growing Pains in Texas Hill Country
Take a Stand

c. Anticipate and answer listener concerns and counterarguments effectively through the inclusion and arrangement of details, reasons, examples, and other elements.
Growing Pains in Texas Hill Country

Take a Stand

d. Maintain a reasonable tone.
Growing Pains in Texas Hill Country
Take a Stand

## Grades Nine to Ten

(Language Arts.9-10) Listening and Speaking
1.0. Listening and Speaking Strategies: Students formulate adroit judgments about oral communication. They deliver focused and coherent presentations of their own that convey clear and distinct perspectives and solid reasoning. They use gestures, tone, and vocabulary tailored to the audience and purpose.

Organization and Delivery of Oral Communication
1.3. Choose logical patterns of organization (e.g., chronological, topical, cause and effect) to inform and to persuade, by soliciting agreement or action, or to unite audiences behind a common belief or cause.
Growing Pains in Texas Hill Country
Take a Stand

(Language Arts.9-10) Listening and Speaking
2.0. Speaking Applications (Genres and Their Characteristics): Students deliver polished formal and extemporaneous presentations that combine the traditional rhetorical strategies of narration, exposition, persuasion, and description. Student speaking demonstrates a command of standard American English and the organizational and delivery strategies outlined in Listening and Speaking Standard 1.0.

2.3 Apply appropriate interviewing techniques:
a. Prepare and ask relevant questions.
People on the Move

b. Make notes of responses.
People on the Move

2.5. Deliver persuasive arguments (including evaluation and analysis of problems and solutions and causes and effects):
a. Structure ideas and arguments in a coherent, logical fashion.
Growing Pains in Texas Hill Country
Living on $500 a Year

b. Use rhetorical devices to support assertions (e.g., by appeal to logic through reasoning; by appeal to emotion or ethical belief; by use of personal anecdote, case study, or analogy).
Growing Pains in Texas Hill Country
Take a Stand

c. Clarify and defend positions with precise and relevant evidence, including facts, expert opinions, quotations, expressions of commonly accepted beliefs, and logical reasoning.
Growing Pains in Texas Hill Country
Take a Stand

d. Anticipate and address the listener's concerns and counterarguments.
Growing Pains in Texas Hill Country
Take a Stand

# Mathematics

## Kindergarten

(Math.K) Number Sense
1.0 Students understand the relationship between numbers and quantities (I.e. that a set of objects has the same number of objects in different situations regardless of its position or arrangement:

1.1 Compare two or more sets of objects (up to ten objects in each group) and identify which set is equal to, more than, or less than the other.
Food for Thought
Go Fish!

1.2 Count, recognize, represent, name, and order a number of objects (up to 30).
Crowding Can Be Seedy

1.3 Know that the larger numbers describe sets with more objects in them than the smaller numbers have.
Crowding Can Be Seedy
Food for Thought

(Math.K) Statistics, Data Analysis, and Probability
1.0 Students collect information about objects and events in their environment:

1.1 Pose information questions; collect data; and record the results using objects, pictures, and picture graphs.
Creatures in Motion
The Stork and the Grim Reaper

(Math.K) Mathematical Reasoning
1.0 Students make decisions about how to set up a problem:

1.2 Use tools and strategies, such as manipulatives or sketches, to model problems.
Earth Cookie
Food for Thought
The Stork and the Grim Reaper

## Grade One

(Math.1) Number Sense
1.0 Students understand and use numbers up to 100:

1.1 Count, read, and write whole numbers to 100.
Creatures in Motion
Food for Thought
Population Circle

1.2 Compare and order whole numbers to 100 by using the symbols for less than, equal to, or greater than (<, =, >).
Adding Armadillos
Creatures in Motion
Crowding Can Be Seedy
Food for Thought

3.0 Students use estimation strategies in computation and problem solving that involve numbers that use the ones, tens, and hundreds places:

3.1 Make reasonable estimates when comparing larger or smaller numbers.
Food for Thought

(Math.1) Statistics, Data Analysis, and Probability
1.0 Students organize, represent, and compare data by category on simple graphs and charts:

1.2 Represent and compare data (e.g., largest, smallest, most often, least often) by using pictures, bar graphs, tally charts, and picture graphs.
Earth Cookie
Food for Thought
Water, Water Everywhere (Elementary/Intermediate)

(Math.1) Mathematical Reasoning
1.0 Students make decisions about how to set up a problem:

1.2 Use tools and strategies, such as manipulatives or sketches, to model problems.
Earth: The Apple of Our Eye (Elementary)
Earth Cookie
The Stork and the Grim Reaper

## Grade Two

(Math.2) Number Sense
4.0 Students understand that fractions and decimals may refer to parts of a set and parts of a whole:

