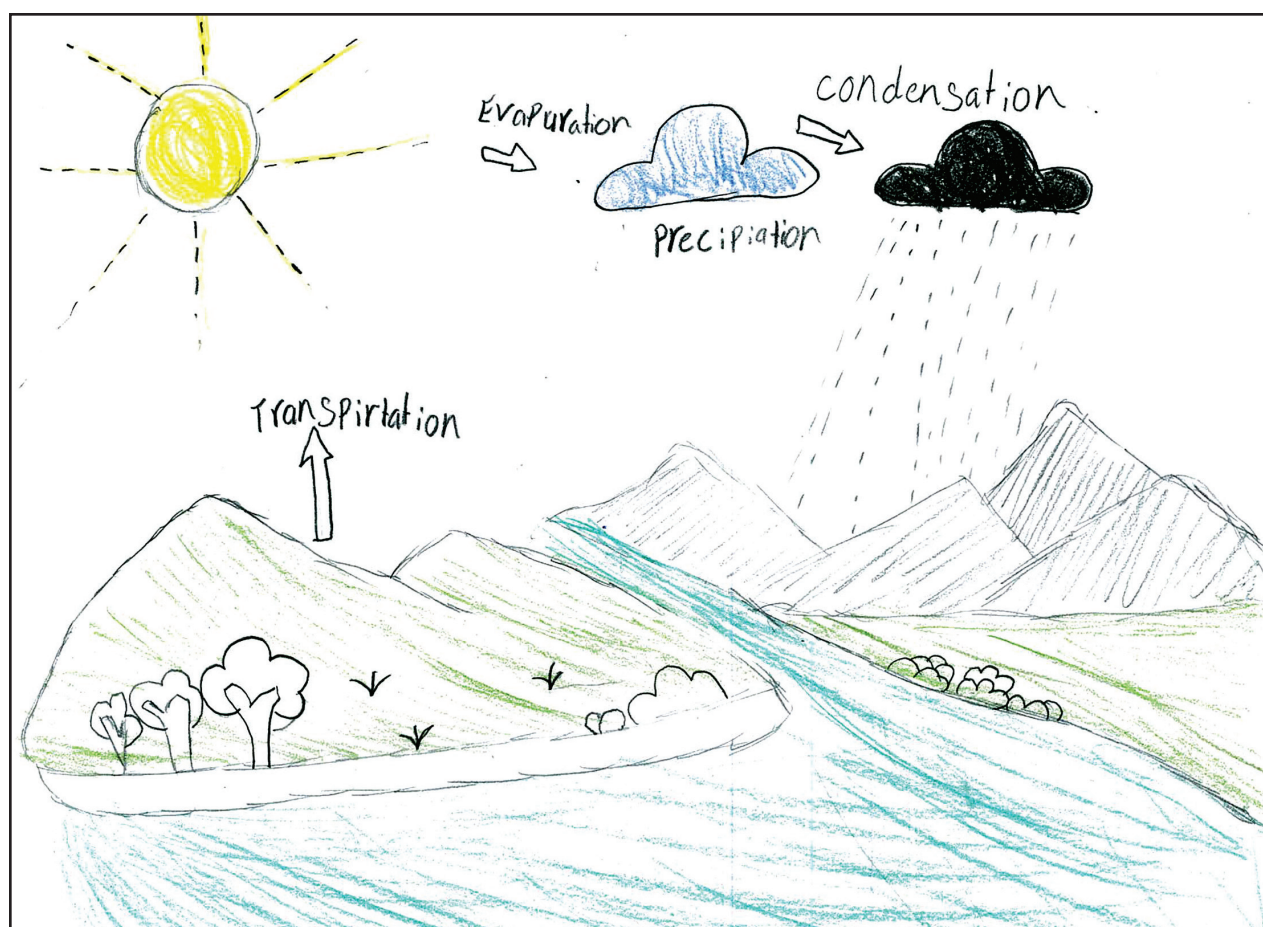


HELPING THE PLANET



JESSICA BAUTISTA OSORIO/HERITAGE ELEMENTARY SCHOOL

Do you know these facts about water?

Jessica Bautista Orsorio
HERITAGE ELEMENTARY SCHOOL

Water is the most important liquid on Earth.

It covers over 70% of Earth's surface.

Water is made of tiny units called molecules.

Salt water can be desalinated and

used for humans to drink and use in irrigation.

The sun, air and gravity work together to create the water cycle, pictured above.

Different ways to repurpose and use recyclables

Camila Maldonado
JOE SERNA JR. CHARTER SCHOOL

Water filter

Step 1: Cut a soda or juice bottle in half.

Step 2: Place top part of bottle onto the bottom part upside down.

Step 3: Place cotton balls, cloth or a coffee filter inside the bottle as the first layer (two to three centimeters thick).

Step 4: Add three to five centimeters of activated charcoal as the second layer.

Step 5: Over the charcoal, add about three centimeters of fine sand.

Step 6: Add about four centimeters of gravel or small stones over the sand.

Step 7: Add the rocks to the bottle as the final layer.

