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Activity One



Ecosystem Slideshow

You learned that ecosystems are being affected by climate change. Natural habitats may be affected by rising sea levels, warming temperatures, drought, severe storms, spreading disease, or migrating animals.

1. Make a list of 4-5 ecosystems that you would like to present.
2. For each ecosystem, learn more about how climate change is affecting its habitats. Use the library or Internet resources for help. Also look for photographs of the ecosystems that show the effects of climate change.
3. Using a slideshow computer program, create a slide for each ecosystem. Each slide should contain the following:
 - A title (usually the name of the ecosystem).
 - 3-5 bullet points summarizing how the ecosystem is affected by climate change.
 - A photograph or visual image representing the effects of climate change in the ecosystem.

The slideshow should also contain:

- An opening slide with an introduction. It should draw people in and tell them why it is important to learn more about the effects of climate change on ecosystems.
 - A closing slide, with a summary.
4. Be sure that each slide is clear and easy to read. Write a short script for yourself, so that you will know what to say for each slide during the slideshow presentation.
 5. Give the slideshow presentation for your class. At the end, ask if anyone has questions.

Ask your teacher for help and permission to post your slideshow on your class website.

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Activity Two



Write a Climate Change Action Plan

Working with a small group, imagine that you work for government agencies. Members of your group can represent different agencies, such as Health, Infrastructure, Human Services, Employment, and Disaster Management. It is your job to work together to help plan for the effects of climate change in your region.

First, research how climate change is likely to affect your area. Find out about:

- How the weather may change as global temperatures rise.
- What severe weather conditions your area might experience.
- Whether your region will be affected by sea level rise.
- Which diseases may spread to your area as a result of warming.

Then, think about what special needs the people in your area will have due to the effects of climate change. How will local services such as health care, transportation, infrastructure, and social services need to change in order to meet people's needs?

Next, write a plan of action. Think about what will need to be done in your area to help people live with the effects of climate change. Have each member of your group write 6–10 bullet points describing steps their agency will take to prepare for meeting the challenges of climate change.

Finally, call a "town hall meeting." Present your action plan to the class. Your classmates can play the part of concerned citizens. Prepare notes to help you talk about your bulleted list of action steps. Members of your group should take turns presenting and discussing each step. Use visual aids such as computer slides or posters.

After your presentation, invite your classmates to offer their responses to your plan. Ask for constructive criticism and ideas for planning.

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Activity Three



A Photographic Story

Scientists have been using satellites to photograph Earth from space for many years. Use satellite photos to tell a story of how Earth's ice caps change over time.

First, search for satellite photos showing Earth's ice caps. Some websites you might find helpful include:

- <http://visibleearth.nasa.gov/>
- <http://earthobservatory.nasa.gov>

Look for a set of photographs that tell a story about polar ice. You may choose from the themes listed below, or create your own story:

- How the ice in an area changes from winter to summer.
- How the ice cover in the Arctic differs from the ice cover in the Antarctic.
- How Arctic ice cover has changed over a period of years.
- How Antarctic ice cover has changed over a period of years.
- How large icebergs break off of ice sheets and travel in the ocean.

Choose 8–10 photos that tell your story. Ask your teacher to help you print the pictures you choose. Paste the pictures onto heavy paper and bind or staple the pages together to form a book. For each picture, add a few sentences that describes the photograph and helps tell the story.

Read your story to other students. Bring your book home to share with your family and friends.