4.1 Recognize, name, and compare unit fractions from 1/12 to 1/2.
Earth: The Apple of Our Eye (Elementary)
Earth Cookie
The Stork and the Grim Reaper

4.2 Recognize fractions of a whole and parts of a group (e.g., one-fourth of a pie, two-thirds of 15 balls).
Earth: The Apple of Our Eye (Elementary)
Earth Cookie
The Stork and the Grim Reaper

4.3 Know that when all fractional parts are included, such as four-fourths, the result is equal to the whole and to one.
Earth: The Apple of Our Eye (Elementary)
Earth Cookie

(Math.2) Mathematical Reasoning
1.0 Students make decisions about how to set up a problem:

1.2 Use tools, such as manipulatives or sketches, to model problems.
Adding Armadillos
Earth: The Apple of Our Eye (Elementary)
Earth Cookie
Multiplying Mice
Population Circle
The Stork and the Grim Reaper
Timber!
Water, Water Everywhere (Elementary/Intermediate)

## Grade Three

(Math.3) Number Sense
2.0 Students calculate and solve problems involving addition, subtraction, multiplication, and division:

2.1 Find the sum or difference of two whole numbers between 0 and 10,000.
Adding Armadillos
Everything Counts
Multiplying Mice
People Count
Timber!

(Math.3) Algebra and Functions
2.0 Students represent simple functional relationships:

2.2 Extend and recognize a linear pattern by its rules (e.g., the number of legs on a given number of horses may be calculated by counting by 4s or by multiplying the number of horses by 4).
Timber!

(Math.3) Measurement and Geometry
1.0 Students choose and use appropriate units and measurement tools to quantify the properties of objects:

1.1 Choose the appropriate tools and units (metric and U.S.) and estimate and measure the length, liquid volume, and weight/mass of given objects.
Measuring a Million
Water, Water Everywhere (Elementary/Intermediate)

(Math.3) Mathematical Reasoning
2.0 Students use strategies, skills, and concepts in finding solutions:

2.3 Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning.
Adding Armadillos
Earth: The Apple of Our Eye (Elementary)
Earth Cookie
Multiplying Mice
Population Circle
The Stork and the Grim Reaper
Timber!
Water, Water Everywhere (Elementary/Intermediate)

2.4 Express the solution clearly and logically by using the appropriate mathematical notation and terms and clear language; support solutions with evidence in both verbal and symbolic work.
Adding Armadillos
Multiplying Mice
Timber!

## Grade Four

(Math.4) Number Sense
1.0 Students understand the place value of whole numbers and decimals to two decimal places and how whole numbers and decimals relate to simple fractions. Students use the concepts of negative numbers:

1.1 Read and write whole numbers in the millions.
Food for Thought
Measuring a Million
On the Double
Population Clock
Population Riddles
Power of the Pyramids

1.2 Order and compare whole numbers and decimals to two decimal places.
Food for Thought
On the Double

1.5 Explain different interpretations of fractions, for example, parts of a whole, parts of a set, and division of whole numbers by whole numbers; explain equivalents of fractions (see Standard 4.0).
Earth: The Apple of Our Eye (Elementary)
Food for Thought
Water, Water Everywhere (Elementary/Intermediate)

1.7 Write the fraction represented by a drawing of parts of a figure; represent a given fraction by using drawings; and relate a fraction to a simple decimal on a number line
Earth: The Apple of Our Eye (Elementary)
Earth Cookie

(Math.4) Algebra and Functions
1.0 Students use and interpret variables, mathematical symbols, and properties to write and simplify expressions and sentences:

1.1 Use letters, boxes, or other symbols to stand for any number in simple expressions or equations (e.g., demonstrate an understanding and the use of the concept of a variable).
Everything Counts

(Math.4) Statistics, Data Analysis, and Probability
1.0 Students organize, represent, and interpret numerical and categorical data and clearly communicate their findings:

1.1 Formulate survey questions; systematically collect and represent data on a number line; and coordinate graphs, tables, and charts.
A World of Difference

1.3 Interpret one-and two-variable data graphs to answer questions about a situation.
Power of the Pyramids
The Pop Ecology Files
Population Circle

2.0 Students make predictions for simple probability situations:

2.2 Express outcomes of experimental probability situations verbally and numerically (e.g., 3 out of 4; 3 /4).
A World of Difference

(Math.4) Mathematical Reasoning
2.0 Students use strategies, skills, and concepts in finding solutions:

2.3 Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning.

