

Dolphin Dentists

Grade Level: Grade 1

Mathematics Skills: Counting and Ordering Numbers

Florida Sunshine State Standards: MA.1.A.2.1, MA.1.A.2.3

Description:

Students will learn about how dolphins in an aquarium setting are cared for by counting and ordering numbers. They will act out the part of the dolphin's dentist by counting and ordering teeth.

Materials:

- "Why Train a Dolphin?" story
- Play dough (preferably white)
- Toothpicks
- Plastic knives
- Ziploc bags
- "Dolphin Dentist" worksheet
- "Panama's Teeth"

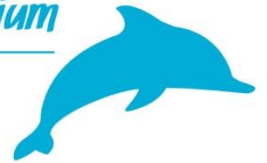
Preparations:

Pull out 1 Ziploc bag per student. Place one toothpick, one plastic knife, and one ball of white play dough in each Ziploc bag. Make enough copies of the "Dolphin Dentist" worksheet for each student to have 1. Print Panama picture on transparency or use a SmartBoard to display picture as a .jpg (available online) for students.

Procedures:

- 1) Ask the class about the dolphins they have seen at zoos or aquariums. Discuss some of the different tricks or behaviors that the dolphins perform during shows and have students offer suggestions as to why these behaviors are taught to the animals.
- 2) Read "Why Train a Dolphin?" aloud to the class. After the reading, have students raise their hands and recall some of the behaviors the dolphins performed that helped the trainers to keep them healthy.
- 3) Display "Panama's Teeth" to students to show how worn down her teeth are.

- 4) Explain to students that today they will be learning about how counting and ordering numbers help the dolphin trainers at the Clearwater Marine Aquarium take care of the dolphins.
- 5) Pass out the “Dolphin Dentist” worksheet. Have them work together in groups to do Part 1, and work as individuals for Part 2. Part 2 will require their prepared bags of play dough and toothpicks.



Why Train a Dolphin?

Panama

The Clearwater Marine Aquarium is not your typical aquarium. It is actually a marine animal hospital. All the animals that live at the aquarium were rescued from the wild because they were very sick or were injured in some way. The reasons they arrived at CMA are all different, but once they are there, they receive the best care.

One of the types of animals that live at the Clearwater Marine Aquarium is the Atlantic Bottlenose Dolphin. The dolphin trainers at CMA work very hard to care for our rescued dolphins. They are in charge of teaching the dolphins to perform behaviors on cue, feeding the dolphins as a reward for correct behavior, and making sure the dolphins are healthy. There is a lot of hard work that goes on behind-the-scenes, including dividing up the dolphin's daily food, cleaning and scrubbing the dolphin's tanks, and working long hours to feed the dolphins on time. The most exciting parts of the day are the training sessions that occur during the dolphin shows. Although these shows are very fun for the dolphins, their trainers, and all the guests watching, they serve a very important purpose.

The most important reason that the dolphins at the Clearwater Marine Aquarium are trained is to help take care of them. Sometimes, going to the doctor can make people nervous, even if it's just for a check-up. Dolphins will get nervous just like we do, so the trainers at the Clearwater Marine Aquarium help to keep the dolphins calm by rehearsing the different behaviors they would do during a check-up with the veterinarian. These behaviors are called "husbandry behaviors." The dolphins practice presenting their tail flukes to the trainers, just like they would have to if they were getting a shot. They also practice holding still while the trainers look in their mouths to check their teeth, just like a dentist visit. One of the most exciting behaviors that the dolphins practice is when they beach themselves, or come all the way out of the water onto a platform. This is a good time for the trainers or the vet to look at the dolphin's whole body and make sure they are healthy.

Panama is the oldest and largest dolphin that lives at the Clearwater Marine Aquarium. When Panama lived in the ocean, she had a lot of trouble hunting for her own food. Instead of hunting, Panama started to beg for food from boats. Feeding wild dolphins is actually against the law, but the people that fed Panama thought they were helping her. Instead they were making Panama very sick. They gave Panama fish that had been sitting out for a long time and even "people food," like cheeseburgers. Finally, Panama became so ill that she had to go to the Clearwater Marine Aquarium. The animal care staff at the aquarium found out that Panama's teeth were

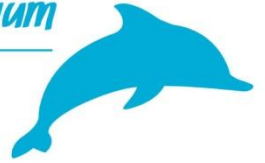
very worn down – many were even missing. That was why Panama wasn't hunting! Panama's trainers spend a lot of time taking care of Panama's teeth, so she has to be very comfortable with trainers looking in her mouth. They practice this medical behavior at every training session.

