

STEM Taught Camp

I'm a Scientist

Eugenie Clark: Day 4

Grades: 4-8

WELCOME

(5 min)



Introduction: Welcome your students to camp. Be friendly.

Say: "Today we get to play fun games, explore the ocean in our robot submarines, and make a fun fish craft!"

Remind students they have the opportunity to earn sand dollars when they complete a task, help another student, help set up or clean up, write in their journal, read a book, etc. Tally the amount of sand dollars that each student earned from helping and record it on the weekly payroll sheet.

STEM READERS THEATER

(30 min)

- Act out story: 15 min
- Discuss story: 5 min
- Activity: 30 min

Materials:

- Print one copy of "Day 4: Research Expeditions"
- Three pairs of scissors
- One roll of tape



Eugenie Clark story

READ SWIMMING THROUGH TIME WITH EUGENIE CLARK, DAY 4: RESEARCH EXPEDITIONS

Prepare beforehand: Print out one copy of "Day 4: Research Expeditions" from the story. Print one coloring page for each student from the "Student Sheets" section. Gather scissors and tape.

What you'll do:

- 1. Setup storytelling props (10 min):** Call up volunteers to help with the readers theater. Ask students to cut out the story props found in the story document. Remember to tape the headband ends together to fit a child's head. Students that are not helping with the story setup can color their coloring pages while they wait.
2. Gather all students and have them sit to listen to the reader's theater. Ask students to leave their coloring pages behind.
3. Assign a volunteer actor to handle each prop for story time.
4. Read the story to your students. Guide your volunteer prop holders in following the acting instructions as you read.
5. Discuss the story with your students following the discussion prompts printed underneath the story text.

STEM TIME

(30 min)



NATURE CREATION

Take the students outside, and challenge them to create something cool out of the things they find. They can work solo or with their friends. Let them use their imaginations!

Some possibilities: A rock stack, a rainbow made out of leaves, sticks & rocks, people out of leaves and sticks, a house with rooms from sticks laid on the ground, a nest from pine needles, a bracelet from dandelions, a crown of flowers or a taco out of a rose petal and grass. If you have shells, let the kids use them in their creations.

ART

(60 min)

Materials:

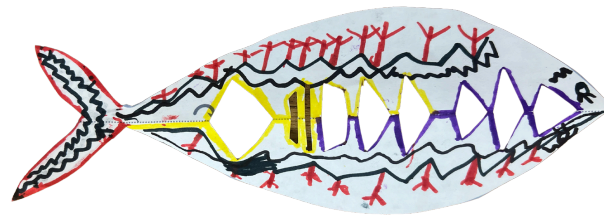
- Paper templates
- Scissors
- Crayons, markers, or oil pastels

PAPER FISH

Instructions:

Say: "Today we get to make paper fish to create a school of fish that we will display in the window! A school of fish is a group of fish that swim together. Swimming in a school helps fish stay safe, find food, make friends, and learn new things!"

1. Instruct the students to color, then cut out the designs on the fish (it will be better to color the fish before cutting them so the fish are stronger and don't tear).
2. Fold the fish in half and cut the designs along the lines.
3. Create a school of fish by taping the fish in a window.



ROBOTICS

(60 min)

Materials:

- Robots
- Remote controls
- Magnets
- Paper clips
- Legos
- Why Bricks
- Trays
- Ocean animal pictures



BUILD A SUBMARINE

Students get to design and build their own ROV, similar to ones that dive into the deep oceans to collect marine samples.

New Word: “ROV” is short for remotely operated vehicle; ROVs are robots that do not carry people. They can be driven to explore ocean depths and collect samples while being operated by someone at the water surface. This is a much safer way to explore the deep ocean than sending people down in a submersible.

Set up:

Pictures of animals need to be cut out and have magnets stuck to the back of them. Designate an area on flat ground for the ocean and place the pictures of the animals, magnet side up, randomly on the floor (hard surfaces work best).

Instructions:

1. Students will partner up and will get 1 robot, 1 remote and 1 tray of Legos/Why Bricks and a few paper clips.
2. Have students code their robot to the remote. The instructions for coding the robots are printed on the robot mat. Refer to the mat for instructions.
3. Students will get to build a sample collection device that can pick up the magnetic cards. Students can use as many Legos and/or Why Bricks and paper clips as needed on their deep sea rovers (robots).
4. Once their robot has been built, have them go into the ocean and collect samples.
5. When groups have a number of sample cards let them count and graph what they collected!

**If you are doing the lab outdoors you must be in the shade or else the remotes will not work with the robots. The surface must be flat and it is best to use the mats to create a smooth surface on the concrete (mats represent the ocean).

STEM GAMES

(60 min)

Materials:

- Buckets of water
- Cups
- Hose or spigot for water

Materials:

- List of words
- Timer

Categories to get you thinking: sports, dog breeds, candy, things that fly, vegetables, fast food restaurants

GAMES/KIDS CHOICE

High Tide, Low Tide Instructions:

1. Set up tubs of water by the rows of tide kids, so they can quickly fill up their cups. Divide the kids into 2 groups. Half the kids will be the tide. They will each get a cup and stand in 2 rows. The rows should be about 10 feet away from each other. Kids should face each other (adjust the number of kids in each group, if necessary).
2. The other team will be kids at the beach, they are the runners. They should line up about 10 feet from the start of the tide-tunnel.
3. All the tide kids scoop water in their cups.
4. The first kid in line calls out "high tide" or "low tide", then runs through the tunnel. If he says "low tide", all the kids toss water low on his legs. If he says "high tide", they toss water towards his arms or high in the sky to come down on his head. No throwing water in the face!
5. After he is through the tunnel, the tide kids hurry and scoop more water into their cup and get back in position. The next kid calls out "high tide" or "low tide" and runs through. Play continues.
6. After all the kids have run through a couple times, the groups will change position so the tide kids now become the runners and go through the tide-tunnel.

Word Association Challenge Instructions:

- Objective: kids are all given the same topic. Each team will come up with words associated with the theme.
1. Divide kids into teams with about 6-8 kids per team.
 2. Each team will have 1 pencil, paper, and a clipboard or something to write on. A leader or older child will be the writer for the team. Send the teams to different areas of the room.
 3. Name a category, like sea animals. Start a timer for 90 seconds. Kids will start naming all the things they can think of in that category. The writer will quickly write them down. Remind kids not to yell, they need to talk quietly so the other teams don't hear their answers.
 4. Stop when the timer goes off. Each team will count their answers then read their answers to the class. The team with the highest score wins that round.
 5. Choose another category and start over. Play as many rounds as you want. If the category is the beach, answers could include water, sand, sunscreen, swimsuit, sand crabs, surfing, etc.
 6. Time can be adjusted if needed.