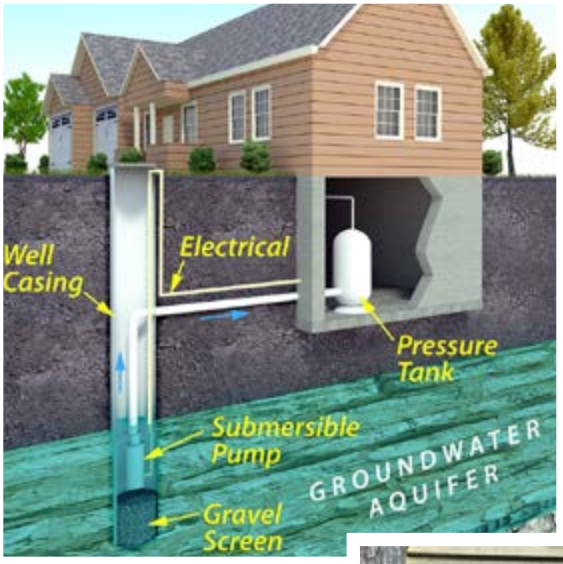
CLASSROOM ACTIVITY GUIDE
5th & 6th

Name:
Date:

Wells

Do you have to go to a well every day to get water? No? You can thank the underground well system! Wells (a hole that is dug into the Earth to get water) are a way for people in communities all over the world to get clean water. Wells get drilled deep into the ground into aquifers (layers and areas of rocks below ground where all the cracks, crevices, and spaces between rock particles are full of water), where there is a pile of water, rocks, and dirt. The water comes from the rain water that goes into the ground. Then the well system gathers the water and brings it up through a pump. This pump sends the water from the aquifer up into a pressure tank (a tank in which a liquid or gas is stored under pressure). The water in the pressure tank is then distributed into pipes that go into people's homes and other places. Then this water is distributed so that it can reach many people, like when people get water from their sinks.. Fun fact: Well water is clean because anything that is not supposed to be in the water will stick to the dirt and won't come up through the well system. Water from the ocean is not drinkable because it contains too much salt. This is why we drink well water!



Before the underground well system was made, people had to go to the well every day to get all their water! This includes water for drinking, bathing, cooking, drinking, and anything else that you would need water for. Some people still need to do this today. By creating a well underground system, people will be able to have easy access to water. Building well systems is a great way for people all over the world to have access to clean water. One well can serve multiple buildings and people, meaning it can help many people at once get clean access to water. Having clean water enables us to do everyday activities and not having to worry about going to/finding a well whenever we need water.

Every person in the world needs access to clean water everyday. When we use well water, we take water from the environment (from the aquifers). However, global warming can impact how much water that we have! Global warming is the process that causes the earth to become hotter. As the earth becomes hotter, the air becomes hotter. The hot air can hold more moisture, or water, than colder air does. This means that as the world gets warmer, it will suck up water from oceans, lakes, soil, and plants! This results in more water that we need will be stuck in the hot air instead of going into the ground. Then there will be less water for us to drink! Global warming is happening now, and quickly. Nonetheless, there are ways that we can stop global warming together to help us conserve (the act of keeping or protecting from waste, loss, or destruction) water. Some ways to conserve water include taking a shower instead of a bath, turning off the sink water while you are brushing your teeth, reusing your towels, and watering plants in the morning. There are lots of other ways to help! To learn more about how you can conserve water and stop global warming, you can visit, https://climatekids.nasa.gov/how-tohelp/. Taking steps to conserve water and stop global warming can ensure that we have enough well water for your lifetime, along with future generations to come.

The next time you drink water, be sure to think about where it came from and how you can conserve water in the future!

CLASSROOM ACTIVITY GUIDE
5th & 6th

Name:
Date:

Wells Assessment

Directions: Answer the following questions about wells in full sentences. Make sure you include the vocabulary words well, aquifer, and conserve in at least one of your answers.

1. How do wells work? Please describe in two or more full sentences.

2. How do wells help people in different communities?

3. How can you conserve water?

CLASSROOM ACTIVITY GUIDE
5th & 6th

Name:
Date:

Wells Lesson Questions

Directions: Read the vocabulary below. Then use the vocabulary when answering the questions. Make sure to read the directions to the question so you know when in the lesson you are supposed to be answering the question. Questions will be answered at different points in the lesson.

1. How does water get to your house? Answer in full sentences based on the video. (Wells Video)

2 . How do wells help people in different communities? (Wells Reading)

3. How can you conserve water? (Wells Reading)

4. Which part of the project is the well? Which part of the project is the aquifer? (Wells Project)

5. How does the water go from cup to cup? Explain in full sentences using at least 2 well vocabulary words (well, aquifer, pressure tank).

Classroom Activity Guide

Grade: 5th/6th
Duration: 1 hour
Date: Any

Lesson Topic:

Well System

Lesson Objectives:

Students will be able to create their own version of a well system.

Students will be able to write about how wells work, help people, and ways to conserve water.

Essential Question:

How do wells work?

How do wells help people in different communities?

What can people do to conserve water?