A dolphin's teeth tell us a lot about the animal. Unlike humans, not every dolphin has the same amount of teeth. They can have anywhere from 80-100 teeth. Also unlike humans, dolphins only have 1 pair of teeth throughout their whole lives. Dolphin's teeth are sharp and shaped like a cone to help them catch their fish. For Panama, having worn down teeth prevented her from hunting. A dolphin's teeth can also tell us how old a dolphin is. If a dolphin's tooth falls out, you can count the rings inside the tooth – just like counting the rings of a tree – to see how old the animal is. These “growth rings” grow once a year and let scientists estimate the age of dolphins.

Dolphin Teeth



Panama's trainer takes a look at her worn down teeth

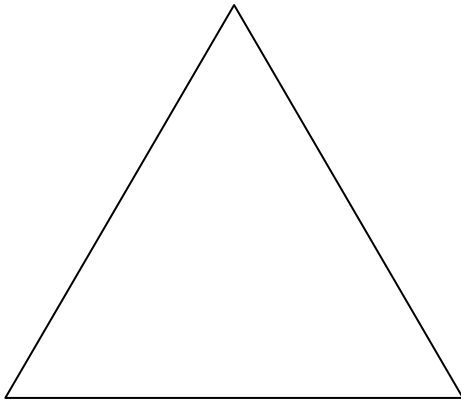


Dolphin Dentists

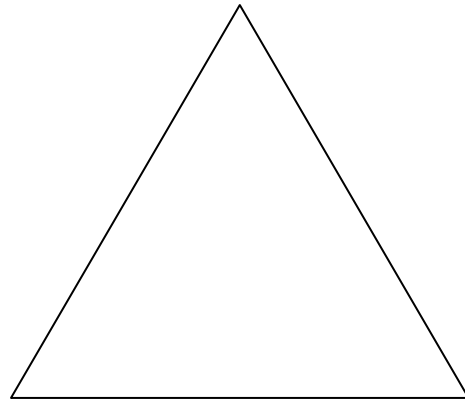
Name: _____

Part One Directions: Using the triangles below as a guide, draw the growth rings each dolphin would have.

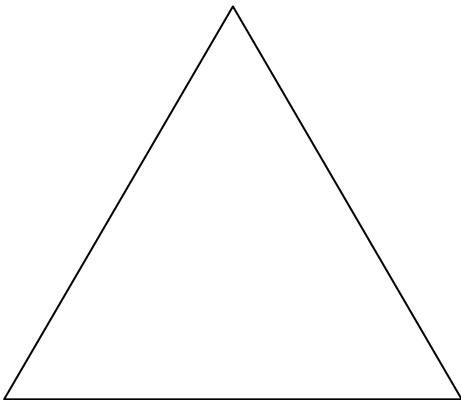
A) A 3-year-old dolphin calf



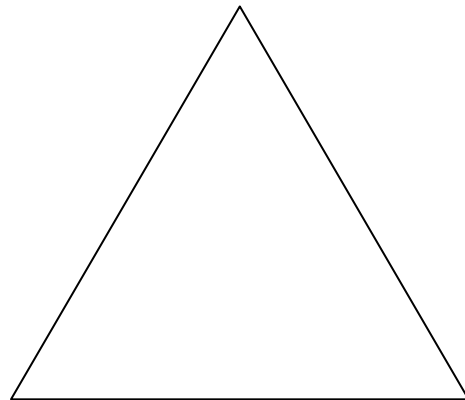
B) A 15-year-old dolphin



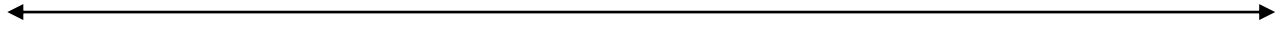
C) A 12-year-old dolphin



D) A 7-year-old dolphin

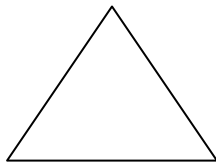


Part Two Directions Using the dolphin teeth from above, order the dolphins from youngest to oldest on the number line below.

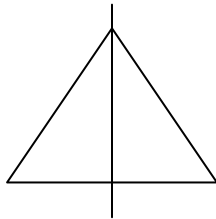


Part Three Directions Follow the instructions to see what your tooth would look like if you were a dolphin!

A) Using the play dough create a cone-shaped dolphin tooth.



B) Cut your tooth in half (as shown in the picture) using the plastic knife.



C) Using your toothpick, make growth rings inside your tooth. Make one growth ring for each year of your age.