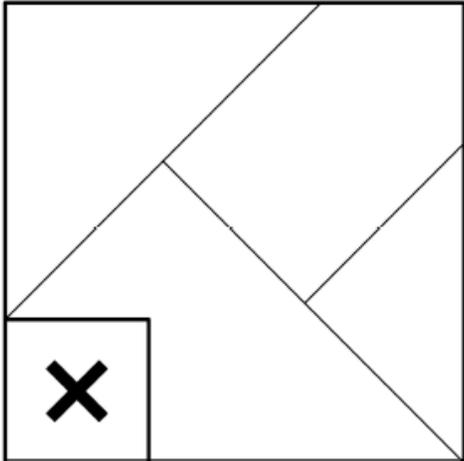


Session Title	Water conservation and the environment
Objectives:	Real-world Content/Context
1. Justify the importance of conserving the natural environment	Students will explore how their daily activities impacts water supply. They will specifically make links between their daily activities and water lock offs.
2. Outline the effects of human activities on the environment	
3. Investigate features/ soils of different environments	
Life Skills	
Collaboration	Think Pair share
Problem-solving	Deductive scientific method
Communication	Explain their ideas during phase 3 of the 5Es lesson
Creativity	Make predictions and communicate through creative writing and art work
Content Notes	
<p>The environment is all the physical surroundings on the Earth, including all living and non-living things, and which affects life on earth. Deserts, forests, wetlands, grasslands, marine, freshwater and tundra are examples of environments which differ in vegetation, animal life, soil and terrain and climate. Conserving the environment means trying to preserve natural resources so they will still be around in the future.</p> <p>The activities of people may affect the environment in good and bad ways. Human activities have caused serious environmental problems which have changed the earth and its climate, and have impacted the health of many living things.</p>	
Attention Igniter (AI)	
	<ol style="list-style-type: none"> 1. Print the Tangram shown 2. Cut the object along the lines. 3. Remove the square marked x 4. Ask the students to use the remaining 4 pieces to make a square 5. After they have successfully done this give them the x square and ask them to make another square now with all 5 pieces (tell them they can get help if they need it for the second square)

ENGAGE

- (a). Let students Think Pair Share and answer questions 1-3
 (b). Show Students the water use calculation sheet below and let them calculate how much water they use per day.

1. How much water do you need per day?
2. What causes water lock offs?
3. Where does the water you use each day come from?



How much **W A T E R** do we use?

This chart will help you calculate how much water your household uses a month. If you have water-saving appliances or toilets, your use may be somewhat less than the amount you have calculated on the chart.

Showers	Multiply the number of daily showers by the number of minutes each shower takes. Now multiply that number by 3 gallons per minute used. Enter that number in the box.	
Baths	Multiply the number of daily baths by 36 (gallons in a full bath) or 18 (gallons in a half full tub). Enter that number in the box.	
Toilets	Multiply the number of persons in the home by the number of daily flushes. (The average is four per person.) Multiply that figure by 3, the number of gallons used per flush. Enter that number in the box.	
Brushing Teeth	Multiply the number of persons in the house by the number of daily tooth brushings. Multiply that figure by 3 (the number of gallons used while the faucet runs for one minute). Enter that number in the box.	
Hand Washing	Multiply the number of times per day dishes are washed by the number of minutes the water is running. Multiply that number by 3. Enter that number in the box.	
Dishwasher	Add the number of times a week you run the dishwasher and divide by 7 to obtain the average daily usage. Multiply that figure by 12 (the number of gallons used by each wash). Enter that number in the box.	
Laundry	Add the number of times a week you run the dishwasher and divide by 7. Multiply that figure by 44 (the number of gallons used per load). Enter that number in the box.	
Other Indoor Use	The people in your household use water in other ways. Multiply the number of persons in the household by 10 gallons. Enter that number in the box.	
Outside Watering	You also use water outside (watering plants, washing cars, filling pools, etc). Multiply the number of minutes you have a hose turned on by 6 and enter that number in the box.	
Now calculate your household's daily use. Add up all the boxes to get an estimate of the gallons of water used daily. Enter in the box.		
Next, calculate your monthly use by multiplying the amount used daily by 30. Enter that number in the box. This is your estimated monthly usage.		

