

Brandon Valley School District  
District Learning Plan  
March 23-27, 2020

Grade 5 Science



## Brandon Valley School District Distance Learning Plan

LESSON/UNIT: Water Cycle

SUBJECT/GRADE: Science/5th

DATES: March 23-27, 2020

<p>What do students need to do?</p> <p><a href="#">Link to BV instructional video for week of March 23-27, 2020</a></p>	<ul style="list-style-type: none"> <li>● Monday (3/23): Water Cycle Story Time/You will pretend you are a water drop and write a short story about your life! See attached handout, “My Life as a Drip.” This short story should be at least two paragraphs in length. Begin working on your story: Choose your beginning and ending prompt, and make sure to fill in the middle with the following vocabulary words: evaporation, condensation, precipitation, and accumulation.</li> <li>● Tuesday (3/24): Continue working on your “My Life as a Drip” story.</li> <li>● Wednesday (3/25): Finish working on your “My Life as a Drip” story.</li> <li>● Thursday (3/26): Read the article “A Giant Floating Trash Collector Will Try to Scoop Up Ocean Garbage Patch.” Answer the four questions that go along with the article.</li> <li>● Friday (3/27): Reread the article “A Giant Floating Trash Collector Will Try to Scoop Up Ocean Garbage Patch.” Design an invention that can pick up trash from the Great Pacific Garbage Patch. Draw your design and describe how it will work.</li> </ul>
<p>What do students need to bring back to school?</p>	<p>They need to return their completed “Water Pollution Invention” handout.</p>
<p>What standards do the lessons cover?</p>	<p>5-ESS2-2: Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.</p> <p>5-ESS2-1: Develop a model describing the interaction of geosphere, biosphere, hydrosphere, and atmosphere.</p> <p>5-ESS3-1: Obtain and combine information about ways individual communities use science ideas to protect the Earth’s resources and environment.</p>
<p>What materials do students need? What extra resources can students use?</p>	<p>Students need the following attached handouts:</p> <ul style="list-style-type: none"> <li>● “A Giant Floating Trash Collector Will Try to Scoop Up Ocean Garbage Patch.”</li> <li>● Water Pollution Invention Handout</li> </ul>
<p>What can students do if they finish early?</p>	<ul style="list-style-type: none"> <li>● Watch the Pollution Video: <a href="https://www.youtube.com/watch?v=Om42Lppkd9w">https://www.youtube.com/watch?v=Om42Lppkd9w</a></li> <li>● Go to Mysteryscience.com and watch Mystery Science Videos</li> <li>● Practice test for the Science AIR test: <a href="https://sd.portal.airast.org/training-tests.shtml">https://sd.portal.airast.org/training-tests.shtml</a></li> </ul>
<p>Who can we contact if we have questions?</p>	<p><b>Brandon Valley Intermediate School</b></p> <p><b>Principal-</b> Mr. Skibsted- <a href="mailto:Nick.Skibsted@k12.sd.us">Nick.Skibsted@k12.sd.us</a></p> <p><b>Assistant Principal-</b> Mr. Pearson- <a href="mailto:Rick.Pearson@k12.sd.us">Rick.Pearson@k12.sd.us</a></p> <p><b>Science Teachers:</b></p> <p>Mrs. Sershen- <a href="mailto:gina.sershen@k12.sd.us">gina.sershen@k12.sd.us</a> (red team)</p> <p>Mr. Stroh- <a href="mailto:nick.stroh@k12.sd.us">nick.stroh@k12.sd.us</a> (white team)</p> <p>Mr. Metzger- <a href="mailto:tyson.metzger@k12.sd.us">tyson.metzger@k12.sd.us</a> (blue team)</p> <p>Mr. Wiese- <a href="mailto:alex.wiese@k12.sd.us">alex.wiese@k12.sd.us</a> (silver team)</p>
<p><b>Notes:</b> Have a good week!</p>	