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

2.4 Express the solution clearly and logically by using the appropriate mathematical notation and terms and clear language; support solutions with evidence in both verbal and symbolic work.
Everything Counts
On the Double

## Grade Five

(Math.5) Number Sense
2.0 Students perform calculations and solve problems involving addition, subtraction, and simple multiplication and division of fractions and decimals:

2.1 Add, subtract, multiply, and divide with decimals; add with negative integers; subtract positive integers from negative integers; and verify the reasonableness of the results.
Adding Armadillos
All in the Family
Earth: The Apple of Our Eye (Elementary)
Everything Counts
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
Population Clock
The Stork and the Grim Reaper
Timber!
Water, Water Everywhere (Elementary/Intermediate)

2.3 Solve simple problems, including ones arising in concrete situations, involving the addition and subtraction of fractions and mixed numbers (like and unlike denominators of 20 or less), and express answers in the simplest form.
A World of Difference

(Math.5) Algebra and Functions
1.0 Students use variables in simple expressions, compute the value of the expression for specific values of the variable, and plot and interpret the results:

1.1 Use information taken from a graph or equation to answer questions about a problem situation.
All in the Family
Earth: The Apple of Our Eye (Elementary)
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
On the Double

The Pop Ecology Files
Power of the Pyramids
Timber!
Water, Water Everywhere (Elementary/Intermediate)

1.2 Use a letter to represent an unknown number; write and evaluate simple algebraic expressions in one variable by substitution.
Everything Counts
Global Warming Begins at Home

(Math.5) Measurement and Geometry
1.0 Students understand and compute the volumes and areas of simple objects:

1.3 Understand the concept of volume and use the appropriate units in common measuring systems (i.e., cubic centimeter [cm3], cubic meter [m3], cubic inch [in3], cubic yard [yd3]) to compute the volume of rectangular solids.
How Much Space Do We Need?
Measuring a Million

(Math.5) Statistics, Data Analysis, and Probability
1.0 Students display, analyze, compare, and interpret different data sets, including data sets of different sizes:

1.2 Organize and display single-variable data in appropriate graphs and representations (e.g., histogram, circle graphs) and explain which types of graphs are appropriate for various data sets.
Earth: The Apple of Our Eye (Elementary)
Power of the Pyramids

1.3 Use fractions and percentages to compare data sets of different sizes.
Earth: The Apple of Our Eye (Elementary)
Food for Thought
Power of the Pyramids
A World of Difference

(Math.5) Mathematical Reasoning
2.0 Students use strategies, skills, and concepts in finding solutions:

2.3 Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning.
Adding Armadillos
All in the Family
Earth: The Apple of Our Eye (Elementary)
Everything Counts
Food for Thought
Global Warming Begins at Home
How Much Space Do We Need?
Multiplying Mice
On the Double
People Count
The Pop Ecology Files
Population Circle
Population Riddles
Stage Stepping
The Stork and the Grim Reaper
Timber!
Water, Water Everywhere (Elementary/Intermediate)

A World of Difference

2.4 Express the solution clearly and logically by using the appropriate mathematical notation and terms and clear language; support solutions with evidence in both verbal and symbolic work.
Earth: The Apple of Our Eye (Elementary)
Everything Counts
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
Timber!
A World of Difference

2.5 Indicate the relative advantages of exact and approximate solutions to problems and give answers to a specified degree of accuracy.
Everything Counts
The Stork and the Grim Reaper

(Math.5) Mathematical Reasoning
3.0 Students move beyond a particular problem by generalizing to other situations:

3.3 Develop generalizations of the results obtained and apply them in other circumstances.
Global Warming Begins at Home
On the Double
Population Clock
The Pop Ecology Files
Timber!
A World of Difference

## Grade Six

(Math.6) Number Sense
1.0 Students compare and order positive and negative fractions, decimals, and mixed numbers. Students solve problems involving fractions, ratios, proportions, and percentages:

1.2 Interpret and use ratios in different contexts (e.g., batting averages, miles per hour) to show the relative sizes of two quantities, using appropriate notations ( a/b, a to b, a:b ).
How Much Space Do We Need?
Measuring a Million
On the Double
Population Clock
Population Riddles
The Pop Ecology Files
The Stork and the Grim Reaper
Timber!

2.0 Students calculate and solve problems involving addition, subtraction, multiplication, and division:

2.3 Solve addition, subtraction, multiplication, and division problems, including those arising in concrete situations that use positive and negative integers and combinations of these operations.
Everything Counts
Global Warming Begins at Home

How Much Space Do We Need?
Measuring a Million
On the Double
People Count
The Pop Ecology Files
Population Clock
Population Riddles
Power of the Pyramids
Stage Stepping
Timber!

(Math.6) Algebra and Functions

1.0 Students write verbal expressions and sentences as algebraic expressions and equations; they evaluate algebraic expressions, solve simple linear equations, and graph and interpret their results:

1.1 Write and solve one-step linear equations in one variable.
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
On the Double
The Pop Ecology Files
Population Clock
Power of the Pyramids

1.2 Write and evaluate an algebraic expression for a given situation, using up to three variables.
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
On the Double
The Pop Ecology Files
Population Clock
Power of the Pyramids

2.0 Students analyze and use tables, graphs, and rules to solve problems involving rates and proportions:

2.1 Convert one unit of measurement to another (e.g., from feet to miles, from centimeters to inches).
How Much Space Do We Need?
Measuring a Million

(Math.6) Algebra and Functions

3.0 Students investigate geometric patterns and describe them algebraically:

3.1 Use variables in expressions describing geometric quantities (e.g., $P = 2w + 2l$, $A = 1/2bh$, $C = pd$ - the formulas for the perimeter of a rectangle, the area of a triangle, and the circumference of a circle, respectively).
Measuring a Million

3.2 Express in symbolic form simple relationships arising from geometry.
Measuring a Million

2.0 Students use data samples of a population and describe the characteristics and limitations of the samples:

2.1 Compare different samples of a population with the data from the entire population and identify a situation in which it makes sense to use a sample.
Everything Counts

Family Perspective
People Count
Power of the Pyramids

2.2 Identify different ways of selecting a sample (e.g., convenience sampling, responses to a survey, random sampling) and which method makes a sample more representative for a population.
Everything Counts

2.3 Analyze data displays and explain why the way in which the question was asked might have influenced the results obtained and why the way in which the results were displayed might have influenced the conclusions reached.
World Population Video

2.4 Identify data that represent sampling errors and explain why the sample (and the display) might be biased.
Everything Counts
People Count

2.5 Identify claims based on statistical data and, in simple cases, evaluate the validity of the claims.
Everything Counts
A World of Difference

3.0 Students determine theoretical and experimental probabilities and use these to make predictions about events:

3.2 Use data to estimate the probability of future events (e.g., batting averages or number of accidents per mile driven).
A World of Difference

(Math.6) Mathematical Reasoning

1.0 Students make decisions about how to approach problems:

1.2 Formulate and justify mathematical conjectures based on a general description of the mathematical question or problem posed.
All in the Family
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
Population Clock
A World of Difference

2.0 Students use strategies, skills, and concepts in finding solutions:

2.4 Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning.
Adding Armadillos
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
Multiplying Mice
The Pop Ecology Files
Population Circle
Population Clock

Power of the Pyramids
Stage Stepping
Timber!
A World of Difference

2.7 Make precise calculations and check the validity of the results from the context of the problem.
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
Timber!
A World of Difference

## Grade Seven

(Math.7) Number Sense
1.0 Students know the properties of, and compute with, rational numbers expressed in a variety of forms:

1.7 Solve problems that involve discounts, markups, commissions, and profit and compute simple and compound interest.
The Pop Ecology Files

(Math.7) Algebra and Functions
1.0 Students express quantitative relationships by using algebraic terminology, expressions, equations, inequalities, and graphs:

1.1 Use variables and appropriate operations to write an expression, an equation, an inequality, or a system of equations or inequalities that represents a verbal description (e.g., three less than a number, half as large as area A).
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
On the Double
The Pop Ecology Files
Population Clock
Power of the Pyramids

1.5 Represent quantitative relationships graphically and interpret the meaning of a specific part of a graph in the situation represented by the graph.
All in the Family
Power of the Pyramids
The Pop Ecology Files

(Math.7) Measurement and Geometry
1.0 Students choose appropriate units of measure and use ratios to convert within and between measurement systems to solve problems:

1.1 Compare weights, capacities, geometric measures, times, and temperatures within and between measurement systems (e.g., miles per hour and feet per second, cubic inches to cubic centimeters).
How Much Space Do We Need?
Measuring a Million

1.3 Use measures expressed as rates (e.g., speed, density) and measures expressed as products (e.g., person-days) to solve problems; check the units of the solutions; and use dimensional analysis to check the reasonableness of the answer.

Global Warming Begins at Home
How Much Space Do We Need?
On the Double
Population Clock

2.0 Students compute the perimeter, area, and volume of common geometric objects and use the results to find measures of less common objects. They know how perimeter, area, and volume are affected by changes of scale:

2.1 Use formulas routinely for finding the perimeter and area of basic two-dimensional figures and the surface area and volume of basic three-dimensional figures, including rectangles, parallelograms, trapezoids, squares, triangles, circles, prisms, and cylinders.