Standards: CCSS.ELA-LITERACY.RI.5.10

By the end of the year, read and comprehend informational texts, including history/ social studies, science, and technical texts, at the high end of the grades 4-5 text complexity band independently and proficiently.

CCSS.ELA-LITERACY.W.6.4

Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1-3 above.)

CCSS.ELA-LITERACY.L.6.6

Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

Classroom Activity Guide

Grade: 5th/6th
Duration: 1 hour
Date: Any

Materials, Equipment:

- Half a cup of rocks per students
- 2 Cups per student (can be paper, plastic, whatever you have)
- 1 Soap dispenser cup per student
- Half a cup of water per student
- 1 Computer, smart board, or laptop to show students the video
- https://www.youtube.com/watch?v=cGi4PugN4qY&t=143s "How Does Water Get to Your House?"
- 1 Pencil per student
- 1 Wells reading passage per student
- 1 Wells lesson question sheet per student
- 1 Wells assessment sheet per student
- 1 Class sizes white board, 1 white board market, 1 eraser (write the lesson goals, vocabulary, and vocabulary words on the board before the lesson)

Extension materials: (optional)

- Make Your Own Well! | Science Project for Kids https://www.youtube.com/watch?v=dkk_YbB139E
- "What can we do to help?" https://climatekids.nasa.gov/how-to-help/

Vocabulary:

- **Well:** a hole that is dug into the Earth to get water.
- **Aquifer:** layers and areas of rocks below ground where all the cracks, crevices, and spaces between rock particles are full of water.
- **Pressure tank:** a tank in which a liquid or gas is stored under pressure.
- **Conserve:** the act of keeping or protecting from waste, loss, or destruction of water.

INTO | Anticipatory Set (How will students get engaged in learning in multiple ways?):

1. Verbal questions (2 minutes) Ask students the following questions. Have students raise their hand and call on students to share their answer with the whole class: 1) Where did you get your water from today? 2) Do you know where your water came from before that? 3) Was your water clean or dirty?

Classroom Activity Guide

Grade: 5th/6th
Duration: 1 hour
Date: Any

2. Lesson goals (1 minute) Read the classroom goals for this lesson out loud to all of the students.

Goals: I can create my own well. I can write numerous sentences about how wells work, how they help people, and how to conserve water.

3. Vocabulary (3 minutes) Read the vocabulary words and definitions written on the board to the students.
4. Video and questions (6 minutes) Hand out the Wells Lesson Question sheet to students. Then show students the video https://www.youtube.com/watch?v=cGi4PugN4qY&t=143s "How Does Water Get to Your House?". Students should be answering questions 1 on their Wells Lesson Questions sheet during or after watching the video. Students should be looking for the answer to the question, "how do wells work?" throughout the video. Then have some students raise their hand to share what they wrote with the class. Guide students to make sure that they understand the process well.
5. Reading: (13 minutes) Hand out the Wells reading passage to each student. Have 1 student read each paragraph of the Wells reading passage aloud to the class. Take note of the pictures and how the well systems work. Point out the different parts of the well in the picture on the bottom of page 1. Have students work in pairs to discuss and answer questions 2 and 3 on their Wells Lesson Questions sheet after finishing the reading. Students can reread parts of the passage and the vocabulary words on the board if needed. After students finish, have some pairs raise their hands to share their answers to these questions.

THROUGH | Explain and/or instructional steps (multiple means of representation & engagement): Students will create their own wells- here is a youtube video that shows how to make the wells if you need an example https://www.youtube.com/watch?v=dkk_YbB139E

6. Project Set up (2 minutes) Give each student 2 cups, a half cup of rocks, a half cup of water, and a soap dispenser pump
7. Project (6 minutes) Have students put half a cup of rocks in 1 cup. Then they add half a cup of water to the cup with the rocks. Then they put the soap dispenser in the cup with the water and the rocks. Put the extra cup next to the cup with rocks,water, and soap pump. Face the mouth of the soap pump into the empty cup. Have students press the soap pump transferring water into one cup to the empty cup.
8. Project Vocabulary (3 minute) Ask students which part of the project is the well? Which part is the aquifer? Have students discuss this in partners and then write their answer in question 4 of their Wells Lesson Questions sheet.
9. Project discussion (2 minutes) Have students discuss in pairs what they notice about what is happening in their well project.

Classroom Activity Guide

Grade: 5th/6th
Duration: 1 hour
Date: Any

10. Project notes (3 minutes) Students should answer questions 5 on their Wells Lesson Questions sheet individually.

BEYOND | Applications/extensions/activity (multiple means of engagement & expression):

11. Class discussion: (3 minutes) Ask students "How can we help people to have access to clean water in the future?". Students can look back at the reading for ideas if needed. Have multiple students raise their hands and share their thoughts with the class.
12. Assessment (15 minutes) Hand the assessment sheet out to students. Students will individually answer the questions on the sheet using full sentences and the vocabulary related to wells.
13. Share (2 minutes) Have students verbally share what they learned from this lesson.

Extension: For more information on how to conserve water and stop global warming, students can go to https://climatekids.nasa.gov/how-to-help/