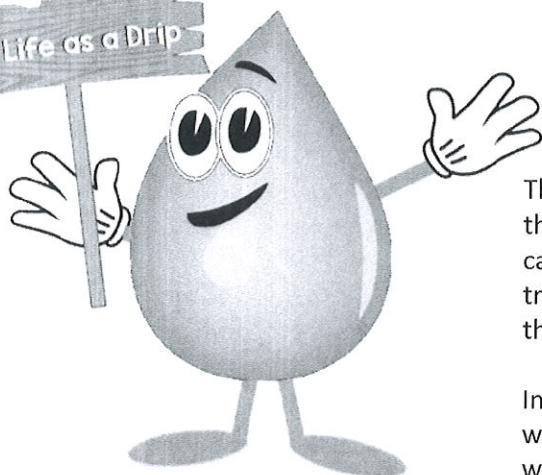
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***Instructional materials are posted below (if applicable)***

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*Brandon Valley School District*

Name \_\_\_\_\_ Period \_\_\_\_\_



## My Life as a Drip

### Water Cycle Story Starter

Think about that refreshing drink of water you had at the water fountain. Where do you think that water came from? How far do you think the water has traveled in a day? A week? A year? How long do you think it has been around?

In this activity, you will imagine that you are a drop of water and write a short story about your life. You may want to create a persona for your drop – a name, attitude, and/or inner dialogue that is unique to your drop. The beginning and ending prompts are given to you. Your job is to tell what happened in between as the drop travels through the steps of the water cycle.

### Step 1: Choose your beginning from the following prompts...

- 1) "Once I was floating around inside a cloud..."
- 2) "Once I was just a drop of water in the middle of the ocean..."
- 3) "Once I was a little flake of snow on the top of a mountain..."
- 4) "Once I was trapped in the ground underneath a river..."
- 5) "Once I was part of a huge, thundering waterfall..."
- 6) "Once I was lying in a puddle in the middle of a parking lot..."

### Step 2: Choose your ending from the following prompts...

- 1) "...and that's how I ended up in this lake."
- 2) "...and then some seventh-grade kid drank me up."
- 3) "...and now I'm just part of an iceberg."
- 4) "...and then a dandelion sucked me up with its roots."
- 5) "...and now I'm stuck here in this sewer."
- 6) "...and I've been floating around in this swimming pool ever since."

### Step 3: Fill in the middle...

Your drop must visit each of the water cycle steps while taking its adventure.

Use the checklist below to make sure you have each step of the water cycle included in your story.

evaporation     condensation     precipitation     accumulation

# A giant floating trash collector will try to scoop up ocean garbage patch

By USA Today, adapted by Newsela staff on 08.22.18

Word Count **676**

Level **840L**



The Ocean Cleanup Project's system is under construction in Alameda, California. Once it's finished, the system will be as long as five football fields. Photo by: The Ocean Cleanup Project

**SAN FRANCISCO, California** — Scientists hope a giant floating strainer will help to clean up the ocean. Soon, it will be tested off the coast of California.

Called the Ocean Cleanup Project, the 2,000-foot device has pipes that float on the water with nets below. It collects trash in the middle of it.

The huge device is designed to collect tons of garbage from what's known as the Great Pacific Garbage Patch. The floating trash can harm and kill whales, dolphins, seals and more, scientists at Britain's University of Plymouth say. The animals might eat the trash or get tangled in it.

The project is the work of Boyan Slat. He is 23 years old and is from the Netherlands. He was so disgusted by the plastic waste he saw while diving near Greece that he has worked to clean up the mess.

A Dutch nonprofit group runs the project, which is very expensive. The group has received millions of dollars to help.

### **How It Works**

The cleanup project's system uses connected pipes the length of five football fields that float on the ocean. Nets hang below the pipes.

The system moves slower than the water. This allows the currents and waves to push trash into its center. Floating pieces are captured by the net while the push of water against the net moves fish and other ocean life out of the way.

It has solar-powered lights and systems to keep ships from running into it. It has cameras and sensors to communicate with people.

The system will operate mostly on its own, although a few people will watch from a nearby ship. A ship will be sent out occasionally to get the collected trash and take it to shore. Then it will be recycled.

### **Expanding The Focus**

Scientists say things are so bad that it's worth a shot.

"I applaud the efforts to remove plastics," said Rolf Halden. He is a professor at Arizona State University.