Activity Four



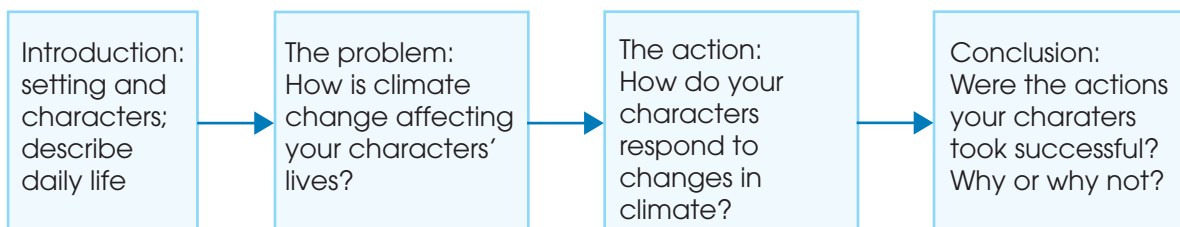
Write a story about early humans

You learned about how early humans were affected by changing climate. They often had to move to find new sources of food and fresh water. Their migrations around the world were affected by sea level and changes in yearly weather patterns.

Imagine what it would be like to live tens of thousands of years ago. Think about these questions:

- How do you get food? What do you eat? How is your food source dependent on climate?
- Where do you live? What is your shelter like? How do you protect yourself from the weather?
- What is a typical day like?
- Who do you live with?
- What changes would your community have to make if the climate became warmer or cooler?

Then, brainstorm a plot that relates to how the characters in your story respond to a change in climate. Organize your ideas using a concept map or flow chart like the one shown below.



Now, write your story. You may choose to use illustrations or maps to help you tell your story.

When you are finished writing the story, share it with your classmates and friends.

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Activity Five



Documentary: Scientists in Antarctica

Scientists brave extreme conditions to study the ice sheet in Antarctica. Learn more about how scientists live and work in Antarctica. Create a documentary based on your findings.

First, research how scientists live and work in Antarctica. You may find the following websites helpful:

- The International Polar Foundation <http://www.sciencepoles.org>
- The U.S. Antarctic Program <http://www.usap.gov/>
- Australian Antarctic Division <http://www.aad.gov.au>

While you are doing research, ask the following questions:

- How do scientists travel to Antarctica?
- Where do they live when they are there?
- How long do they stay?
- What must they bring with them in order to survive?
- What are the weather conditions like during their stay?
- How do they communicate with friends and family at home?
- What do they do for fun while they are there?

You may wish to try and contact a scientist who has been to Antarctica. Ask them for a phone or email interview. You may use some of the questions above, and add a few of your own.

Collect your research notes, photographs, and interviews. Use them to create a documentary about living and working in Antarctica. If you are not familiar with documentaries, watch a few on science television or check some out from your library. Pay attention to how words and graphics are used to tell a story.

Use a storyboard to organize your information into a 10–20 minute presentation. You will need to narrate your documentary. Write down your lines. Practice them a few times. Use a camera to record your documentary, or present it live for your class.



Activity Six



Rising Sea Levels Cause Challenges Around the World! **Television News Report**

Imagine that you are a news reporter for your local TV news channel. In groups of three or four, you will create a news report on how people are being impacted by rising sea levels.

BEFORE YOU BEGIN

Do you regularly watch the news? If not, spend some time in the evening watching different news programs. Think about how the news reporters are presenting their stories. What tone of voice do they use? What kinds of information do they present? How do they use visuals to help viewers understand the story?

DO YOUR RESEARCH

Rising sea levels are already causing problems for many cities and communities around the world. Island nations are being particularly affected right now. So are cities built at very low sea level. Rising seas are also causing damage to shoreline barriers, roads, homes, and natural habitats. Choose 3–4 examples of communities that are having problems with rising sea levels. These will be your focus for your news report. For each community you choose, find out what problems are being caused by rising seas, and how the community is handling those problems.

WRITE YOUR NEWS REPORT

Based on your research, put together a 5–10 minute news report. Be sure to include the following in your report:

- An introduction, which gives an overview of the information you will present.
- WHERE your communities are located (you may wish to include a map with all locations marked).
- WHO lives in the affected communities.
- WHEN rising seas became a problem for your communities.
- HOW rising sea level is affecting each community.
- WHAT the people in your communities are doing to address the problems of rising seas.
- A summary, which explains why rising sea level is a problem around the world, and what might be done to address the problem.