How Much Space Do We Need?
Measuring a Million

(Math.7) Statistics, Data Analysis, and Probability

1.0 Students collect, organize, and represent data sets that have one or more variables and identify relationships among variables within a data set by hand and through the use of an electronic spreadsheet software program:

1.1 Know various forms of display for data sets, including a stem-and-leaf plot or box-and-whisker plot; use the forms to display a single set of data or to compare two sets of data.

The Pop Ecology Files

(Math.7) Mathematical Reasoning

1.0 Students make decisions about how to approach problems:

1.1 Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, sequencing and prioritizing information, and observing patterns.

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

1.2 Formulate and justify mathematical conjectures based on a general description of the mathematical question or problem posed.

All in the Family
Everything Counts
Everything Is Connected
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
Population Clock
A World of Difference

2.0 Students use strategies, skills, and concepts in finding solutions:

2.3 Estimate unknown quantities graphically and solve for them by using logical reasoning and arithmetic and algebraic techniques.

Population Circle

2.5 Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning.

Adding Armadillos
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
Multiplying Mice
The Pop Ecology Files
Population Circle
Population Clock
Power of the Pyramids
Stage Stepping
Timber!
A World of Difference

2.8 Make precise calculations and check the validity of the results from the context of the problem.
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
Timber!
A World of Difference

## Grades Eight to Twelve

(Math.8-12) Algebra I

10.0 Students add, subtract, multiply, and divide monomials and polynomials. Students solve multistep problems, including word problems, by using these techniques.
Global Warming Begins at Home
How Much Space Do We Need?

15.0 Students apply algebraic techniques to solve rate problems, work problems, and percent mixture problems.
All in the Family
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million
On the Double
The Pop Ecology Files
Population Clock
Power of the Pyramids
Stage Stepping

(Math.8-12) Algebra II

19.0 Students use combinations and permutations to compute probabilities.
A World of Difference

(Math.8-12) Geometry

8.0 Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface area of common geometric figures.
Measuring a Million

(Math.8-12) Probability and Statistics

1.0 Students know the definition of the notion of independent events and can use the rules for addition, multiplication, and complementation to solve for probabilities of particular events in finite sample spaces.

A World of Difference

8.0 Students organize and describe distributions of data by using a number of different methods, including frequency tables, histograms, standard line and bar graphs, stem-and-leaf displays, scatterplots, and box-and-whisker plots.

All in the Family
The Pop Ecology Files
Population Circle
Power of the Pyramids
Timber!

(Math.8-12) Advanced Placement Probability and Statistics

1.0 Students solve probability problems with finite sample spaces by using the rules for addition, multiplication, and complementation for probability distributions and understand the simplifications that arise with independent events.

A World of Difference

14.0 Students organize and describe distributions of data by using a number of different methods, including frequency tables, histograms, standard line graphs and bar graphs, stem-and-leaf displays, scatterplots, and box-and-whisker plots.

All in the Family
The Pop Ecology Files
Power of the Pyramids

# Science

## Kindergarten

(Science.K) 3. Earth Sciences. Earth is composed of land, air, and water. As a basis for understanding this concept:

c. Students know how to identify resources from Earth that are used in everyday life and understand that many resources can be conserved.
Earth: The Apple of Our Eye (Elementary)
Earth Cookie
Mining for Chocolate
*Sharing a Small World*

(Science.K) 4. Investigation and Experimentation. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:

a. Observe common objects by using the five senses.
Creatures in Motion
Crowding Can Be Seedy
Go Fish!
Population Circle
Web of Life
Who Polluted the River?

e. Communicate observations orally and through drawings.
Creatures in Motion
Crowding Can Be Seedy
Earth: The Apple of Our Eye (Elementary)
Earth Cookie
Go Fish!
Mining for Chocolate
Population Circle
Web of Life
Who Polluted the River?

## Grade One

(Science.1) 2. Life Sciences. Plants and animals meet their needs in different ways. As a basis for understanding this concept:

a. Students know different plants and animals inhabit different kinds of environments and have external features that help them thrive in different kinds of places.
Web of Life

b. Students know both plants and animals need water, animals need food, and plants need light.
Cougar Hunt
Crowding Can Be Seedy
Web of Life

c. Students know 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

(Science.1) 3. Earth Sciences. Weather can be observed, measured, and described. As a basis for understanding this concept:

c. Students know the sun warms the land, air, and water.
Crowding Can Be Seedy
Web of Life

(Science.1) 4. Investigation and Experimentation. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:

a. Draw pictures that portray some features of the thing being described.
Earth Cookie

b. Record observations and data with pictures, numbers, or written statements.
Adding Armadillos
Cougar Hunt
Earth Cookie

c. Record observations on a bar graph.
Adding Armadillos
Go Fish!