The small stones are used to filter out large sediments, the sand is used to remove fine impurities, the activated charcoal removes contaminants and pollutants through chemical absorption!

Bird feeder

Step 1: Near the bottom of the bottle, cut a little hole into the side, a bit bigger than the spoon. Poke the spoon handle through it until it hits the other side, cut a small hole there



CAMILA MALDONADO/JOE SERNA JR. CHARTER SCHOOL

so the handle goes through.

Step 2: Repeat Step 1 higher up on the bottle for the other spoon.

Step 3: Tie some string around the neck of the bottle as a hanger for the bird-feeder.

Step 4: Fill the bottle from the top with the birdseed and hang your feeder outside for the birds to enjoy. The seeds will fall into the spoon as the birds eat it!

Watering can

Step 1: Find a large, plastic bottle or jug with a handle, a large jug without a handle will work just as well as a milk jug with a handle you can also use a regular water bottle.

Step 2: Clean out the bottle, fill the bottle with water, then close the cap shake the bottle. Pour the water out. Do this a few times. If there is a label, peel it off then remove any residue.

Step 3: Poke 6 to 15 small holes in the bottom of the bottle, 5 to 6 if you're using a water bottle.

Step 4: Poke a hole in the cap of the bottle, a little bit smaller than your thumb.

Step 5: Fill a bucket with water, put your bottle in, when the bottle is filled put your thumb over the cap.

It fills up through the holes in the bottom. Put your thumb over the top and the water won't spray out, take your thumb off to let out the water.

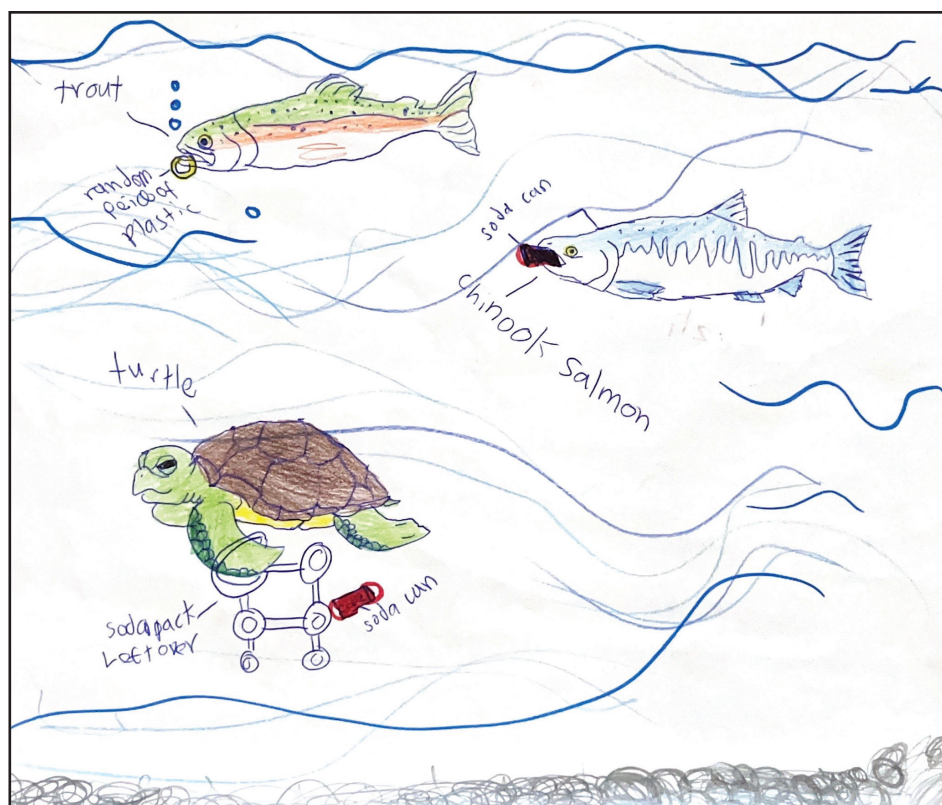
How to help

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Why do people litter? When people throw bottles and trash on the ground, it is bad for the animals. The litter can harm the animals. For example, they can get diseases. What can you do? You can pick up your wrappers and throw them in a garbage can.



MUHAMMAD AZAAN KHAN/HERITAGE



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Educating about the watershed at the NorCal Science Festival

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On April 23 of this year I had the opportunity to help at the NorCal Science Festival. I helped Mrs. Kathy Grant, City of Lodi watershed educator, at the watershed station.

I learned a lot of things I had not known before. For example, the watershed is a large area of sloped land where our drains and much more lead to. I also learned that we can simply help keep a healthy watershed by washing a car in a location not near any

storm drains, or simply picking up trash. This is because all those chemicals, soap, and trash are not good for the watershed. All those chemicals and other things can harm our wildlife. I also learned that the Sacramento River water-

shed is the biggest watershed in California. If you did not know, our watershed is the Mokelumne River, and our water supply comes from the Mokelumne River. In conclusion, I learned a lot at the NorCal Science Festival.

