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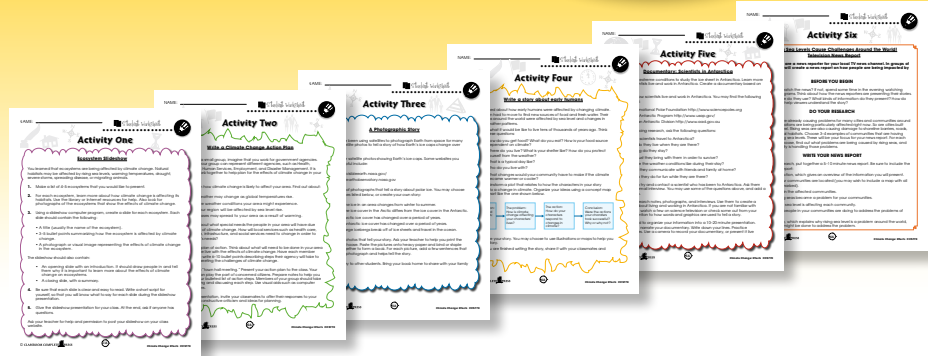
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NAME: _____

Before You Read



Climate and the Economy

1. Explain the meaning of the term **sea level**. Describe how changes in sea level could affect people living near the coast.

2. List five different examples of severe weather.

3. Find the meaning of the word **economy**. Explain the meaning of this term in your own words.



Reading Passage

NAME: _____

Climate and the Economy

Changes in Earth's climate could have harmful effects on the economies of countries around the world. Rising sea levels, changing weather patterns, and severe storms can all have huge costs. Businesses, governments and families may all be affected.

Rising sea levels could flood major cities and communities near the coast. Money will have to be spent on building dams and levees. A **dam** is built to slow or stop the flow of a river. A **levee** is built alongside a river's banks to stop flood waters from spreading. If both of these structures fail, many people may have to move. Rising sea levels could destroy large coastal cities like Shanghai, China, with a population of about 17 million people. Governments will have to deal with large numbers of homeless and refugees. New homes and cities will have to be built on higher ground.



How could rising sea levels affect the economies of countries?

Changing weather patterns can cause big changes in how and where food crops can be grown. Agriculture is a main part of the **economy** in many parts of the world. If crops can no longer be grown for sale, farmers could lose their livelihoods.

Severe weather can also have terrible effects on the economy. Families can lose houses and places of work. Insurance companies will have to pay large amounts of money destroyed property. Governments, and therefore tax-payers, pay for rescue efforts and rebuilding of **infrastructure**. These include roads, levees and public schools.



NAME: _____

After You Read



Climate and the Economy

1. Complete each sentence with a word from the list.

dam	refugee	levee	livelihoods
agriculture	harmful	weather	sea levels

- a) Changes in Earth's climate could have _____ effects on the economies of countries around the world.
- b) Rising _____ could destroy large coastal cities.
- c) Changing weather patterns may affect _____ by changing the locations that different crops can be grown.
- d) If crops can no longer be grown and sold in an area, farmers may lose their _____.
- e) A person who must leave their home for a long period of time due to a natural disaster or war is called a _____.
- f) A _____ is a structure built to slow or stop the flow of a river.
- g) A _____ is a structure built alongside a river's banks to stop flood waters from spreading.
- h) _____ describes the condition of the atmosphere at a given place and time.

2. Circle the examples of **infrastructure**.

roads	cars	bridges	tunnels
buildings	trees	trains	bicycles



After You Read

NAME: _____

Climate and the Economy

3. Answer each question with a complete sentence.

a) Describe **two** ways in which the economy of countries could be affected by climate change.

b) Describe **two** types of jobs that might be affected by climate change.

Research

4. Find out more about how farming will most likely be affected by climate change. Use your library or internet resources. Research more about how changing climate will change the way food crops are grown around the world. Work in small groups. Have each student pick one of the following factors. As you do your research, find out in what part of Earth each factor is most likely to have an effect. How does each factor affect agriculture in that area?

- Increased storms and severe weather.
- Increased drought.
- Changes in ocean currents and water temperature.
- Longer growing seasons in cool areas.
- Spread of plant diseases and insects.