## Grade Two

(Science.2) 2. Life Sciences. Plants and animals have predictable life cycles. As a basis for understanding this concept:

e. Students know light, gravity, touch, or environmental stress can affect the germination, growth, and development of plants.
Crowding Can Be Seedy
Web of Life

(Science.2) 3. Earth Sciences. Earth is made of materials that have distinct properties and provide resources for human activities. As a basis for understanding this concept:

e. Students know rock, water, plants, and soil provide many resources, including food, fuel, and building materials, that humans use.
Earth: The Apple of Our Eye (Elementary)
Earth Cookie
Timber!
Water, Water Everywhere (Elementary/Intermediate)
Web of Life
Who Polluted the River?

(Science.2) 4. Investigation and Experimentation. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:

a. Make predictions based on observed patterns and not random guessing.
Adding Armadillos
Multiplying Mice
Population Circle

The Stork and the Grim Reaper
Timber!

e. Construct bar graphs to record data, using appropriately labeled axes.
Adding Armadillos
Go Fish!

g. Follow oral instructions for a scientific investigation.
Adding Armadillos
Earth: The Apple of Our Eye (Elementary)
Earth Cookie
Go Fish!
Mining for Chocolate
Population Circle
The Stork and the Grim Reaper
Timber!
Water, Water Everywhere (Elementary/Intermediate)
Web of Life
Who Polluted the River?

## Grade Three

(Science.3) 1. Physical Sciences. Energy and matter have multiple forms and can be changed from one form to another. As a basis for understanding this concept:

a. Students know energy comes from the Sun to Earth in the form of light.
Web of Life

b. Students know sources of stored energy take many forms, such as food, fuel, and batteries.
Energy Imagery

(Science.3) 3. Life Sciences. Adaptations in physical structure or behavior may improve an organism's chance for survival. As a basis for understanding this concept:

b. Students know examples of diverse life forms in different environments, such as oceans, deserts, tundra, forests, grasslands, and wetlands.
Cougar Hunt
Web of Life

c. Students know living things cause changes in the environment in which they live: some of these changes are detrimental to the organism or other organisms, and some are beneficial.
Crowding Can Be Seedy
Earth: The Apple of Our Eye (Elementary)
Mining for Chocolate
More or Less
Multiplying Mice
Population Circle
Population Riddles
The Stork and the Grim Reaper
Timber!
Web of Life
Who Polluted the Potomac?
Who Polluted the River?

d. Students know when the environment changes, some plants and animals survive and reproduce; others die or move to new locations.

Cougar Hunt
Crowding Can Be Seedy
Who Polluted the Potomac?
Who Polluted the River?

(Science.3) 5. Investigation and Experimentation. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:

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

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

d. Predict the outcome of a simple investigation and compare the result with the prediction.

Population Circle
Population Riddles
The Stork and the Grim Reaper
Timber!

e. Collect data in an investigation and analyze those data to develop a logical conclusion.

Adding Armadillos
Cougar Hunt
Crowding Can Be Seedy
Creatures in Motion
Earth: The Apple of Our Eye (Elementary)
Earth Cookie
Food for Thought
Go Fish!
Mining for Chocolate
Multiplying Mice
Population Circle
Population Riddles
The Stork and the Grim Reaper
Timber!
Water, Water Everywhere (Elementary/Intermediate)
Web of Life
Who Polluted the Potomac?
Who Polluted the River?

## Grade Four

(Science.4) 2. Life Sciences. All organisms need energy and matter to live and grow. As a basis for understanding this concept:

a. Students know plants are the primary source of matter and energy entering most food chains.
*How Do People Use the Earth's Resources?*

b. Students know producers and consumers (herbivores, carnivores, omnivores, and decomposers) are related in food chains and food webs and may compete with each other for resources in an ecosystem.
*How Do People Use the Earth's Resources?*
*How Many Is Enough?*

c. Students know decomposers, including many fungi, insects, and microorganisms, recycle matter from dead plants and animals.
Web of Life

(Science.4) 3. Life Sciences. Living organisms depend on one another and on their environment for survival. As a basis for understanding this concept:

b. Students know that in any particular environment, some kinds of plants and animals survive well, some survive less well, and some cannot survive at all.
Cougar Hunt
A World of Difference
*What Is a Population?*

c. Students know many plants depend on animals for pollination and seed dispersal, and animals depend on plants for food and shelter.
Timber!

