



GirlsGotSTEAM “Ocean Acidification Exploration” SciNotebook

Program:	Ocean Acidification Exploration
Age Range:	10-14
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Description:	The accompaniment to the demonstration and experiment duo designed to explain what ocean acidification is, why it is important, connect concepts such as pH and carbon sinks, and help you think about your own carbon footprint!

Introductory Questions:

If you don't know the answer, make sure to check the PowerPoint!

- Name **3** things that are considered acidic.

1.

2.

3.

- What will happen if the ocean becomes too acidic?

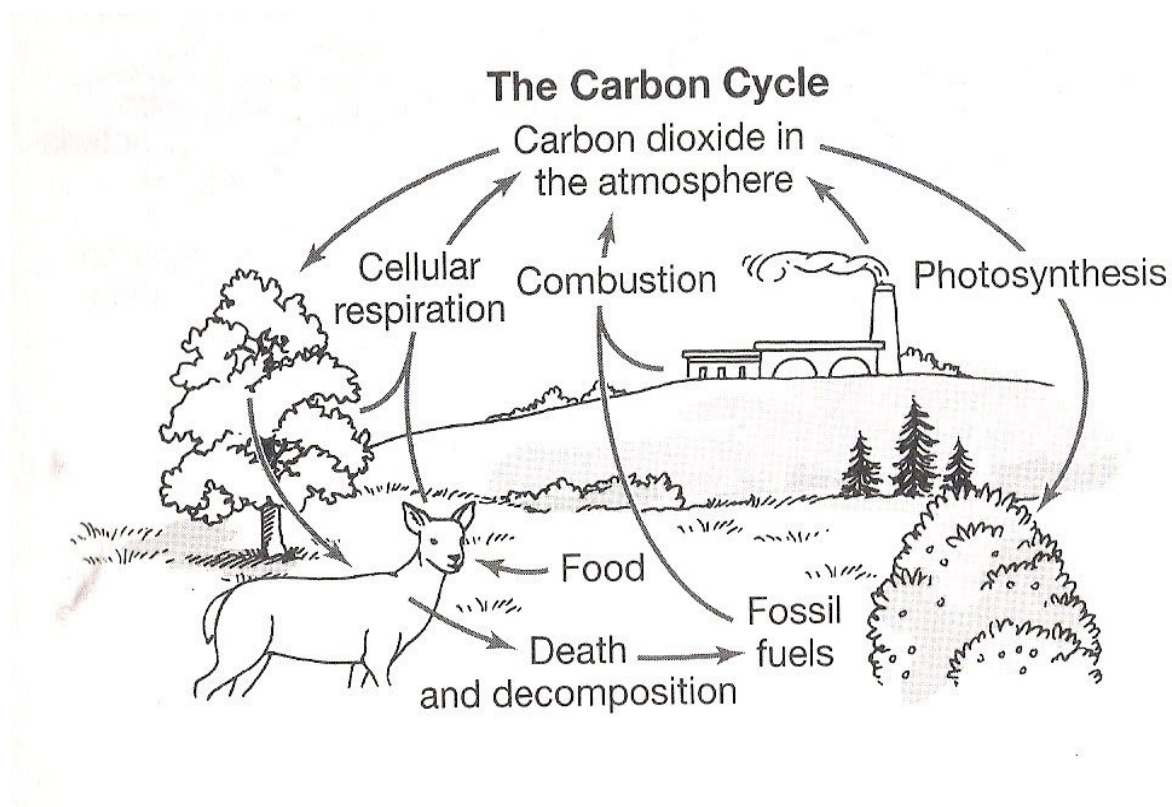
- Where does CO₂ come from?



- Describe what a carbon sink is **in your own words**.

Carbon Cycle Diagram

Color in the diagram and note the labels! Please ask your instructor if you are confused about any of the vocabulary in the diagram.



<https://www.google.com/url?sa=i&url=http%3A%2F%2Fthomasthinktank.pbworks.com%2Fw%2Fpage%2F70386097%2FCarbon%2520Cycle&psig=AOvVaw19Ew3NGI8dFXk53tacXbjm&ust=1595303139064000&source=images&cd=vfe&ved=0CAMQjB1qFwoTCMDfieT12uoCFQAAAAAAdAAAAABAP>

Dry Ice Demo:

Color the beakers according to the demonstration. Feel free to mix more than one color!



Pre-Industrial Revolution Beaker



Post-Industrial Revolution Beaker



Let's Talk Clams and Chalk:

Chalk Length (cm)	Student 1	Student 2	Student 3
Before			
After			

1. Which student's chalk deteriorated the most, and why?

2. Did the results surprise you? Why or why not?

Reflection:

Answer at least three questions in the space provided and take time to reflect on the demonstration/experiment.

- How are the dry ice and the vinegar similar?
- What can you do to reduce your carbon output at home?



- Why is ocean acidification dangerous? What animals does it affect?

- Name two new facts you learned over the course of this lesson.
 - 1.

 - 2.

- How are chalk and clam shells similar?

We hope you enjoyed our “Ocean Acidification Exploration” workshop! As you wrap up, try to think of realistic ways YOU can decrease your carbon footprint and help avoid the consequences of ocean acidification!