Model sea level rise.

You will need:

- A clear plastic or glass terrarium
- clay
- string
- water

1. Start by creating a model landscape inside the terrarium. Use clay to model hills, valleys, basins, mountains, and plains. Be sure to include one large basin to model an ocean.
2. Slowly pour water into the main ocean basin. Fill it to a few inches deep, or until it resembles an ocean with a shoreline.
3. Using string, mark the area where the water meets the dry clay, all around your landscape. The string represents the shoreline.
4. If you wish, create small towns and cities in your model.
5. Slowly add more water to your ocean basin. Observe how the shoreline changes as the sea level rises. Add enough water so that your sea level rises at least one inch.
6. Using more string, mark the area where the water now meets the dry clay all around your landscape. This string marks the new shoreline.
7. Observe the differences between the old and new shoreline. What effect did rising sea level have in your model? Were you surprised by the way in which the shoreline changed? Were any areas flooded more than you expected?



Crossword Puzzle!

WORD LIST

climate
desert
economy
ecosystem
forest
fossils
glacier
infrastructure
levee
migrate
permafrost
satellites
sea level
tundra

Across

1. Remains of once-living things preserved in rock.
3. The frozen ground in the tundra.
6. A large mass of ice that doesn't totally melt in summer.
7. A common ecosystem in North America filled with trees.
9. A hot, dry ecosystem.
13. Objects that orbit Earth.
14. When people move from one area to another.

Down

2. The permanent parts of cities.
4. The use of money by a government.
5. This structure is built to help stop flood waters from spreading.
8. Where the ocean meets land.
10. The interaction between the living and nonliving parts of an environment.
11. The average weather conditions over time.
12. The ecosystem in the Arctic and Antarctic.



Comprehension Quiz

Part A



26

Circle the word **TRUE** if the statement is TRUE OR Circle the word **FALSE** if it is FALSE.

1. Melting ice caps can create a negative feedback cycle.
TRUE **FALSE**
2. Early humans migrated around the globe in response to changes in climate.
TRUE **FALSE**
3. Fossils are the remains in rock of plants and animals that lived a very long time ago.
TRUE **FALSE**
4. Ice sheets once covered Florida.
TRUE **FALSE**
5. Climate change may lead to tropical diseases spreading to more locations.
TRUE **FALSE**
6. Global climate change is causing fewer severe storms to form.
TRUE **FALSE**
7. Ozone cannot harm the lungs of healthy people.
TRUE **FALSE**
8. Ice sheets and permafrost are already melting at a fast pace due to climate change.
TRUE **FALSE**

