

## The Life Cycle of Clay

**Subject:** Grade 5 Science

**Lesson:** The Life Cycle of Clay

**Standard Addressed:**

- Students know that the sun’s energy fuels the water cycle and impacts different aspects of the water cycle (evaporation, transpiration, condensation, precipitation). (NC.5.P.2.1)

**Objectives:**

- Students will evaluate how the components of the water cycle affect the use of clay in pottery-making.
- Students will analyze the effect of the sun and weather on the pottery making process

**Materials Needed:**

- Device for showing *The Life Cycle of Clay* video
- Life Cycle of Clay activity
- Plastic zip bags
- Wet mud, dirt, play dough or clay

**Outline:**

- Prior to the lesson students should know how to identify the different components of the water cycle.
- Watch the 7:54 minute video, *The Life Cycle of Clay*. <https://youtu.be/skUnLZYM0rY>
- Go over Activity 1 as a group to review the stages of the water cycle. Use this to discuss where you saw opportunity for some of these stages during the video.
- Allow the students to complete the following activities in pairs or individually.

**Take It Further:** Encourage students to find some wet mud or clay and roll it into two balls. Put one ball in a plastic zip bag and one on a paper plate. Place both in a sunny window and make observations. Which one dries out first? Which part of the water cycle is responsible for this? And what happens to the plastic bag over time? Which part of the water cycle is responsible for the collected water droplets in the bag? What if you put one in the shade? What if you added green leaves from a plant into the bag? How does this change the results?

**Cross-Curriculum Connection:** Students will make a pinch pot out of play dough. They will perform the experiment from the “Take it Further” activity and keep a written log of their observations. At the end of the experiment, students will write a paragraph summary of why their pots did or did not dry out.



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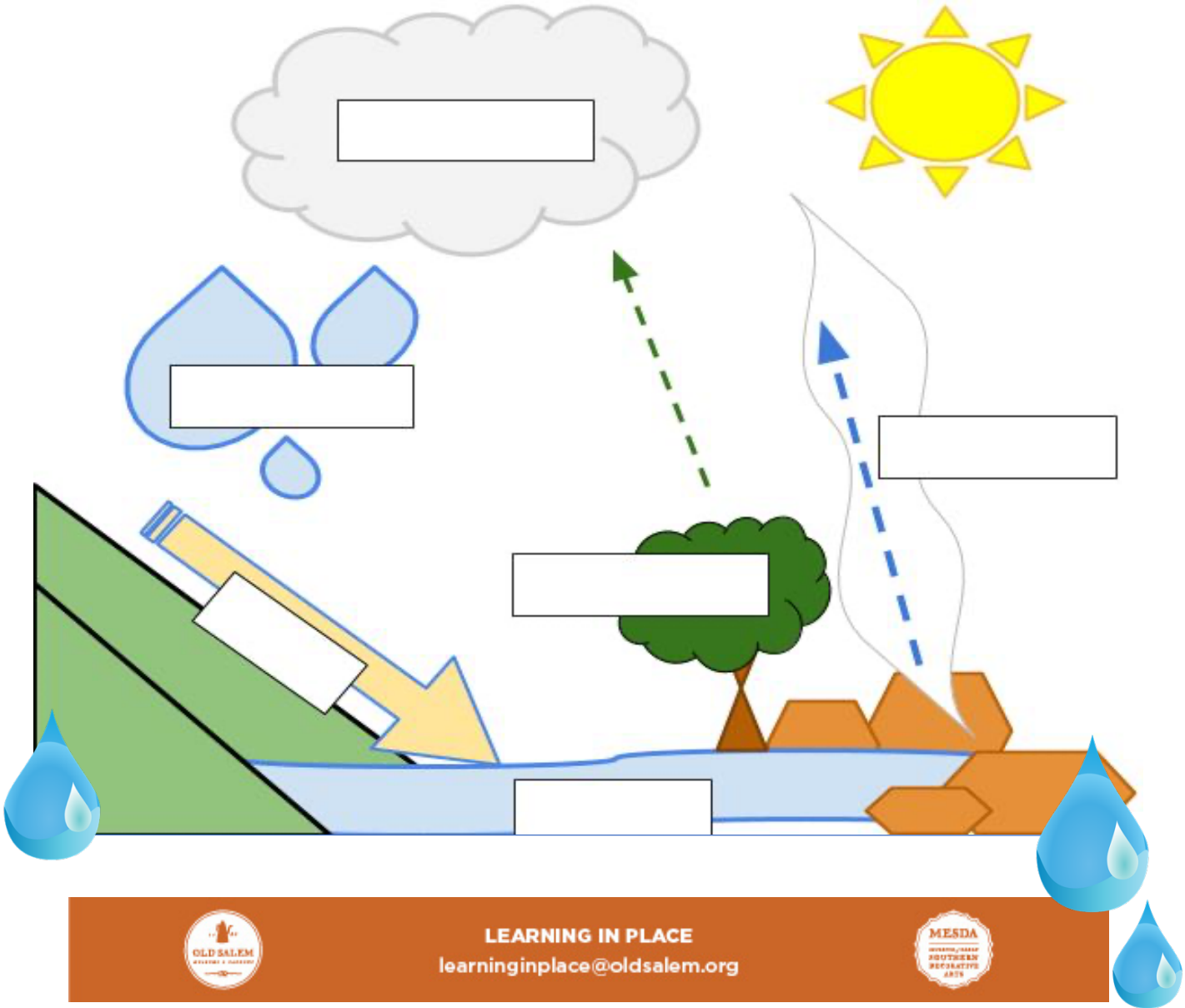
Student Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Activity 1:

*Use the word bank to fill in the stages of the water cycle.*

<b>Word Bank:</b>	Evaporation	Condensation	Precipitation
	Runoff	Transpiration	Collection



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Student Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Activity 2:

*Use the diagram from Activity 1 to help answer the questions below.*

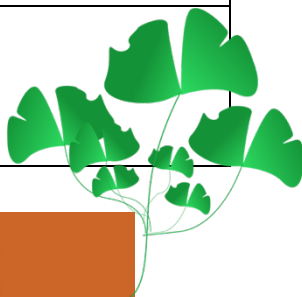
Which part of the water cycle creates the sediment that makes up clay?	
When clay is very wet, which part of the water cycle can help it dry out?	
On a very humid day, when there is a lot of water vapor in the air, sometimes moisture gathers on the surface of cool clay and keeps it wet. Which part of the water cycle explains this?	



## Activity 3:

*Take a moment to think about the sun's energy and how the weather affects evaporation and transpiration. Use this understanding to answer the questions below.*

Would a pot dry faster in a closed cabinet or in a sunny window?	
If there is a lot of precipitation outside, would it be easier or harder to get a pot to dry?	
Would wrapping a wet pot in a plastic cover help it keep moisture or lose moisture?	
Would keeping a lot of house plants in the pottery shop add more moisture to the air or less?	



