



Field Trip Lesson Plan: Animal Care at the Dallas World Aquarium

Goal: Students will observe many species of animals while at the Dallas World Aquarium and will identify ways in which the staff cares for and meets their individual needs.

Objectives: Students will participate in a discussion on aspects of caring for animals.

Students will create an individualized care plan for a selected animal based on observations made on the field trip, class discussions, and Internet research.

Science TEKS: 6th Grade – 6.3.B, 6.3.C, 6.4.C

(3) Scientific and engineering practices. The student develops evidence-based explanations and communicates findings, conclusions, and proposed solutions. The student is expected to:

- (B) communicate explanations and solutions individually and collaboratively in a variety of settings and formats; and
- (C) engage respectfully in scientific argumentation using applied scientific explanations and empirical evidence.

(4) Scientific and engineering practices. The student knows the contributions of scientists and recognizes the importance of scientific research and innovation on society. The student is expected to:

- (C) research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

7th Grade – 7.3.B, 7.3.C, 7.4.C

(3) Scientific and engineering practices. The student develops evidence-based explanations and communicates findings, conclusions, and proposed solutions. The student is expected to:

- (B) communicate explanations and solutions individually and collaboratively in a variety of settings and formats; and
- (C) engage respectfully in scientific argumentation using applied scientific explanations and empirical evidence.

(4) Scientific and engineering practices. The student knows the contributions of scientists and recognizes the importance of scientific research and innovation on society. The student is expected to:

- (C) research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

8th Grade – 8.3.B, 8.3.C, 8.4.C

(3) Scientific and engineering practices. The student develops evidence-based explanations and communicates findings, conclusions, and proposed solutions. The student is expected to:

- (B) communicate explanations and solutions individually and collaboratively in a variety of settings and formats; and
- (C) engage respectfully in scientific argumentation using applied scientific explanations and empirical evidence.

(4) Scientific and engineering practices. The student knows the contributions of scientists and recognizes the importance of scientific research and innovation on society. The student is expected to:

- (C) research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Materials:

- Caring for Animals worksheet
- A Few of the Animals at the Dallas World Aquarium sheet
- You've Been Hired as an Animal Caretaker at the Dallas World Aquarium worksheet
- Pencils or pens

Introduction/
Background:

1. Go over the A Few of the Animals at the Dallas World Aquarium sheet with the students. Explain that these are only a few of the many animals they will see on the field trip. Also explain that these are animals that are typically easy to spot while moving through the exhibits.

2. Explain to the students that we are going to talk about one of the many career opportunities with animals, animal caretaking. This role is an important one at many aquariums and zoos including the Dallas World Aquarium as there are large numbers of animals each with unique needs.
3. Mention that taking care of animals is a big responsibility. It can be a lot of work. There are five big factors to consider to successfully meet animal needs. These include diet, habitat, behavior, and physical and mental health. Each of these factors can be broken down into several different pieces, all of which are important in successful animal care and welfare.
4. Ask if anyone in the class has a pet. Ask the students if they provide care for the pet. If so, how? Are they the sole caretaker or do others help?
5. Distribute the “Caring for Animals” worksheet. Ask the students to think about everything needed to provide excellent care for a house cat and to write their thoughts in the labeled boxes. Tell them to be as specific as possible (i.e., don’t just put “food” for diet, make sure you give details). Allow students time to complete the worksheet.
6. When finished, discuss the activity with the students, starting with diet. What does a cat need to eat? What other considerations did you need to think of when selecting a diet for this cat? Invite the students to add considerations they didn’t include on their list.

Possible responses: Nutritious cat food from a reputable company. Feed recommended amount based on weight. Measure food given, and what was eaten. Ensure food is fresh when offered. Do not offer people food. Limit treats.

7. Next, let’s talk about habitat. Obviously, this cat lives in a house. What other considerations did you list?

Possible responses: House should be clean and kept at a hospitable temperature. There should be a litter box that is cleaned on a regular basis. There should not be any plants or other items left out that can make a cat sick.

8. Now let’s move on to behavior. The animal should be able to express natural behavior even in human care. What about an indoor cat? Hunting is an important natural behavior in cats as they are predators. How can we ensure the indoor cat has an opportunity to “hunt” without going outside? What did you put on your list?

Possible responses: Prey drive is present even in domestic indoor house cats. Provide opportunities for the cat to hunt through enriching toy play. This can involve laser light follows, toys hanging from a wand, battery-operated toy balls with feathers attached that roll randomly, and many others. Cats also scratch surfaces such as tree trunks to sharpen their claws. It is important to provide a scratching post so the cat doesn't choose your furniture for scratching. Cats also like to climb, so multi-level cat trees or elevated cat beds will allow for this.