(Science.4) 6. Investigation and Experimentation. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:

b. Measure and estimate the weight, length, or volume of objects.
Measuring a Million

c. Formulate and justify predictions based on cause-and-effect relationships.
Everything Counts
More or Less
Power of the Pyramids
Stage Stepping
The Pop Ecology Files
The Stork and the Grim Reaper
Timber!
Who Polluted the Potomac?
A World of Difference

e. Construct and interpret graphs from measurements.
Everything Counts
Population Circle
Power of the Pyramids

f. Follow a set of written instructions for a scientific investigation.
Earth Cookie
Timber!

## Grade Five

(Science.5) 3. Earth Sciences. Water on Earth moves between the oceans and land through the processes of evaporation and condensation. As a basis for understanding this concept:

a. Students know most of Earth's water is present as salt water in the oceans, which cover most of Earth's surface.
Water, Water Everywhere (Elementary/Intermediate)

d. Students know that the amount of fresh water located in rivers, lakes, underground sources, and glaciers is limited and that its availability can be extended by recycling and decreasing the use of water.
Water, Water Everywhere (Elementary/Intermediate)
Who Polluted the Potomac?

(Science.5) 6. Investigation and Experimentation. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:

f. Select appropriate tools (e.g., thermometers, meter sticks, balances, and graduated cylinders) and make quantitative observations.
Measuring a Million
Water, Water Everywhere (Elementary/Intermediate)

g. Record data by using appropriate graphic representations (including charts, graphs, and labeled diagrams) and make inferences based on those data.
All in the Family
Earth: The Apple of Our Eye (Elementary)
Everything Counts
How Much Space Do We Need?
Multiplying Mice
On the Double
People Count
The Pop Ecology Files
Population Circle
Power of the Pyramids
Timber!
Water, Water Everywhere (Elementary/Intermediate)
A World of Difference

h. Draw conclusions from scientific evidence and indicate whether further information is needed to support a specific conclusion.
Adding Armadillos
All in the Family
Cougar Hunt
Crowding Can Be Seedy
Earth: The Apple of Our Eye (Elementary)
Global Warming Begins at Home
How Much Space Do We Need?
More or Less
Multiplying Mice
On the Double
The Pop Ecology Files
Population Circle
Power of the Pyramids
Stage Stepping

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

## Grade Six: Focus on Earth Sciences

(Science.6) 5. Ecology (Life Sciences). Organisms in ecosystems exchange energy and nutrients among themselves and with the environment. As a basis for understanding this concept:

b. Students know matter is transferred over time from one organism to others in the food web and between organisms and the physical environment.
Cougar Hunt
Energy Imagery
Mining for Chocolate

c. Students know populations of organisms can be categorized by the functions they serve in an ecosystem.
*The Balance of Nature*

d. Students know different kinds of organisms may play similar ecological roles in similar biomes.
Cougar Hunt

e. Students know the number and types of organisms an ecosystem can support depends on the resources available and on abiotic factors, such as quantities of light and water, a range of temperatures, and soil composition.
Cougar Hunt
Energy Imagery
Food for Thought
Growing Pains in Texas Hill Country
How Much Space Do We Need?
Mining for Chocolate
The More The Merrier?
The Stork and the Grim Reaper
Timber!
Water, Water Everywhere (Elementary/Intermediate)
World Population Video
A World of Difference
*The Balance of Nature*

(Science.6) 6. Resources. Sources of energy and materials differ in amounts, distribution, usefulness, and the time required for their formation. As a basis for understanding this concept:

a. Students know the utility of energy sources is determined by factors that are involved in converting these sources to useful forms and the consequences of the conversion process.
Energy Imagery
Global Warming Begins at Home
*The Balance of Nature*

b. Students know different natural energy and material resources, including air, soil, rocks, minerals, petroleum, fresh water, wildlife, and forests, and know how to classify them as renewable or nonrenewable.
Earth: The Apple of Our Eye (Intermediate/Secondary)
Energy Imagery

Food for Thought
Global Warming Begins at Home
Mining for Chocolate
Something for Everyone
Take a Stand
Timber!
Water, Water Everywhere (Elementary/Intermediate)

c. Students know the natural origin of the materials used to make common objects.
Mining for Chocolate

(Science.6) 7. Investigation and Experimentation. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:

a. Develop a hypothesis.
Population Circle

b. Select and use appropriate tools and technology (including calculators, computers, balances, spring scales, microscopes, and binoculars) to perform tests, collect data, and display data.
Measuring a Million
The Stork and the Grim Reaper
Timber!
Water, Water Everywhere (Elementary/Intermediate)
Who Polluted the Potomac?

c. Construct appropriate graphs from data and develop qualitative statements about the relationships between variables.
Adding Armadillos
All in the Family
The Pop Ecology Files
Population Circle
Power of the Pyramids
Stage Stepping
Timber!

