

Global Warming: The Earth has a Fever!

Author: Diana Madson, California Coastal Commission

LESSON OVERVIEW

Subject(s):	Science, Environment
Topic or Unit of Study:	Climate Change: Humanities Impact on Earth and its Oceans
Grade/Level:	Kindergarten
Objective:	Students will be able to identify connections and the cause and effect relationship between human activities. The students will also be able to identify natural resources and conservation of resources. The children will be able to distinguish between land and water on the globe.

IMPLEMENTATION

Teaching Strategies:	Using puppets as props to engage children in brainstorming and expressing their ideas after having it modeled by the teacher.
Time Allotment:	40 minutes per class.
Preparation:	<p>Prepare the Mother Earth masks. When printing the masks, you can print on normal paper and later glue to a paper plate, sturdy paper, or a recycled item such as a cereal box, or you can print directly onto cardstock.</p> <p>It may be helpful to cut out each of the masks, both the outer edges and the eyes/mouth, ahead of time.</p> <p>Complete one mask entirely which will be used as your “Mother Earth”.</p> <p>Color in one of each of the versions of the mask to be used as an example for distinguishing the land from the water.</p>
Anticipatory Set:	Script to use with Earth Mask:

Mother Earth: Hi guys! It’s me, Mother Earth. I bet you never thought I would come and chat with you today. You know, the big old world you are sitting on. Reach down and touch it - it’s me! You can jump on me, you can dance on me, you can somersault on me, you can dive into my waters, roll around on my grass, dig in my sand, and wiggle your toes in my squishy mud [building pictures in their minds]. I am the whole world: I am

the oceans [point to the blue water masses on the mask], I am the land [point to the green land mass on the mask], I am the forests, I am the mountains. I hold all of the animals in the world in my arms, all the fish in the sea, all the butterflies in the air, and all the people on the earth. I am your planet, I belong to you and you belong to me and together we live a happy life.

Question: Mother Earth: Have you ever seen my oceans? Have you ever seen my forests? My rivers? My mountains? What do I look like? What do I feel like? What do I smell or sound like? [Bring in their previous knowledge, generate their interest in the area, then you tag them into a topic they already know about.]

[Reinforce connectedness]

Mother Earth: You are such smart children about the world. You have learned so much about me and you bring me such joy. And it is great joy to me to share everything I have with you. But I came to you today because I have a problem and I think you can help me.

Mother Earth: I have begun to get a bit of a fever because some of the people who live on me are making me sick with the dirty gas in their cars, stinky smoke that comes from factories, and icky garbage. You might have felt this way once if you ever got into a car that had been sitting parked in the sun for a long time with the windows shut. When it gets this hot inside of a car the ice cream melts, the flowers you picked bend over and lose their petals, and you feel really uncomfortable because it is SO hot. I am getting warmer and warmer, just like this car and the reason I am getting hot is because when certain things called fossil fuels are burned the smoke from the burning goes up into the sky to create a kind of a roof on top of the sky! Can you imagine what a roof on top of the sky would be like? The gas people put into cars is a fossil fuel and when you drive around in the car, all the smoke that comes out of the pipe in the back goes up into the sky. When so much smoke goes up into the sky it builds a big roof over the sky and this roof keeps all the hot air from going back out to space, just like the roof of a car! With this roof and heat, I am starting to get sick and my sickness is called Global Warming. I came to you because I knew you would understand and I know how smart you are, and I know you can help. A lot of grownups are helping too. But, I need the help of all the little children of the world to make me better because, if we work together, we can make me a happy and healthy place to live for all the little children and animals in the world.

[Brainstorming Ideas and Solutions, children generating ideas from their base of knowledge:]

Question: Mother Earth: Has anyone ever told you how to take care of

Mother Earth? You know many wonderful ways of helping the earth. Tell me what you know.

Mother Earth: Those were really great ideas! I knew you were so smart. There are so many ways to take care of me and here are some more: [Access “What You Can Do” supplement.]

[During the brainstorming when the children are involved and engaged in the interactive process of generating these ideas, there may be several key components they have missed. Now is a key time to access the supplemental list.]

Guided Practice:

Mother Earth: Now, I need you to go out into the world and teach all the little children and their families, too. You get to make a puppet that looks just like me and then tell my story to all your friends. You can pretend to be me! [Children engage in art activity and talk to each other while they do it.]

-Direct the children to color in the masks using blue for the oceans and green for the land.

-Paste, staple, or tape the masks (reinforced with paper plate or cardstock) to tongue depressors, popsicle sticks, or pencils to be used as handle for the mask.

[Once the children are finished coloring in their masks]

Modeling:

Mother Earth: Now practice telling each other about all the things we can do to take care of Mother Earth. [Demonstrate how to use the puppet and how to ask for help on behalf of Mother Earth with another child, and then direct the children to do the same with each other.]

Closure:

Mother Earth: Show me your beautiful mother earth faces. Now let’s all practice being me and talking to our friends about helping Mother Earth get better. Tell me some of the things you are going say. What are the things we can do to protect Mother Earth?