9. Next is physical health. Many animals, including cats, don't always show it if they aren't feeling well. What did you include in your list to ensure this cat stays physically healthy?

Possible responses: make sure the cat visits the vet on a regular basis. Make sure to observe the cat enough that you can detect when something isn't right, whether it be limping, a weepy eye, scratching at ears, vomiting, loose stools, inappetence, lethargy, or behavior changes. Keep track of the cat's weight. Brush the cat to keep the fur from matting and for hairball control.

10. Finally, let's talk about mental health. This involves limiting stress in the cat's life and providing opportunities for mental exercise. What did you include on your list to meet this need?

Possible responses: cats thrive on routine, so frequent changes can make them uncomfortable. When changes need to happen, keep a careful watch on the cat to ensure he is handling things well. If there are visitors or little ones in the house, ensure they know not to chase, pick up, or pester the cat. For mental exercise, you can try training! Use (small, healthy) treats to reward behavior you like. Even though they might not seem motivated like a dog, cats surprisingly get very into learning new things.

11. Collect the worksheets. Explain that when looking at all these things, there are certainly a lot of work going into ensuring the cat is healthy and thriving. Let's switch gears and talk about the people who care for the animals at the Dallas World Aquarium.

12. What does it take to become an animal caretaker at an aquarium or a zoo? What background do aquarists and zookeepers need to have? Working with animals can be amazing, but don't expect a job with regular hours. Animals need care on weekends and holidays. Sometimes, round the clock care is necessary.

13. In addition to time with the animals, you typically spend a lot of time cleaning the habitat, preparing diets, and providing enriching opportunities to the animals that allow them to display natural behaviors. You also spend a lot of time observing the animals and working closely with the veterinary team. You might also have a position that involves teaching guests about your animals.

14. For schooling, a college degree is usually required. A strong background in science and math is helpful. It also helps to have a SCUBA certification if you want to work in an aquarium.

15. Experience with animals is important as well. A lot of animal caretakers start as volunteers at their local zoo. Some have experience working at a shelter or horse barn before moving into an aquarium or zoo role.

16. Distribute an “A Few of the Animals at the Dallas World Aquarium” sheet to each student. Explain to the students that they will each select an animal and will create a care plan for their animal. This will help them learn about some of the day-to-day responsibilities of an animal caretaker.

17. Explain to the students that they will have a chance to observe their animal in-person on their upcoming field trip, and that they will then learn more about their selected animal by accessing the Dallas World Aquarium’s website (and any other animal information website you deem appropriate). All of this will help them when they return to school and create an animal care plan for their selected animal.

Directions:

1. After arriving at the Dallas World Aquarium, remind the students to enjoy watching all the animals but to pay close attention to their selected animal.
2. Move through the exhibits. Point out the selected animals and allow students to share their observations. Make mention of visible food dishes or animal caretakers while moving through the Aquarium.

Wrap-Up/
Discussion

1. Upon returning to school, distribute the “You’ve Been Hired as an Animal Caretaker...worksheet. Also return the “Caring for Animals” worksheet as an example. Allow the students time to access information about their animal online and formulate their care plan for their selected animal.
2. Collect both worksheets.

3. End the lesson with a discussion about the animals seen during the field trip. Ask the students to share their thoughts on the following questions:

- *What was your favorite animal at the Dallas World Aquarium and why?*
- *What was your favorite part of the field trip?*
- *Do you think it would be interesting to work with animals? Explain your answer.*
- *Was there anything that you learned that surprised you?*

Assessment:

Comprehension of concepts will be evaluated based on observations of the students during the field trip, participation in discussions and activities, and the completed student animal care plans following observations and Internet research on their selected animal.

Modifications:

- To limit the spread of germs (such as the COVID-19 virus), you could have the students wear masks while at the Dallas World Aquarium.
- For students with visual impairment, you could ask an assistant or chaperone to carry and present items for the student to touch that mimic the hair, skin, or feathers of animals like those found at the Dallas World Aquarium.
- For students with sensory sensitivities, you could reach out to the student or the student's parent/guardian for tips to help the child with sensory overwhelm while on the field trip.

Extension
Activity:

1. "Who Lives at the Dallas World Aquarium?" crossword puzzle

This fun crossword puzzle is a great way to generate excitement for the upcoming field trip. It includes many of the different animals the students will see at the Dallas World Aquarium. *Crossword puzzle and answer key included.*