d. Communicate the steps and results from an investigation in written reports and oral presentations.
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million

e. Recognize whether evidence is consistent with a proposed explanation.
Eco Ethics
Take a Stand

## Grade Seven: Focus on Life Sciences

(Science.7) 7. Investigation and Experimentation. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:

a. Select and use appropriate tools and technology (including calculators, computers, balances, spring scales, microscopes, and binoculars) to perform tests, collect data, and display data.
Measuring a Million

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

b. Use a variety of print and electronic resources (including the World Wide Web) to collect information and evidence as part of a research project.
Take a Stand

c. Communicate the logical connection among hypotheses, science concepts, tests conducted, data collected, and conclusions drawn from the scientific evidence.
All in the Family
Cougar Hunt
Everything Counts
Stage Stepping
A World of Difference

e. Communicate the steps and results from an investigation in written reports and oral presentations.
Everything Counts
Global Warming Begins at Home
How Much Space Do We Need?
Measuring a Million

## Grade Eight: Focus on Physical Sciences

(Science.8) 5. Reactions. Chemical reactions are processes in which atoms are rearranged into different combinations of molecules. As a basis for understanding this concept:

a. Students know reactant atoms and molecules interact to form products with different chemical properties.
Global Warming Begins at Home

(Science.8) 9. Investigation and Experimentation. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:

e. Construct appropriate graphs from data and develop quantitative statements about the relationships between variables.
Adding Armadillos
All in the Family
The Pop Ecology Files
Population Circle
Power of the Pyramids
Stage Stepping
Timber!

g. Distinguish between linear and nonlinear relationships on a graph of data.
All in the Family
The Pop Ecology Files
Population Circle
Timber!

## Grades Nine to Twelve: Chemistry

2. Chemical Bonds. Biological, chemical, and physical properties of matter result from the ability of atoms to form bonds from electrostatic forces between electrons and protons and between atoms and molecules. As a basis for understanding this concept:

b. Students know chemical bonds between atoms in molecules such as H2, CH4, NH3, H2CCH2, N2, Cl2, and many large biological molecules are covalent.
Global Warming Begins at Home

3. Conservation of Matter and Stoichiometry. The conservation of atoms in chemical reactions leads to the principle of conservation of matter and the ability to calculate the mass of products and reactants. As a basis for understanding this concept:

a. Students know how to describe chemical reactions by writing balanced equations.
Global Warming Begins at Home

## Grades Nine to Twelve: Biology/Life Sciences

6. Ecology. Stability in an ecosystem is a balance between competing effects. As a basis for understanding this concept:

a. Students know biodiversity is the sum total of different kinds of organisms and is affected by alterations of habitats.
A World of Difference

b. Students know how to analyze changes in an ecosystem resulting from changes in climate, human activity, introduction of nonnative species, or changes in population size.
Everything Is Connected
Global Warming Begins at Home
The Pop Ecology Files
A World of Difference
*The People Connection*
*Troubled Water*
*A Warm Forecast for the Planet?*

c. Students know how fluctuations in population size in an ecosystem are deter-mined by the relative rates of birth, immigration, emigration, and death.
All in the Family
Family Perspective
On the Double
Population Clock
Power of the Pyramids
Stage Stepping
World Population Video
*The People Connection*

e. Students know a vital part of an ecosystem is the stability of its producers and decomposers.
For the Common Good
Something for Everyone

## Grades Nine to Twelve: Investigation and Experimentation

1. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other four strands, students should develop their own questions and perform investigations. Students will:

a. Select and use appropriate tools and technology (such as computer-linked probes, spreadsheets, and graphing calculators) to perform tests, collect data, analyze relationships, and display data.

The Pop Ecology Files
Power of the Pyramids

d. Formulate explanations by using logic and evidence.

Global Warming Begins at Home
Growing Pains in Texas Hill Country
The Pop Ecology Files
Power of the Pyramids
Take a Stand

l. Analyze situations and solve problems that require combining and applying concepts from more than one area of science.

Earth: The Apple of Our Eye (Intermediate/Secondary)
Eco Ethics
Everything Is Connected
For the Common Good
Global Warming Begins at Home
How Much Space Do We Need?
The Pop Ecology Files
Something for Everyone
Stage Stepping
Take a Stand

m. Investigate a science-based societal issue by researching the literature, analyzing data, and communicating the findings. Examples of issues include irradiation of food, cloning of animals by somatic cell nuclear transfer, choice of energy sources, and land and water use decisions in California.

All in the Family
Earth: The Apple of Our Eye (Intermediate/Secondary)
Eco Ethics
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 Pop Ecology Files
Power of the Pyramids
Stage Stepping
Take a Stand
Water, Water Everywhere (Secondary)
A World of Difference
World Population Video