



TEACHER GUIDE

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STUDENT HANDOUTS

• Reading Comprehension	
1. <i>What Is Salt Water?</i>	
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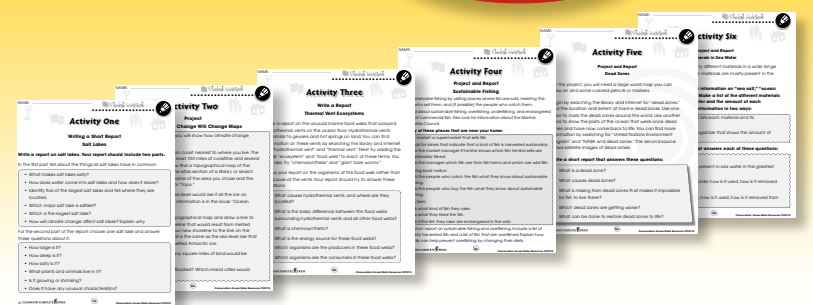
EASY MARKING™ ANSWER KEY 21

MINI POSTERS 23

✓ **6 BONUS Activity Pages!** Additional worksheets for your students

FREE!

- Go to our website: www.classroomcompletepress.com/bonus
- Enter item CC5774 – Conservation: Ocean Water Resources
- Enter pass code CC5774D for Activity Pages





How Changes in Salt Water Could Change Our Lives

1. Circle the word **TRUE** if the statement is TRUE or Circle the word **FALSE** if it is FALSE.

- a) Ocean level is rising.
TRUE FALSE
- b) Polar ice caps are shrinking.
TRUE FALSE
- c) Fish populations are increasing.
TRUE FALSE
- d) Polar bears are losing habitat.
TRUE FALSE
- e) If all the ice at the poles melted, sea level would rise about seven feet.
TRUE FALSE

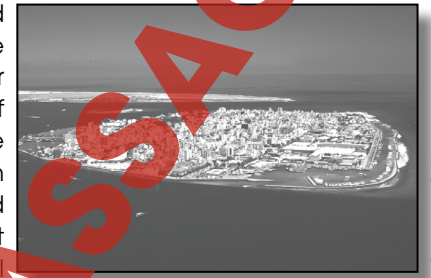
2. Put a check mark (✓) next to the answer that is most correct.

- a) Most of Earth's ice is located
 - A in glaciers
 - B in ice bergs
 - C on Antarctica
 - D on Greenland
- b) How is an increasing concentration of atmospheric carbon dioxide related to sea level change?
 - A Carbon dioxide evaporates from the ocean, which decreases ocean volume.
 - B Carbon dioxide increases the greenhouse effect, raising temperatures and melting ice.
 - C Carbon dioxide increases the rate of photosynthesis, which makes climate rainier.
 - D Carbon dioxide forces water vapor out of the atmosphere and into the ocean.
- c) What does "sustainable" mean as the term applies to the fishing industry?
 - A catching enough fish to feed everyone
 - B being sure fish have enough food to eat
 - C keeping as many fish as you throw back
 - D catching fish at the same rate they reproduce



How Changes in Salt Water Could Change Our Lives

The two changes in the oceans that could affect people's lives most are melting ice caps and ocean pollution. Melting polar ice could have the greatest effect on the lives of people living in two very different places—in the arctic and on tropical atolls. Loss of sea ice is such a serious problem for polar bears that it has caused a decline in their population. If this predator at the top of the Arctic food chain is removed, it will change the relationships among all organisms in the ecosystem. In the arctic, people are very much a part of the ecosystem.



Male, the Capital of Maldives. (The whole city is only a few feet above sea level.)

People living on low-lying atolls face a different problem. These islands are so close to sea level that a slight rise in ocean level could flood much of their land. The picture shows the capital city of an island nation in the Indian Ocean called the Maldives. The average elevation of the Maldives is only 2.3 meters (7.5 feet). If all the ice on Greenland melted, these islands would be under water. The ecosystems of tropical and temperate coastal areas would probably not suffer as greatly from rising sea levels as would the arctic ecosystems from loss of ice. Most organisms could adapt to slowly rising ocean levels.

STOP

How could rising global temperature lead to a problem for people living on tropical atolls?

The decline in fish populations could affect everyone who depends on seafood as part of their diet. Two things could help save fish populations. We could stop polluting the oceans, and we could reduce the fish catch to a sustainable level. This means catching fish at the same rate they are replaced by their own reproduction. To harvest fish sustainably would mean that people would not be able to eat as much fish as they want to. But that is better than soon having no fish at all.



How Changes in Salt Water Could Change Our Lives

1. Look at the map of the United States.

In which city could rising global temperature cause the most people to move?