Part B

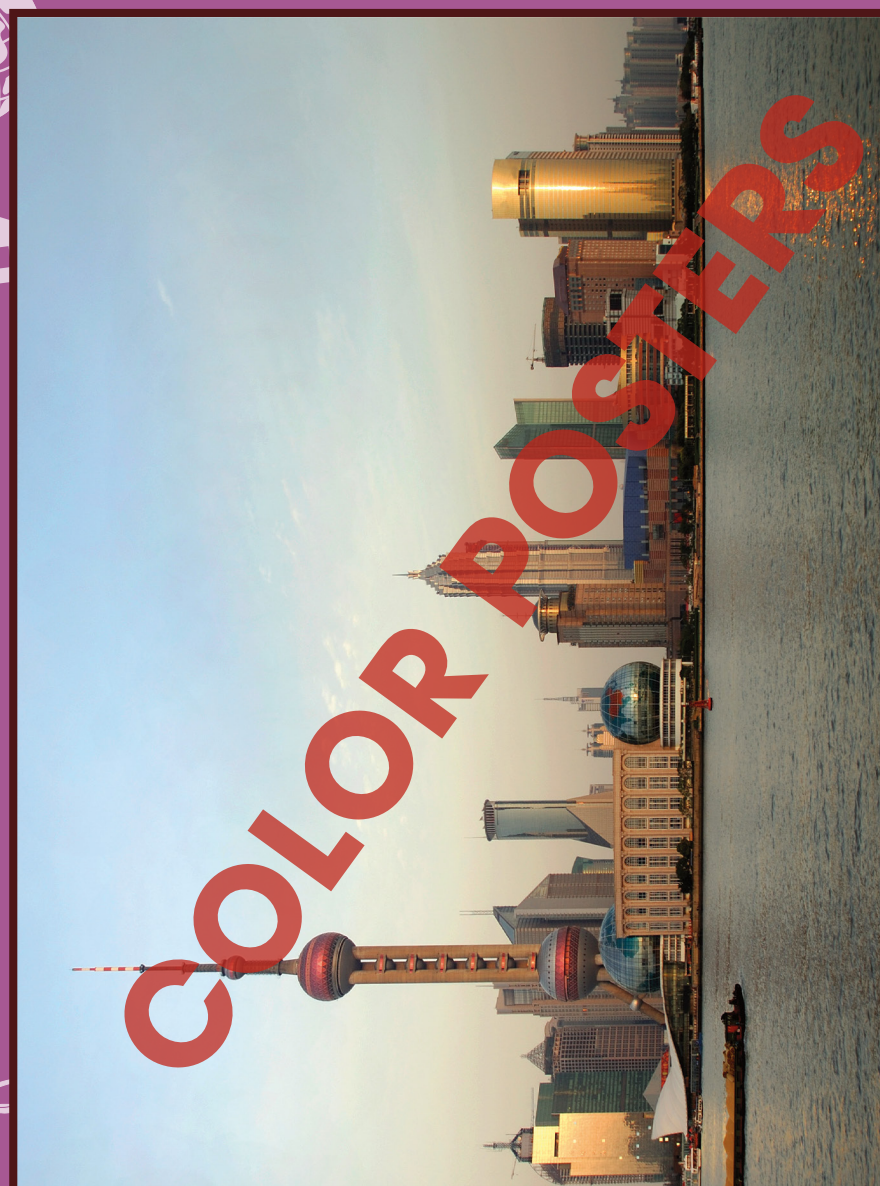
Label the diagram by doing the following:

1. Label the map of North America with the ecosystems from the list below.
 - 1 desert
 - 2 deciduous forest
 - 3 grassland
 - 4 tundra



4

Shanghai, China



“Scientists predict that sea levels may rise as much as 26 inches by the end of this century. This will have devastating effects for people living in cities that are built at the ocean’s edge.”



Climate and the Economy



3. Answer each question with a complete sentence.

a) Describe **two** ways in which the economy of countries could be affected by climate change.

b) Describe **two** types of jobs that might be affected by climate change.

Research

4. Find out more about how farming will most likely be affected by climate change. Use your library or internet resources. Research more about how changing climate will change the way food crops are grown around the world. Work in small groups. Have each student pick one of the following factors. As you do your research, find out in what part of Earth each factor is most likely to have an effect. How does each factor affect agriculture in that area?

- Increased storms and severe weather.
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- Changes in ocean currents and water temperature.
- Longer growing seasons in cool areas.
- Spread of plant diseases and insects.

3.

a) Answers will vary.

b) Answers will vary.

Across:

- 1. fossils
- 3. permafrost
- 6. glacier
- 7. forest
- 9. desert
- 13. satellites
- 14. migrate

Down:

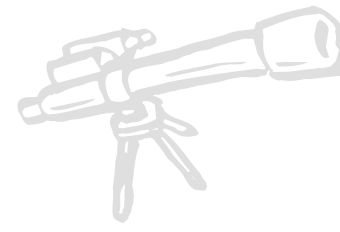
- 2. infrastructure
- 4. economy
- 5. levee
- 8. sea level
- 10. ecosystem
- 11. climate
- 12. tundra

EASY MARKING ANSWER KEY

10

15





Climate and the Economy

Changes in Earth’s climate could have harmful effects on the economies of countries around the world. Rising sea levels, changing weather patterns, and severe storms can all have huge costs. Businesses, governments and families may all be affected.

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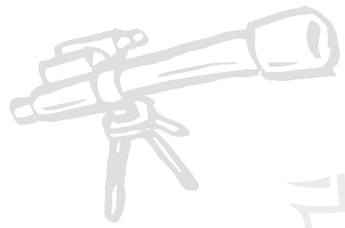


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Shanghai, China



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