However, he added that we need to stop the tons of plastic entering the oceans each day.

Another concern is that the project targets only plastic pollution floating on the ocean. Scientists have found plastics all the way down to the sea floor.

Project leaders say that cleanup is important, even if success is a long shot.

"The current plastic pollution will not go away by itself," Rick van Holst Pellekaan said. He is a spokesman for the project.

He said the group is considering systems for rivers and other areas. Those would catch plastic before it reaches the ocean.

A report says as much as 9.5 million tons of trash goes into the ocean each year.

Plastic is different than other trash. It does not break down like food or paper garbage.

The trash often comes from countries that have growing businesses but whose waste systems haven't caught up. Several of these countries are in Asia.

### **Discovering The Patch**

Trash patches gather floating trash in areas hundreds of miles across. They accumulate because of ocean currents.

Most of the pollution in these patches is plastic, said a British study published last year.

Slat got interested in cleaning up these areas after his diving experience. He gave a talk on his ideas after he graduated from high school in 2013.

His talk went viral online. A project to raise money for cleanup began. Slat ended up leaving Delft University in the Netherlands to focus on the cleanup.

Scientists have been working to build the cleanup system across the bay from San Francisco. It is weeks away from launch.

### **The Plan**

The cleanup system is scheduled to be taken to a spot off the coast on September 8. It will spend 40 to 60 days there for testing.

If it does well, the system will be taken to the Great Pacific Garbage Patch. It is between California and Hawaii.

The goal is to use 60 systems by 2020. The group believes that will clean up half of the trash in the garbage patch in five years.

## Quiz

1 Which two choices are MAIN ideas of the article?

1. *Boyan Slat designed a floating system to help remove plastic trash from the oceans.*
2. *Plastic trash in the world's oceans is a huge and serious problem.*
3. *The floating system is made up of nets, pipes, solar lights and communication systems.*
4. *Plastic trash is found throughout the oceans because it does not break down like other garbage.*

- (A) 1 and 2
- (B) 1 and 3
- (C) 2 and 4
- (D) 3 and 4

2 Read the paragraph from the section "How It Works."

*The system moves slower than the water. This allows the currents and waves to push trash into its center. Floating pieces are captured by the net while the push of water against the net moves fish and other ocean life out of the way.*

Which statement BEST summarizes the paragraph?

- (A) The system will not cause any harm to animals because it is designed to move very slowly.
- (B) The system will be able to collect trash only when ocean currents and waves are just right.
- (C) The system will use the natural movement of the ocean to help it work and to protect wildlife.
- (D) The system will move the trash in the ocean into one place so another system can then remove it.

3 According to the section "Expanding The Focus," what is a downside to the cleanup system?

- (A) The system can break down food and paper garbage, but it has not found a way to break down plastic.
- (B) The system can remove only trash that is floating, but plastic has been found down to the ocean floor.
- (C) The system will work only on the ocean, but a lot of trash also is found in rivers and other areas.
- (D) The system will clean up many tons of trash, but even after five years only half of it likely will be removed.

4 What caused Boyan Slat to start the Ocean Cleanup Project?

- (A) what he learned in school about the Great Pacific Garbage Patch
- (B) what he saw while diving in the ocean near Greece
- (C) what he heard about pollution in a speech that went viral online
- (D) what he studied while attending Delft University in the Netherlands



## Water Pollution Invention

\*Start by reading the article “**A Giant Floating Trash Collector Will Try to Scoop Up Ocean Garbage Patch.**”

\*Water pollution is a huge issue in the ocean and will continue to be. Every year 9.5 million tons of trash goes into the oceans. Many whales, dolphins, seals and more animals die from polluted water. Boyan Slat is 23 year old who came up with the idea of the **Ocean Clean Up Project** because he was saddened by the water pollution.

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\*Now it is your turn! Your job is to come up with a new invention that can help with the water pollution problem in the ocean!

1. Design a new, never been seen invention that can help with the water pollution problem in the ocean.
2. Draw and label your invention below. Give a short description of how your invention will work.

<b>Water Pollution Invention</b>
My drawing:
Explain how your invention will work:

