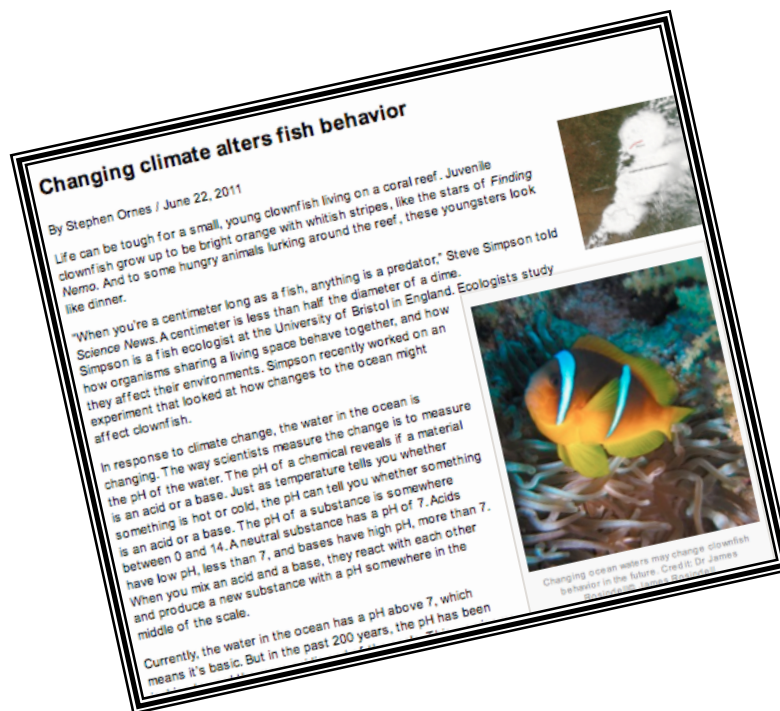


Close Reading and Text Dependent Questions in Science Changing Climate Alters Fish Behavior (Ecosystems – Grade 5)

The text selection, *Changing Climate Alters Fish Behavior*, can be found at the following link:
<http://www.sciencenewsforkids.org/2011/06/changing-climate-alters-fish-behavior/>

We apologize that we cannot include this reading directly; it is copyrighted material and we do not have special permissions that would allow us to post it publically. If you have difficulty accessing this article at the site above, please check the **Science Page of Aspen/SIS** for assistance accessing it.



Look in the Student Learning Outcome (SLO) Documents for guidance on when this should be taught. These can be found on the BPS Science Department's website: <http://bpsscience.weebly.com/> You will find the Student Learning Outcomes documents organized there by grade level.

Changing Climate Alters Fish Behavior (Ecosystems – Grade 5)

Student Questions

1. Why does the scientist believe that young clownfish have so many predators?
2. How do scientists track and measure climate change through ocean water?
3. What does pH measure?
4. According to this article, how is the ocean water changing?
5. Why do young clownfish stay away from the noisy parts of the coral reef?
6. How did the scientists set up an experiment to find out if clownfish would still avoid noisy areas in water with a lower pH?

10. Write an answer to the question “Will climate change have an effect on the clownfish population?”

Changing Climate Alters Fish Behavior (Ecosystems – Grade 5)

Sample Answers

- 1. Why does the scientist believe that young clownfish have so many predators?**

The author meant that because clownfish are so small, they look like food to almost anything in the ocean.

- 2. How do scientists track and measure climate change through ocean water?**

Scientists measure the pH levels in the ocean to track climate change.

- 3. What does pH measure?**

The pH of something measures whether the substance is an acid or a base.

- 4. According to this article, how is the ocean water changing?**

The ocean is becoming more acidic.

- 5. Why do young clownfish stay away from the noisy parts of the coral reef?**

They stay away from the reef because noise is a signal that there are predators out hunting. To avoid being eaten, the clownfish do not approach noisy areas.

- 6. How did the scientists set up an experiment to find out if clownfish would still avoid noisy areas in water with a lower pH?**

They set up a fish tank with two speakers, one that played sounds like near a reef, and one that was quiet. They tested some fish in regular seawater and some fish in water with a lower pH to see how the fish would behave.

7. What did the scientists find regarding the effect of a lower pH level on clownfish behavior?

Why is this worrisome?

Unfortunately, the clownfish did not avoid noise as they used to when the water was basic. This is a concern because if clownfish no longer attempt to avoid predators by avoiding noise, they will be more likely to get eaten.

8. Why did the clownfish change their behavior in water with a lower pH?

Scientists do not know why the clownfish changed their behavior, but they do know it is not because the bones in the ears of fish were damaged.

9. According to the author, how are humans contributing to the ocean's changing pH level?

Humans began burning coal 200 years ago, which puts carbon dioxide into the air. Some of the carbon dioxide dissolves in the ocean, increasing its acidity.

10. Write an answer to the question "Will climate change have an effect on the clownfish population?"

Scientists predict that climate change will have an effect on the clownfish population. The research, so far, shows that clownfish are less responsive to sound in a marine environment that has a lower pH, making clownfish more vulnerable to predation.