

EXPLORING ENVIRONMENTAL ISSUES: FOCUS ON FORESTS

1: What's a Forest to You?

NONE

2: Case Study: Old-Growth Forests

NONE

3: Tough Choices

NONE

4: Who Owns America's Forests?

M:N&O:1 – Demonstrates understanding of rational numbers.

M:N&O:7 – Makes estimates.

M:G&M:7 – Demonstrates understanding of measurable attributes, measures and uses units of measure appropriately and consistently, and makes accurate conversions when solving problems.

M:DSP:1 – Interprets a given representation to answer questions related to the data, or to analyze the data to formulate conclusions, make predictions, and/or solve problems.

M:DSP:2 – Analyzes patterns, trends, or distributions in data in a variety of contexts.

M:DSP:3 – Organizes and displays data; identifies or describes elements of representations that best display a given set of data or situation.

5: Balancing America's Forests

NONE

6: Squirrels vs. Scopes

NONE

7: Words to Live By

NONE

8: Take Action!

NONE

THE CHANGING FOREST: FOREST ECOLOGY

1: Adopt-A-Forest

M:DSP:6 – Decides the most effective method to collect the data necessary to answer a question or hypothesis; collects, organizes and appropriately displays the data; analyzes the data to draw conclusions, and when appropriate makes predictions, asks new questions, and makes connections to real-world situations.

M:CCR:2 – Students will create and use representations to communicate mathematical ideas and to solve problems. *(See Appendix for grade-level specifics.)*

2: Cast of Thousands

M:G&M:6 – Demonstrates understanding of one, two, and three-dimensional measurements, including length/height, radius, diameter, circumference, perimeter, area, surface area, volume, and the use of trigonometric formulas to find these measures.

M:G&M:7 – Demonstrates understanding of measurable attributes, measures and uses units of measure appropriately and consistently, and makes accurate conversions when solving problems.

M:DSP:3 – Organizes and displays data; identifies or describes elements of representations that best display a given set of data or situation.

M:CCR:2 – Students will create and use representations to communicate mathematical ideas and to solve problems. *(See Appendix for grade-level specifics.)*

3: The Nature of Plants

NONE

4: Home Sweet Home

NONE

5: Saga of the Gypsy Moth

NONE

6: Story of Succession

M:G&M:6 – Demonstrates understanding of one, two, and three-dimensional measurements, including length/height, radius, diameter, circumference, perimeter, area, surface area, volume, and the use of trigonometric formulas to find these measures.

M:G&M:7 – Demonstrates understanding of measurable attributes, measures and uses units of measure appropriately and consistently, and makes accurate conversions when solving problems.

M:DSP:3 – Organizes and displays data; identifies or describes elements of representations that best display a given set of data or situation.

M:CCR:2 – Students will create and use representations to communicate mathematical ideas and to solve problems. *(See Appendix for grade-level specifics.)*

7: Understanding Fire

M:G&M:10 – Demonstrates conceptual understanding of spatial reasoning and visualization.

M:PRP:2 – Students will use mathematical reasoning and proof. *(See Appendix for grade-level specifics.)*

8: Fire Management

NONE

EXPLORING ENVIRONMENTAL ISSUES: MUNICIPAL SOLID WASTE

1: Introduction to MSW: The Waste Stream

M:N&O:4 – Accurately solves problems.

M:N&O:7 – Makes estimates.

M:G&M:6 – Demonstrates understanding of one, two, and three-dimensional measurements, including length/height, radius, diameter, circumference, perimeter, area, surface area, volume, and the use of trigonometric formulas to find these measures.

M:G&M:7 – Demonstrates understanding of measurable attributes, measures and uses units of measure appropriately and consistently, and makes accurate conversions when solving problems.

M:DSP:2 – Analyzes patterns, trends, or distributions in data in a variety of contexts.

M:DSP:3 – Organizes and displays data; identifies or describes elements of representations that best display a given set of data.

M:CCR:2 – Students will create and use representations to communicate mathematical ideas and to solve problems. *(See Appendix for grade-level specifics.)*

M:CCR:3 – Students will recognize, explore, and develop mathematical connections. *(See Appendix for grade-level specifics.)*

2: Source Reduction

NONE

3: Recycling and Economics

M:N&O:4 – Accurately solves problems.

M:F&A:2 – Demonstrates understanding of linear and nonlinear relationships and functions.

M:DSP:1 – Interprets a given representation to answer questions related to the data, or to analyze the data to formulate conclusions, make predictions, and/or solve problems.

M:DSP:2 – Analyzes patterns, trends, or distributions in data in a variety of contexts.

M:DSP:3 – Organizes and displays data; identifies or describes elements of representations that best display a given set of data.

M:PRP:1 – Students will use problem-solving strategies to investigate and understand increasingly complex mathematical content. *(See Appendix for grade-level specifics.)*

M:CCR:3 – Students will recognize, explore, and develop mathematical connections. *(See Appendix for grade-level specifics.)*

4: Composting

M:G&M:7 – Demonstrates understanding of measurable attributes, measures and uses units of measure appropriately and consistently, and makes accurate conversions when solving problems.

M:DSP:1 – Interprets a given representation to answer questions related to the data, or to analyze the data to formulate conclusions, make predictions, and/or solve problems.

M:DSP:3 – Organizes and displays data; identifies or describes elements of representations that best display a given set of data.

M:CCR:3 – Students will recognize, explore, and develop mathematical connections. *(See Appendix for grade-level specifics.)*

5: Waste-to-Energy

NONE

6: Landfills

NONE

7: Where Does Your Garbage Go?