EXPLORE

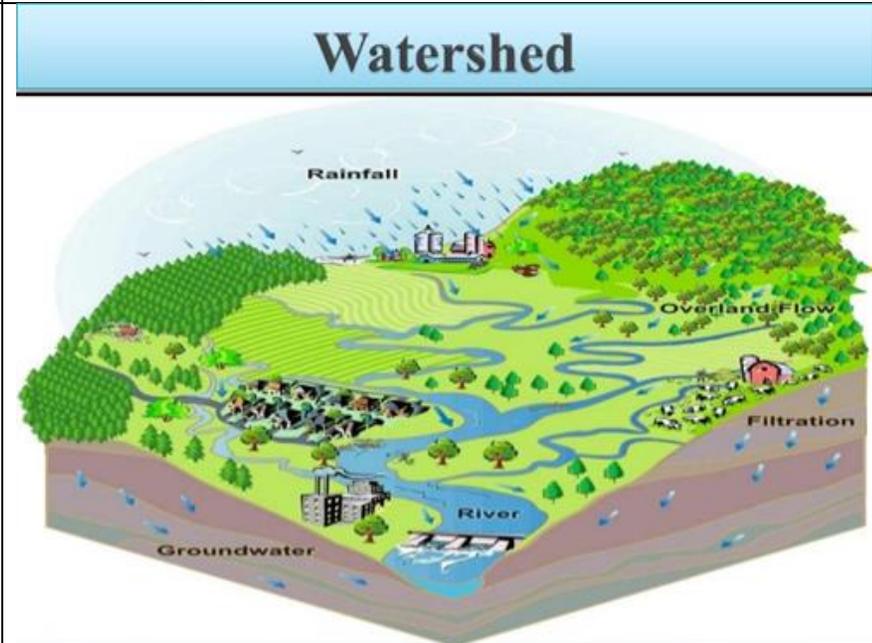
In groups, investigate the water-holding capacity of the soil samples collected. Cork a plastic funnel with cotton wool and add a fixed mass of each soil sample to separate funnels. Fit the end of the funnel over a measuring cylinder or beaker. Add a known volume of water to each soil sample. Measure the time taken for the water to pass through and the volume of water that passed through the soil and funnel. Compare the volumes of water before and after. Answer the questions, "Which soil held the most water?", "What does this suggest about the water-holding capacity of the soil?" Predict which soil would be best for seed germination/ plant growth.

EXPLAIN

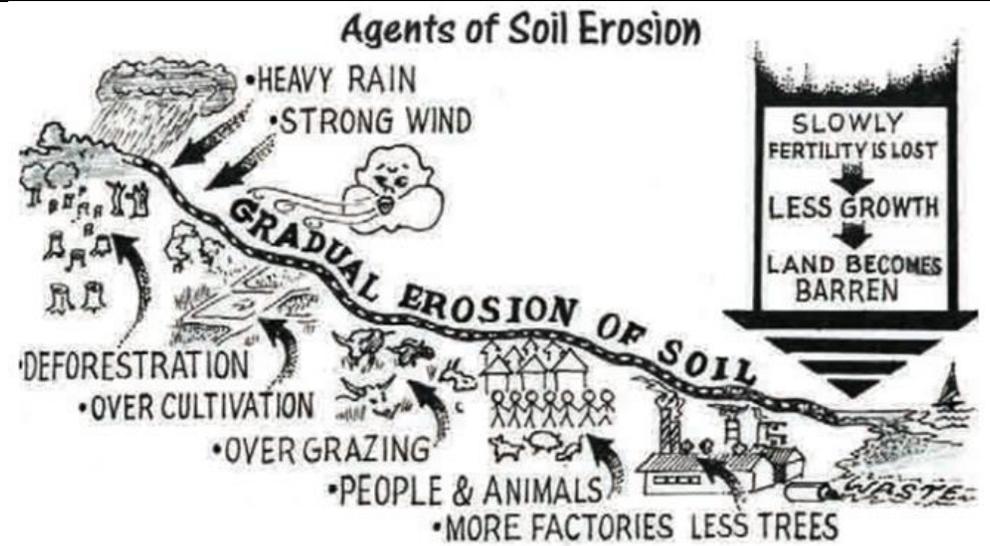
Creative writing or Art work

ELABORATE

1. Trace the ultimate source of water
2. Where does water go after it falls as rain?
3. Predict what happens to rain water when it enters the soil
4. Predict what will happen if all the soil was removed.



How does your activity cause water lock off?



EVALUATE

	Describe the learning experience, including all components as well as instructions for the task. Say what you thought about the task and what you expected going in. How were those expectations met or impacted?	2
	Interpret the experience discussing what you found challenging. Discuss in depth any insight(s) obtained. Support your insight(s) with examples.	3
	Relate specifically what you have learnt from the experience. Make any possible connections to content previously learnt.	2
	Provide a detailed account of how what you have learnt will influence your work/professional/personal practices for the future.	3