

**Title: Environmental Issues**

**Teacher:** Jody Henneman

**School:** Monte Vista

**District:** Creighton School District

**Grade Level:** 2,3,4

**Subjects:** Science, Reading, Writing, Technology

**Snap Shot:** Our goal is to learn about the environmental problems in our society. Air, water and land pollution, excess garbage and endangered animals are all problems in the environment, and we are all affected by these issues. We will also investigate ways we can help solve environmental problems. We will conduct research through internet sites on the environment. We will write, word process, and illustrate stories about the environment using the computers.

**Invitation:**

What do you know about environmental problems?

What are some different ways we can find out about environmental problems?

How do the environmental problems affect the Earth, the plants, the animals, and us?

How can we find ways to help solve environmental problems?

**Standards:** AZ.3SC-F3-PO1, PO2  
AZ.4SC-F7-PO1, PO2,PO3  
AZ.4SC-F1-PO1, PO2  
AZ.3SC-F2-PO1, PO2,PO3,PO4  
AZ.W-F2. -PO1, PO2,PO3, PO4  
AZ.R-F1-PO1  
AZ.R-F2-PO1  
AZ.R-F3-PO1, PO2,PO4.PO5  
ISTE Standards 1,3,5,6

**Tasks:**

1. Students will investigate library and internet sources to learn more about some of the problems in the environment. Students can connect to a number of links on: clean air, conservation, Earth Day, energy, global warming, pollution, recycling, and water.
2. Students will create a class ABC book on the environment. Each page will have a letter of the alphabet, where the students need to include something that begins with that letter that has to with the environment.
3. Students will make a hyperstudio stack on ways they have helped solve environmental problems and why this is important.

**Interactions:** At first, students will be interacting with one another in whole group or small groups. Once students have a knowledge base on the environment, they will have more time to individually begin their projects.

**Tools:**

- Books on the environment
- Songs and poems on the environment
- Computers
- Netscape Navigator/internet
- Kid Works II
- ABC pattern bboks

- ABC chart for environmental words
  - Paper, pencils and other art supplies
  - Kid Pix
  - Pencil and paper
  - Handout \_\_\_\_\_ is helping planet Earth
- because \_\_\_\_\_
- Hyper Studio
  - Grading rubrics

**Situations:** Most of the class time will be devoted to mini-lessons designed to increase students' awareness of 3 core issues: 1) problems in the environment, 2) how these problems affect the world, and 3) what we can do about these problems. We will also do some exploratory lessons on basics of how to use the computer and software programs.

**Assessment:** • Teacher observations

- Grading rubrics

## Task 1

**Task 1:** Students will investigate library and internet resources to learn more about some of the problems in the environment. Students can connect to a number of links on clean air, conservation, Earth Day, energy, global warming, pollution, recycling, and water.

**Standards:** AZ.3SC-F3. Describe and explain the interrelationship of populations, resources and environments

- PO 1. Describe populations, resources and environments (e.g., habitat, ecosystem, food chain)
- PO 2. Explain interactions and interdependence among specific populations, resources and environments

AZ.4SC-F7. Explain the interaction of living and non-living components within ecosystems

- PO 1. Identify living components within ecosystems
- PO 2. Identify non-living components within ecosystems
- PO 3. Describe the interaction among living and non-living components in an ecosystem

AZ.R-F1. Use phonetic skills to decode words

- PO 1. Decode words in context using beginning, middle and final letter/sound relationships

AZ.R-F2. Use word recognition and decoding strategies such as phonetic skills, context clues, picture clues, word order, prefixes and suffixes to comprehend written selections

- PO 1. Derive meaning from a written selection using reading/decoding strategies

AZ.R-F3. Use reading comprehension strategies such as drawing conclusions, summarizing, making predictions, identifying cause and effect, and differentiating fiction from nonfiction

- PO 1. Draw conclusions based on the text
- PO 2. Restate information from a reading selection
- PO 4. Identify cause-and-effect relationships
- PO 5. Differentiate fiction and nonfiction texts

ISTE 5. Technology research tools

\* Students use technology to locate, evaluate, and collect information from a variety of sources.