Jellyfish – the fascinating plankton

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Jellyfish are very fascinating animals. Some types of jellyfish can weigh up to 440 pounds, others can weigh no more than 20 to 30 pounds. They can grow from 15 to 100 feet in length counting the tentacles.

Most jellyfish live for less than a year, some jellyfish live for only a few days, and a few types of jellyfish are immortal. Jellyfish predators are other jellyfish that are bigger and stronger.

Jellyfish are the largest plankton in the world. The people injected by the toxin of the jellyfish are outrageous. There are about 150 million people stung every year. It's crucial to stay away from these creatures.

There are 20 to 40 stings annually in the Philippines. The venom is called Nematocysts, and it is very dangerous for humans. This toxin is located on each tentacle of the jellyfish. The toxin gets inserted when a living thing has contact with the jellyfish.

Not all jellyfish are poisonous, or harmful to humans. Only around 70 species of jellyfish can leave severe wounds in humans. Out of the 70 species of jellyfish that are harmful to humans, only 65 species are aggressive. It is crucial to stay away from these amazing creatures because they can be very aggressive and kill people around them.

Jellyfish are drifters that go with the flow of the water. Their tentacles can measure around 10 feet long for most species. Other species can grow tentacles up to 50 feet.

Their tentacles are their main defense. It helps them protect themselves from predators. Jellyfish have 4 to 8 tentacles but sometimes they have more. Jellyfish like going with the flow.

More than half of the jellyfish species are bioluminescent. Bioluminescent means they can glow in the dark. This helps them against predators. The light scares the predators away. They form a chain that confuses the predators and makes them leave.

Jellyfish can go very deep into the ocean. They can go up to 9,000 meters or 30,000 feet deep. There the main source of food is found deep in the ocean.

If people see jellyfish at the night they will be amazed at how cool, and gorgeous they look. The jellyfish that are bioluminescent are one of the most fascinating things in the world.

Their species are incredibly populated. There are 2,000 known species of jellyfish by humans. Scientists affirm that there are over 300,000 species of jellyfish not known by humans. They predict that most of the species unknown are very deep down in the ocean. They think they are bioluminescent, and that they are way bigger than the species humans know.

Jellyfish are found all over the world. Some are found in the ocean, others are found in fresh water, and others are found in the sea. Jellyfish are more popular to see in the ocean because there are more species there.

The most popular species of jellyfish is the box jellyfish. Jellyfish are incredible creatures, and there are a lot of species of jellyfish.

All about Pacific sanddabs and speckled sanddabs

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What is a Pacific sanddab? The Pacific sanddab is a species of flatfish. The Pacific sanddab belongs to the Paralichthyidae family. The Paralichthyidae family is also known as the large tooth flounder family. All combined, the large tooth flounder family consists of approximately 110 various species.

The Pacific Sanddab is endemic to the Northern Pacific Ocean. They go from the Sea of Japan to the coast of California. They are most abundant off North-Central California and Southern California. The Pacific sanddab has a lifespan of 9 to 10 years. They spawn multiple times during the spawning season, which is through July and September. Female Sanddabs produce numerous eggs.

The Pacific sanddab lives in mostly sandy and muddy areas at depths of 30 feet to 1,800 feet.

The Pacific sanddab usually lives in shallow waters when they are young, but they are also found in tide pools. The Pacific Sanddab lives among many different animals. They live among rays, crustaceans, cephalopods, flatfish, and bottom feeders. They eat small fish, cephalopods, crustaceans, and surprisingly, their own eggs. Due to the way they look, they can easily camouflage in nestles to hide from their predators. Some of their predators include sharks, rays, and halibut. The Pacific Sanddab is fished commercially and recreationally by humans.

The Pacific Sanddab has very interesting characteristics. They have an elongated body, and some-

times even have an oval body. Their color ranges from dull brown to tan. They also have circled spots on their bodies. The color of the spots can go from white to pale brown.

Freshly caught sanddabs will have dull orange spots and blotches.

A fish that's very similar to the Pacific Sanddab is the Speckled Sanddab. Just by the name, you can probably assume that they are very similar. The speckled sanddab is also one of the members of the Paralichthyidae family. The speckled sanddab is known as the smaller cousin of the Pacific Sanddab. The speckled sanddab can grow up to 6 inches in length, which is just about the same size as a Pacific Sanddab. However, the lifespans are very different. The Pacific Sanddab can live up to 10 years. On the other hand, the speckled sanddab can only live up to 4 years. The speckled sanddab is mostly found in the waters of Mexico, but can also be found on the coast of California.

One of the differences between the two is that the speckled sanddab is more speckled rather than mottled, like the pacific sanddab. Another difference is that the pectoral fins are a little shorter than the fins of the pacific sanddab. These two fish are very similar.

Now that we compared the Pacific sanddab to the Speckled Sanddab, we know more about the Paralichthyidae family. It is a very big and interesting family. The Paralichthyidae family has over 240 species of fish. They are all very unique, and the pacific sanddab is one of them. Its features and characteristics make it a fascinating species.