M:DSP:1 – Interprets a given representation to answer questions related to the data, or to analyze the data to formulate conclusions, make predictions, and/or solve problems.

M:DSP:2 – Analyzes patterns, trends, or distributions in data in a variety of contexts.

M:DSP:3 – Organizes and displays data; identifies or describes elements of representations that best display a given set of data.

M:CCR:2 – Students will create and use representations to communicate mathematical ideas and to solve problems. *(See Appendix for grade-level specifics.)*

M:CCR:3 – Students will recognize, explore, and develop mathematical connections. *(See Appendix for grade-level specifics.)*

8: Take Action: Success Stories and Personal Choices

M:DSP:6 – Decides the most effective method to collect data necessary to answer a question or hypothesis; collects, organizes and appropriately displays the data; analyzes the data to draw conclusions, and when appropriate makes predictions, asks new questions, and makes connections to real-world situations.

M:CCR:2 – Students will create and use representations to communicate mathematical ideas and to solve problems. *(See Appendix for grade-level specifics.)*

M:CCR:3 – Students will recognize, explore, and develop mathematical connections. *(See Appendix for grade-level specifics.)*

EXPLORING ENVIRONMENTAL ISSUES: PLACES WE LIVE

1: Personal Places

NONE

2: Community Character

NONE

3: Mapping Your Community Through Time

NONE

4: Neighborhood Design

NONE

5: Green Space

NONE

6: A Vision for the Future

NONE

7: Far-Reaching Decisions

NONE

8: Regional Community Issues: The Ogallala Aquifer

NONE

EXPLORING ENVIRONMENTAL ISSUES: FOCUS ON RISK

1: What is Risk?

NONE

2: Things Aren't Always What They Seem

NONE

3: Chances Are... Understanding Probability and Risk

M:N&O:4 – Accurately solves problems.

M:DSP:2 – Analyzes patterns, trends, or distributions in data in a variety of contexts.

M:DSP:3 – Organizes and displays data; identifies or describes elements of representations that best display a given set of data.

M:DSP:4 – Uses counting techniques to solve problems.

M:DSP:5 – Solves problems to determine the experimental or theoretical probability of an event.

M:PRP:1 – Students will use problem-solving strategies to investigate and understand increasingly complex mathematical content. *(See Appendix for grade-level specifics.)*

M:CCR:1 – Students will communicate their understanding of mathematics. *(See Appendix for grade-level specifics.)*

M:CCR:3 – Students will recognize, explore, and develop mathematical connections. *(See Appendix for grade-level specifics.)*

4: Risk Assessment: Tools of the Trade

NONE

5: Communicating Risk

M:N&O:2 – Demonstrates understanding of the relative magnitude of real numbers.

M:DSP:1 – Interprets a given representation to answer questions related to the data, or to analyze the data to formulate conclusions, make predications, and/or solve problems.

M:DSP:3 – Organizes and displays data; identifies or describes elements of representations that best display the given set of data or situation.

M:PRP:2 – Students will use mathematical reasoning and proof. *(See Appendix for grade-level specifics.)*

M:CCR:2 – Students will create and use representations to communicate mathematical ideas and to solve problems. *(See Appendix for grade-level specifics.)*

M:CCR:3 – Students will recognize, explore, and develop mathematical connections. *(See Appendix for grade-level specifics.)*

6: Weighing the Options: A Look at Tradeoffs

M:PRP:2 – Students will use mathematical reasoning and proof. *(See Appendix for grade-level specifics.)*

M:CCR:3 – Students will recognize, explore, and develop mathematical connections. *(See Appendix for grade-level specifics.)*

7: Decision Making: Ecological Risk, Wildfires, and Natural Hazards

M:N&O:4 – Accurately solves problems.

M:G&M:10 – Demonstrates conceptual understanding of spatial reasoning and visualization.

M:DSP:5 – Solves problems to determine the experimental or theoretical probability of an event.

M:PRP:2 – Students will use mathematical reasoning and proof. *(See Appendix for grade-level specifics.)*

M:CCR:3 – Students will recognize, explore, and develop mathematical connections. *(See Appendix for grade-level specifics.)*

Special Topic: Electromagnetic Fields

NONE

Special Topic: Chlorine

NONE

Special Topic: Plastics, Risk/Benefit Analysis, and Environmental Legislation

NONE

8: Taking Action: Reducing Risk in Your School or Community

NONE

EXPLORING ENVIRONMENTAL ISSUES: BIODIVERSITY

1: Global Invaders

NONE

2: Protected Areas: Issues and Analysis

NONE

3: Potatoes, Pesticides, and Biodiversity

NONE

GLOBAL CONNECTIONS: FORESTS OF THE WORLD

1: Making the Global Connection

NONE

2: What is a Forest?

NONE

3: Mapping the World's Forests

NONE

4: Analyzing Patterns of Forest Change

NONE

5: Understanding the Effects of Forest Uses

NONE

6: Seeking Sustainability: A Global Response

NONE

7: Exploring the World Marketplace

NONE

8: Making Consumer Choices

M:N&O:7 – Makes estimates.

M:CCR:2 – Students will create and use representations to communicate mathematical ideas and to solve problems. *(See Appendix for grade-level specifics.)*

M:CCR:3 – Students will recognize, explore, and develop mathematical connections. *(See Appendix for grade-level specifics.)*

9: Researching Forests Around the World

NONE