\* Students use technology tools to process data and report results.

\* Students evaluate and select new information resources and technological innovations based on the appropriateness

for specific tasks.

ISTE 6. Technology problem-solving and decision-making tools

\* Students use technology resources for solving problems and making informed decisions.

\* Students employ technology in the development of strategies for solving problems in the real world.

**Activities and Strategies:**

Begin the unit by asking for prior knowledge on the subject. Create a KWL (I know, I want to know, and I've learned) chart. "What do you know about problems in the environment?" Accept all contributions and write on the K-I know section. Next ask students "What do you want to know about issues in the environment?" Write these in the W- I want to know section. This will give the teacher a good idea about the student's prior knowledge as well as future topics the students wish to study

The teacher will provide a range of books on the problems in the environment that will be used in read aloud, reading groups ,mini lessons and free reading. Students will also be guided through internet sources to learn more about environmental problems.

**Materials:**

- Books on the environment
- Poems and songs on the environment
- Internet sites:

[http://www.random house.com/seussville/titles/lorax/](http://www.randomhouse.com/seussville/titles/lorax/)

<http://www.hcsps.nexus.edu.au/Projects/recycling/Fay.htm>

<http://www.epa.gov/recyclecity>

<http://www.kidsdomain.com/holiday/earthday>

[http://www.yahooligans.com/Science\\_and\\_Nature/](http://www.yahooligans.com/Science_and_Nature/)

The\_Earth/Environment

**Evaluation:** • Teacher observations

## Task 2

**Task 2:** Students will create a class ABC book on the environment. Each page will have a letter of the alphabet where students need to include something that begins with that letter that has to do with the environment.

**Standards:** AZ.3SC-F2. Use scientific findings to propose and evaluate solutions to problems (e.g., water pollution, malnutrition, fire hazards)

- PO 1. Identify a problem
- PO 2. Use scientific findings to develop solutions
- PO 3. Evaluate proposed solutions to the problem
- PO 4. Modify solutions to the problem, if necessary

AZ.3SC-F3. Describe and explain the interrelationship of populations, resources and environments

- PO 1. Describe populations, resources and environments (e.g., habitat, ecosystem, food chain)
- PO 2. Explain interactions and interdependence among specific populations, resources and environments

AZ.4SC-F7. Explain the interaction of living and non-living components within ecosystems

- PO 1. Identify living components within ecosystems
- PO 2. Identify non-living components within ecosystems
- PO 3. Describe the interaction among living and non-living components in an ecosystem

AZ.W-F2. Use correct spelling, punctuation, capitalization, grammar and word usage, and good penmanship to complete effectively a variety of writing tasks

- PO 1. Spell high frequency words correctly
- PO 2. Punctuate endings of sentences
- PO 3. Capitalize sentence beginnings and proper nouns
- PO 4. Use standard, age-appropriate grammar and word usage (e.g., basic subject-verb agreement, complete simple sentences, appropriate verb tense, regular plurals)

ISTE 3. Technology productivity tools

- \* Students use technology tools to enhance learning, increase productivity, and promote creativity.
- \* Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

### Activities and Strategies:

Teacher will read aloud several ABC style pattern books. After examples have been read the teacher will make a blank ABC chart. As a class discussion, the students will try to fill in every letter of the alphabet with a word on the environment. For example in the space for T, students could write “T is for trees”. Once we have the whole chart filled, each student will receive a page of the Environment ABC book. They will be in charge of the writing and illustrations for their page. For example for the person who has the T page, may write “T is for trees. Animals and

humans depend on trees. We need trees to help keep the air clean. etc. They will write a 4-5 sentence complete paragraph.

While this process is being completed, the teacher will give mini lessons on keyboarding skills such as spaces between words, spaces between sentences, how to capitalize, how to create accent marks, etc. As students finish their written work, they can start to type their stories on Kid Works II.

The teacher will also be giving mini lessons on the drawing tools in Kid Pix. We will discuss how different tools can be utilized for different tasks. For example, the paint brush may be used to color large areas, and some thin lines are easier made with pencils rather than the paint brush. As students finish their drawings they can draw them on the computer using Kid Works II or Kid Pix.