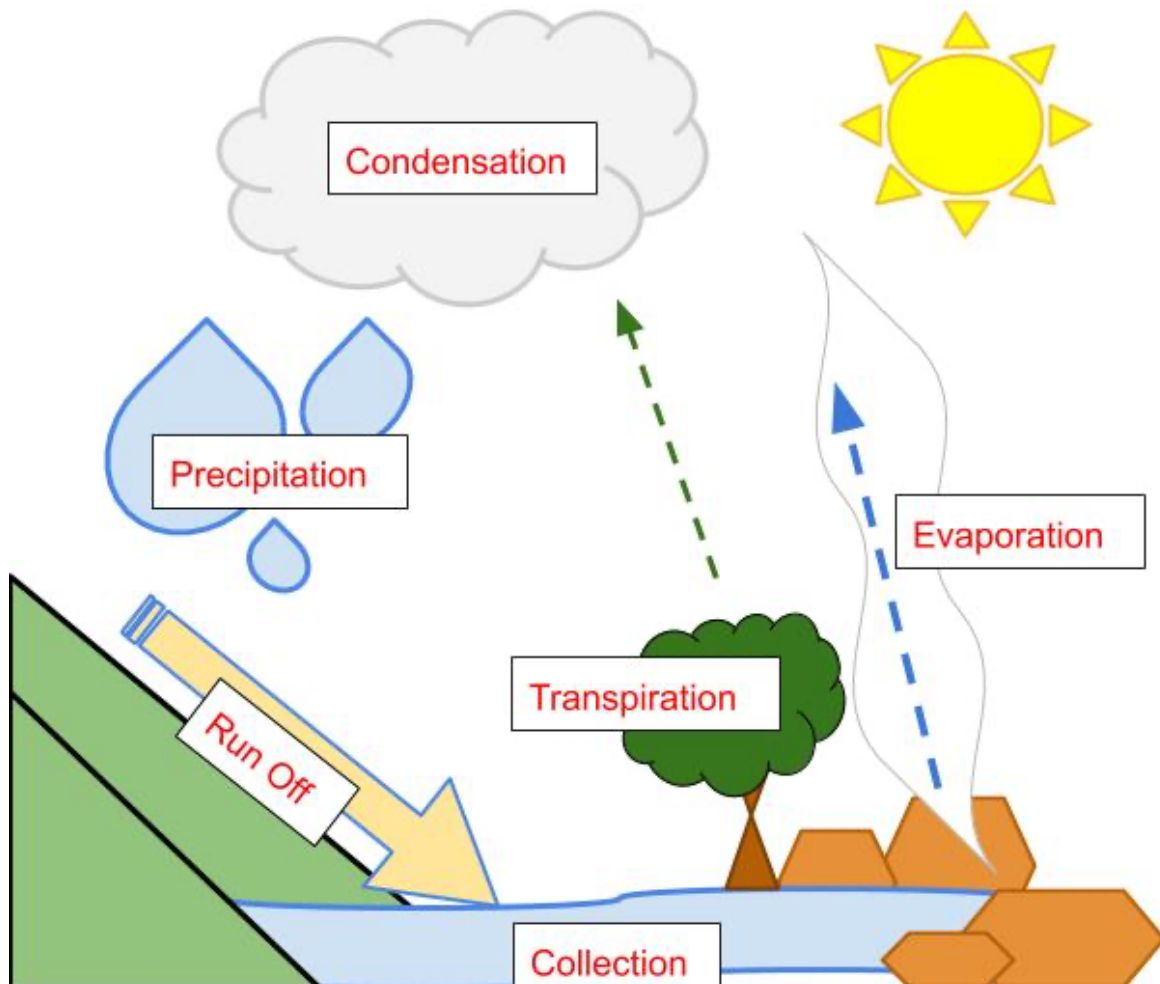
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### ANSWER KEY Activity 1:

Use the word bank to fill in the stages of the water cycle.

Word Bank:	Evaporation	Condensation	Precipitation
	Runoff	Transpiration	Collection



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**ANSWER KEY**

**Activity 2:**

*Use the diagram from Activity 1 to help answer the questions below.*

Which part of the water cycle creates the sediment that makes up clay?	Run-Off
When clay is very wet, which part of the water cycle can help it dry out?	Evaporation
On a very humid day, when there is a lot of water vapor in the air, sometimes moisture gathers on the surface of cool clay and keeps it wet. Which part of the water cycle explains this?	Condensation

**Activity 3:**

*Take a moment to think about the sun's energy and how the weather affects evaporation and transpiration. Use this understanding to answer the questions below.*

Would a pot dry faster in a closed cabinet or in a sunny window?	Sunny Window
If there is a lot of precipitation outside, would it be easier or harder to get a pot to dry?	Harder
Would wrapping a wet pot in a plastic cover help it keep moisture or lose moisture?	Keep Moisture
Would keeping a lot of house plants in the pottery shop add more moisture to the air or less?	More Moisture