Follow-Up:

Mother Earth: Now be my little voices and teach your friends and family by sharing all the things you have learned and ask them what they are doing to help. Then come back and teach us all the wonderful things you, your family, and your friends are doing to make me better because through sharing and working together we can bring down my fever and all live in a healthy and happy world.

(Between next day and next week:

When the children come back and share their experiences they should be acknowledged with a badge or certificate for being “Protectors of Mother Earth”. The class can share progress regularly.)

MATERIALS AND RESOURCES

Instructional
Materials:

Forms:
-Lesson plan
-Script
-Masks
-What You Can Do supplement
-Awards

Art Materials Needed:
-Mask (copy of page for each child)
-Paper plates/cardstock/cardboard/cereal boxes
-Scissors
-Stapler/tape/glue stick
-Tongue depressors, popsicle sticks, or pencils
-Crayons/markers/paint

STANDARDS & ASSESSMENT

CA- California K-12 Academic Content Standards

- **Subject** : English Language Arts
 - **Grade** : Kindergarten
 - **Area** : Listening and Speaking
 - **Sub-Strand 1.0** : Listening and Speaking Strategies
Students listen and respond to oral communication. They speak in clear and coherent sentences.
 - **Concept** : Comprehension
 - Standard 1.1** : Understand and follow one- and two-step oral directions.
 - Standard 1.2** : Share information and ideas, speaking audibly in complete, coherent sentences.
 - **Sub-Strand 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.
 - **Concept** : Using the listening and speaking strategies of kindergarten outlined in Listening and Speaking Standard 1.0, students:
 - Standard 2.1** : Describe people, places, things (e.g., size, color, shape), locations, and actions.
- **Subject** : History & Social Science
 - **Grade** : Kindergarten
 - **Area** : Learning and Working Now and Long Ago
Students in kindergarten are introduced to basic spatial, temporal, and causal relationships, emphasizing the geographic and historical connections between the world today and the world long ago. The stories of ordinary and extraordinary people help describe the range and continuity of human experience and introduce the concepts of courage, self-control, justice, heroism, leadership, deliberation, and individual responsibility. Historical empathy for how people lived and worked long ago reinforces the concept of civic behavior: how we interact respectfully with each other, following rules, and re-specting the rights of others.
 - **Sub-Strand K.4**: Students compare and contrast the locations of people, places, and environments and describe their characteristics.

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

- **Subject :** Science

- **Grade :** Kindergarten

- **Area :** Earth Sciences

- **Sub-Strand 3:** Earth is composed of land, air, and water. As a basis for understanding this concept:

- Standard c:** Students know how to identify resources from Earth that are used in everyday life and understand that many resources can be conserved.

- **Area :** Investigation and Experimentation

- **Sub-Strand 4:** 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:

- Standard e:** Communicate observations orally and through drawings.



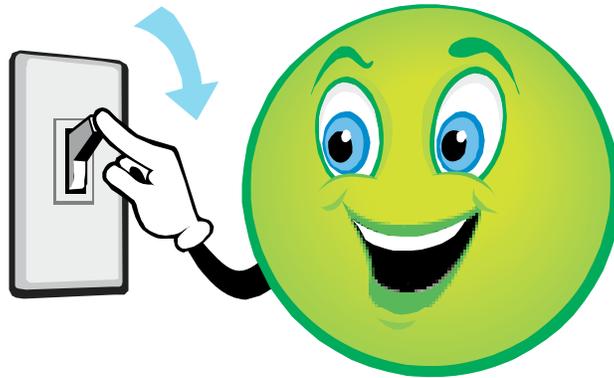
Western Hemisphere
Mask



Eastern Hemisphere
Mask

What You Can Do

1. Always turn off the lights when you leave a room, because electricity takes up a lot of energy and makes the Earth hot. So when you turn the lights off when you are not using them, you save lots of energy.



2. Make sure to close the refrigerator door after you are done getting something or putting something away. Just like with lights, electricity makes the refrigerator work. Electricity makes the light bulb in the refrigerator turn on and keeps it very cold inside. Because it takes so much electricity to make the refrigerator work, it is important to keep the door shut, so that you can save energy.



3. Turn off the water when you are brushing your teeth so that you can save water. It also takes energy to bring the water to your house and make it clean and hot, so be sure to only use as much water as you need.



4. Spend time gardening and planting trees if you can. Trees love to eat the stinky smoke that makes the Earth so hot, so if we have lots of trees, they can eat up some of the gases and the Earth can stay cool.



5. Do you recycle your cans, bottles, and paper at home? Try to recycle all the cans, bottles, and paper that you use. You can also be a very special helper to your family when they gather all of the recycling into a bin and take it out to the street.



6. Try to ride your bike or walk when you are going somewhere close by instead of driving in a car with your family. Taking the bus or train is fun, too! Remember, the smoke that comes out of the cars causes the Earth to get a fever.



7. Tell your friends and family about these great things you can do to help bring down the Earth's fever.





Protector of Mother Earth



Name

Helped Mother Earth by;

Teacher Name

Date



Protector of Mother Earth



Name

Helped Mother Earth by;

Teacher Name

Date