As the pages are complete we will combine the pages in alphabetical order and arrange them into a class book. The book will then be placed in our classroom library or will be shared with other classrooms.

**Materials:**

- ABC pattern books
- Books, poems, and songs on the environment
- ABC chart for Environmental words
- Paper, pencils and other art supplies
- Kid Works II
- Kid Pix
- ABC Environment Book Project Rubric

**Evaluation:** •

- Teacher observations
- Scores from rubric

### Task 3

**Task 3:** Students will make a class book on ways they have helped solve environmental problems and why this is important.

**Standards:** AZ.3SC-F2. Use scientific findings to propose and evaluate solutions to problems (e.g., water pollution, malnutrition, fire hazards)

- PO 1. Identify a problem
- PO 2. Use scientific findings to develop solutions
- PO 3. Evaluate proposed solutions to the problem
- PO 4. Modify solutions to the problem, if necessary

AZ.3SC-F3. Describe and explain the interrelationship of populations, resources and environments

- PO 1. Describe populations, resources and environments (e.g., habitat, ecosystem, food chain)
- PO 2. Explain interactions and interdependence among specific populations, resources and environments

AZ.4SC-F1. Describe and explain cause-and-effect relationships in living systems

- PO 1. Identify cause-and-effect relationships in living systems
- PO 2. Explain cause-and-effect relationships in living systems

AZ.W-F2. Use correct spelling, punctuation, capitalization, grammar and word usage, and good penmanship to complete effectively a variety of writing tasks

- PO 1. Spell high frequency words correctly
- PO 2. Punctuate endings of sentences
- PO 3. Capitalize sentence beginnings and proper nouns
- PO 4. Use standard, age-appropriate grammar and word usage (e.g., basic subject-verb agreement, complete simple sentences, appropriate verb tense, regular plurals)

ISTE 1. Basic operations and concepts

- \* Students demonstrate a sound understanding of the nature and operation of technology systems.
- \* Students are proficient in the use of technology.

ISTE 3. Technology productivity tools

- \* Students use technology tools to enhance learning, increase productivity, and promote creativity.
- \* Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

ISTE 6. Technology problem-solving and decision-making tools

- \* Students use technology resources for solving problems and making informed decisions.
- \* Students employ technology in the development of strategies for solving problems in the real world.

## Activities and Strategies:

Although the problems of the environment are complex, even young students can have a role in helping with the problems of the environment. In addition to the web sites and library books on the problems of the environment. Students will also be reading and researching ways they can help the environment. Students will justify with supporting reasons why they have helped the environment. Each student will receive a handout \_\_\_\_\_ is helping planet Earth because \_\_\_\_\_. Students should be able to identify several ways they have helped the environment:

- Taking showers instead of baths
- Reducing, reusing and recycling
- Turning off lights and appliances
- Planting trees

Students will then justify and support their examples given. They will then be asked to make an illustration to go along with their paragraphs.

While this process is being completed, the teacher will review lessons on keyboarding skills. By this time, students should be more proficient with word processing and the teacher will include more lessons including: spell check, font, text size, alignment, etc. Students will word process their paragraphs in Kid Works II.

As students finish their drawings they can draw them on the computer using Kid Works II or Kid Pix. The teacher will also review mini lessons on the drawing tools in Kid Pix. We will go into the basics of color and design and what colors and patterns look good together.

As the pages are complete we will import the materials into Hyper Studio. Students will be given an introduction to the presentation software Hyperstudio. They will see how their pictures and stories have been added to the program and how the program presents their information in a new way. Teacher may go into the basics of the cards, the transitions, etc. The completed stack can be presented to other classrooms.

**Materials:**

- Books, poems and songs on how to help environmental problems
- Paper, pencils and other art supplies
- Handout \_\_\_\_\_ is helping planet Earth

because \_\_\_\_\_

- Kid Works II
- Kid Pix
- Hyperstudio
- Hyperstudio Stack Project Rubric

**Evaluation:**

- Teacher observation
- Scores from rubric