



NATIONAL AQUARIUM IN BALTIMORE.

Conservation Education Department
Pier 3, 501 East Pratt Street
Baltimore, MD 21202

Fast Facts

- ❑ Play is an important aspect of learning new behaviors in animals.
- ❑ From the earliest civilizations to today, humans have been training animals.
- ❑ At the Aquarium, training helps make routine medical and animal care procedures easier and less stressful for the animal and its trainer.

Key Terms

Reinforcer - A reinforcer is anything that increases the frequency, intensity, or duration of a particular behavior.

Bridging stimulus

Also called a "bridge", it is a signal (either a whistle or a verbal stimulus such as "Good!") that the trainer communicates at the precise moment an animal does something correct.

Ask the Aquarium

*Fact Sheets from the
Conservation Education Department*

Dolphin Training

People are naturally curious about dolphins and their behavior. Like all animals, dolphins develop behaviors for three main purposes: 1) to find something to eat, 2) to avoid being eaten by predators, and 3) to reproduce.

Some animals are born with instinctive behaviors that help them survive. Other behaviors are learned. Play is an important aspect of learning new behaviors. For example, some animals learn hunting or defensive behaviors through play with siblings. Even in humans, play is an important aspect of learning.

Animal Training

From the earliest civilizations to today, humans have been training animals to do many things. Birds of prey have been trained to hunt, and horses to pull wagons. Dogs learn to guide and rescue people. You may have trained a pet at home or taken a dog to pet "school".

Animal training is important at the National Aquarium in Baltimore, too. We train the dolphins and other animals in our care for two important reasons. The first is to assist the trainers in the care and feeding of the animals. Dolphins, for example, are trained to lie still during their medical check-ups. Training helps make routine medical and animal care procedures easier and less stressful for the animal and its trainer.

The second reason we train animals is to showcase animal behavior in ways that foster a closer connec-



When reinforcement, like this hoop, is used the right way, dolphins can be trained to do many things.

tion between people and animals. In the Aquarium's dolphin show, *Play!*, the audience is drawn closer to the dolphins by interacting with them and learning about their natural behaviors.

Communicating with Dolphins

Trainers use reinforcers to tell the dolphins what to do. A reinforcer is anything that increases the frequency, intensity, or duration of a particular behavior. Dolphin reinforcers can be fish, toys, rubdowns or other touch, swimming with a trainer, or even learning a new behavior. When reinforcement is used the right way, dolphins can be trained to do many things.

How does an animal know it has behaved correctly? Trainers use what is called a "bridging stimulus" (bridge for short). A bridge is a signal (either a whistle or a verbal stimulus such as "Good!") that the trainer communicates at the precise moment an animal does something

correct. Each of these bridging stimuli tells the dolphin that it is correct, the behavior is over, and the dolphin can now receive some kind of reinforcement from the trainer.

Putting it All Together

Here's how we might train a dolphin to do a high jump behavior: First, we lower a target (a bright red ball) from the ceiling to the surface of the water and reinforce the dolphin for touching it. Then, we raise the target a few inches above the water and reinforce the dolphin for touching it again. We continue to raise and reinforce in small steps. After many trials, the dolphin learns to high jump - 18 feet above the surface of the water - and hit the target on cue!

Dolphin Training Activity

Description

Students role play a "trainer" and a "dolphin". Using the tools and steps outlined below, the "dolphin" will be trained to do simple behavior (to stand on one foot, for example).

Grades: 5 and up

Time: 30 minutes

Directions to Teacher

1. Introduce the students to the basic concepts of a reinforcer and a bridge.

2. Select one student to be the "trainer" and another to be the "dolphin".

3. Determine an appropriate reinforcer (applause, verbal encouragement, etc.)

4. Ask the "dolphin" to leave the room.

5. With the remaining students, discuss a simple behavior to train the "dolphin" to do (for example, stand on one foot, turn around, or raise a hand). Keep the behavior

simple.

6. Bring the "dolphin" back into the room. Ask him/her to behave normally and keep moving (walk around, move arms, etc.).

7. The "trainer" should reinforce the "dolphin" anytime s/he moves or acts in the direction of the desired behavior. If the desired behavior is to train the "dolphin" to a flip a wall switch, for example, the trainer would start by reinforcing the "dolphin" each time s/he faces the wall where the light switch is located.

8. After each reinforcement is given, the "dolphin" must go back to where s/he entered the room and start over. This helps curb the tendency of some "dolphins" to freeze after the reinforcement is received. After a few reinforcements this step can be skipped.

9. The "trainer" needs to be consistent and ignore behaviors that are incorrect.

10. The audience cannot talk or give instructions.

11. The activity ends when the "dolphin" has done the correct behavior.

More Training Suggestions

◆ Don't try to train for two or more complex behaviors at the same time. Keep it simple.

◆ Stay ahead of your "dolphin". Plan out the sequence of behaviors you want to reinforce.

◆ At any point in the activity, the "dolphin" may suddenly realize what it's being asked to do, and go and do it. If so, it is common to reinforce the animal's behavior with what is called a "jackpot" reinforcer. A larger than normal quantity of fish, or lots of special attention, for example.

Dolphins at the National Aquarium in Baltimore

The National Aquarium in Baltimore has permits allowing us to have dolphins. These permits are issued by the federal government and require that certain standards regarding animal care and public education are met.

Dolphins, and all marine mammals, are protected by the Marine Mammal Protection Act. This law makes it illegal to feed, touch, harass, or kill marine mammals. It also makes it illegal to buy, sell, import, or export products made from marine mammals.

Humans pose the biggest threat to dolphins. Our trash, especially plastics, ends up in the ocean where marine mammals often ingest it or become entangled in it. Approximately 90% of all marine mammal strandings are due to humans.

By following simple suggestions, people could make the oceans much safer for dolphins.

- ◆ Help by throwing trash away properly, and recycling whenever possible.
- ◆ Participating in local beach clean-ups.
- ◆ Support sustainable seafood practices like "dolphin safe" tuna.