- _____ **A** Las Vegas
- _____ **B** Denver
- _____ **C** Chicago
- _____ **D** Miami

2. Circle the word **TRUE** if the statement is TRUE or Circle the word **FALSE** if it is FALSE.

- a) Polar bear population has increased because of warmer temperatures.
TRUE FALSE
- b) If all the ice in Greenland melted, some countries would be completely under water.
TRUE FALSE
- c) Floating trash is spread evenly over the surface of the ocean.
TRUE FALSE
- d) Some types of ocean fish contain toxic chemicals.
TRUE FALSE
- e) Atolls are small floating islands.
TRUE FALSE



How Changes in Salt Water Could Change Our Lives

3. Answer the questions in complete sentences.

Describe two changes in the oceans that could change people's lives. For each ocean change, tell how people's lives would change.

- a. _____
- b. _____

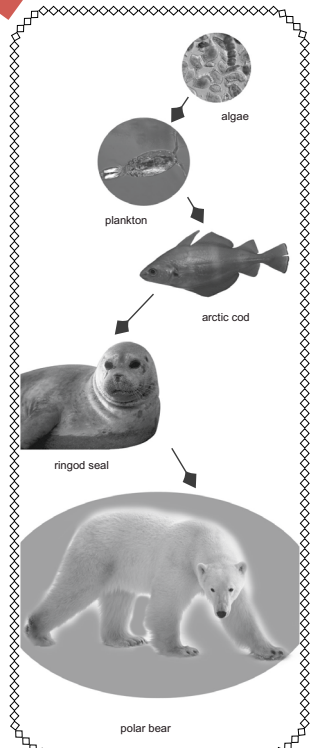
Extensions & Applications

An Arctic food chain is shown in the diagram.

- a. How would the ringed seal population change if the polar bear population declined? Explain your answer.

- b. How would the Arctic cod population change if the polar bear population declined? Explain your answer.

A Marine Food Chain





How Changes in Salt Water Could Change Our Lives

3. Answer the questions in complete sentences.

Describe *two* changes in the oceans that could change people's lives. For each ocean change, tell how people's lives would change.

- a. _____

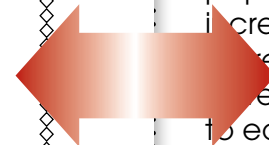
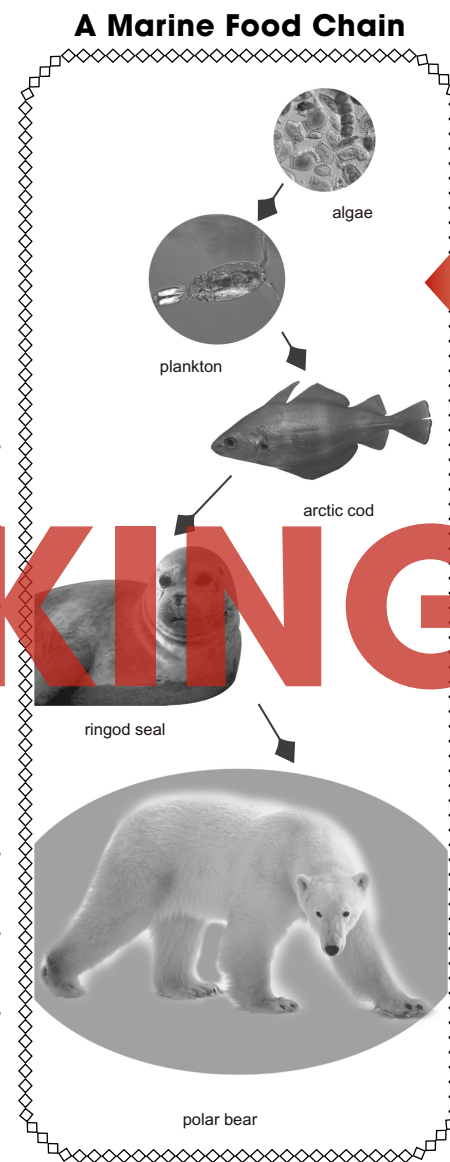
- b. _____

Extensions & Applications

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EASY MARKING ANSWER KEY

3.

- a) Higher sea levels make it necessary for some people to move to higher ground.
- b) Lower fish populations will cause people to change their diets or livelihoods.

Activity Two

- Challenger Deep in the Mariana Trench
- 11,000 meters
- 1,095 as great as at the surface
- Yes—flat fish, sea worms
- Two
- Ooze, flatfish, sea worms, shrimp
- Spherical steel cabin, self-propelled, gasoline-filled float, iron shot ballast
- There are currently no vessels capable of carrying people to the Challenger Deep.

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Extensions & Applications

a) The ringed seal population would increase because there would be fewer polar bears to eat them.

Activity Three

- Ocean, 3.5%; Great Salt Lake, about 14%(varies greatly); Dead Sea, 30%
- It would be easier to float in all these bodies of water than in fresh water. It would be difficult to sink in the Great Salt Lake or the Dead Sea.

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b) The arctic cod population would decrease because there would be more ringed seals to eat them.

Activity Four

- To nearly all parts of the ocean
- They were not biodegradable.
- The packaging decomposed in sea water.
- Yes. One of the largest caused Nike shoes to wash up on beaches all over the world.
- The paths of the toys gave scientists a more accurate idea of the paths followed by ocean currents.

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