



Summer Camp

Amazon Adventure Day 1

4 - 8TH GRADE

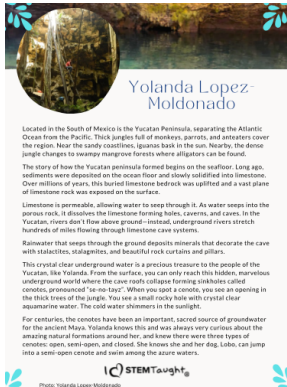
WELCOME

(5 min)

Say: **Get ready to swing into the wild, splash into rainforest rivers, and explore one of the most exciting places on Earth – the Amazon**

STEM STORY

(25 min)



READ ABOUT YOLANDA LOPEZ

Read and talk about why it is important to study groundwater. Use the questions below to lead a class discussion:

Ask: **Why doesn't the Yucatán Peninsula have above-ground rivers like other places?** Example: **Because the ground is made of limestone, which is porous and lets water seep underground to form rivers in caves instead.**

Ask: **What is a cenote, and how is it connected to groundwater?** Example: **A cenote is a sinkhole where the roof of an underground cave has collapsed, revealing groundwater that flows below the surface.**

Ask: **Why are clean cenotes important for people living in the Yucatán?** Example: **Cenotes are often their main source of groundwater for drinking, so polluted water can make people sick.**

WORD GAME

(20 min)

Let's
PLAY

WORD CHAIN: AMAZON EDITION

Objective: Students keep the word chain going by saying related words without repeating or hesitating!

Instructions:

1. The STEM Coach says a word related to the Amazon, groundwater, or nature (e.g., "river").
2. The first student says a word that starts with the last letter of the previous word and relates to the Amazon or groundwater (e.g., "river" ends with r, so the student might say "rain").
3. The next student continues, using the last letter of the new word, linking it back to the theme (e.g., "rain" ends with n, so the next word might be "nut" like Brazil nut).

Keep going around the circle, seeing how long the chain can get!

STEM TIME

(60 min)

Materials:

- Cups
- Optional: spoons to dig or just use another cup.

**INVESTIGATE SOIL**

Say: "Hydrologists are scientists that study groundwater systems because they are such an important resource. In the Amazon, they study soil to understand how well it holds water and how quickly it refills underground supplies. This helps us learn how the rainforest manages its massive rainfall and supports its ecosystems. You can investigate soil to understand how well much water the soil can store."

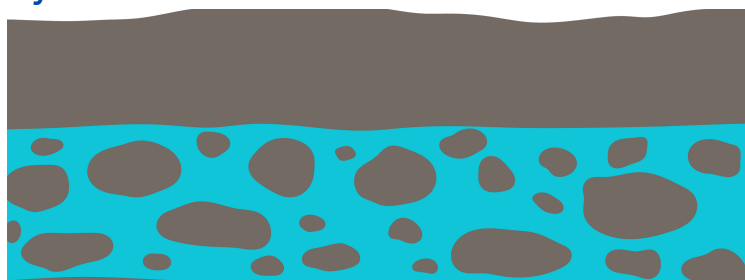
Instructions:

1. Students work with a partner to choose an area to investigate the soil outside. Say: "Different kinds of dirt might be differently colored, and dirt in some places might be drier than others. Let's see the wonderful variety of dirt and soil we can find!" Let them explore and take the time to find an interesting sample. For instance, you might have a spot in a school playing field with clay-like mud, or you might have coarse sand near the front.
2. Groups clear a small area so the soil is exposed.
3. Have students carry out and record their investigation of soil moisture, soil consistency, and soil color using the handout.
4. Students fill their cup about half an inch from the top with dirt.
5. Students fill their test tubes to 50 ml and use this measurement to calculate how much water fits in their dirt. Do the same with a different sample.

Ask: "Are you finding any small bits of rock? Are these grains flat or rounded? How might this influence how much water is held? Example: Flat grains don't leave space for water because they stack on each other. Round grains allow water to be in the dirt because of the space between the grains."

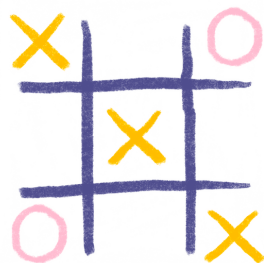
6. Students drip or pour water into their dirt-filled cups to determine how much groundwater they can hold. Ask: "Would your soil make an effective place for groundwater?"

Explain: Dirt is made up of small particles such as gravel, sand, and clay. These particles have small spaces between them that fill with water. Sand and gravel allow water to easily drain from the soil and can be a great place for groundwater to collect. Small clay particles do not drain easily.



GAME TIME

(30 min)



PLAY HUMAN TIC-TAC-TOE

Say: **"In Human Tic Tac Toe, one move affects the whole game—just like one change in the soil or water system affects the entire Amazon. Studying groundwater helps scientists understand how everything is connected: water, soil, trees, and even the animals. "**

Instructions:

1. Organize the players into groups of nine. There are 9 squares on a Tic-tac-toe board, so nine players are needed to play a round of the game.
2. Give the groups of players either 4 jump ropes, chalk or tape to make their board, then they may begin the game.
3. To play, each group will divide into two teams. They can be named team "X" and team "O," or they can come up with their own team names.
4. There will be 4 players on each team, and the remaining player will be there if either team needs them.
5. One team will start by making a move. They can either consult where they want a player to go, or the players can choose where they want to go when it is their turn. Play continues in this pattern, and the players can play as many rounds as time allows or the STEM Coach decides.

STEM TIME

(60 min)

Materials:

- Dried mangoes
- Raisins
- Chocolate
- Cupcake liners



MAKE CHOCOLATE COVERED FRUIT

Say: **"Let's make a snack! Today we are going to use our solar ovens to melt chocolate over dried fruit! In the Amazon Rainforest, thick layers of trees called the canopy block most of the sunlight from reaching the forest floor. But where the sun does shine—like in open spots or high in the trees—it helps fruits grow and animals stay warm. Today, we'll use the power of the sun to melt chocolate and make a yummy rainforest-inspired treat!"**

Instructions:

1. Place additional foil in the solar oven if needed.
2. Add raisins and mangoes to a cupcake liner. Place the chocolate on top of the fruit.
3. Position your solar ovens so the sun is shining just right into your oven. Come back periodically to see if your chocolate has melted.
4. Bring your chocolate covered fruit inside to cool off!

MEDIA

(30 min)

EXPLORE THE AMAZON

Play this nature movie as students enjoy their snack. Pause and discuss animals students are excited to learn more about throughout the week based on what they see in the nature movie.

Animals of Amazon 4K - Animals That Call The Jungle Home

<https://www.youtube.com/watch?v=s7DbVTkaXn0>

***Note: Ask students to collect and bring in recyclable materials such as water bottles, milk jugs, toilet paper tubes and small boxes for the activity tomorrow.**