Train Your Friends

Objective

Students will learn animal training techniques and learn the benefits of positive reinforcement.

Materials (optional)

❑ whistle
❑ object to use as a target (ruler, pointer, etc.)

Background

Behavior is anything an animal does involving action and/or a response to a stimulus. Blinking, eating, walking, flying, vocalizing, and huddling are all examples of behaviors. Animals behave in certain ways for four basic reasons: to find food and water, to interact in social groups, to avoid predators, and to reproduce. While some animal behaviors are inborn, many are learned from experience. Scientists define learning as a relatively permanent change in behavior as the result of experience. For the most part, learning occurs gradually and in steps. An animal's genetic makeup and body structure determine what kinds of behavior are possible for it to learn. An animal can learn to do only what it is physically capable of doing. A dolphin cannot learn to ride a bicycle because it has no legs to work the pedals and no fingers to grasp the handle bars.

SeaWorld's animal training philosophy is based on three important principles:

- Create an environment that is fun, interesting, and stimulating for the animals
- Reinforce desirable behavior with a variety of rewards and do not draw attention to unwanted behavior.
- Build strong and rewarding relationships with the animals based on a history of positive and stimulating interaction.

The most critical aspect in animal training is creating a positive environment. In doing so, animals are motivated to participate. SeaWorld animal trainers have learned that a variety of interactive sessions contributes to animal enrichment and well-being. Interactive sessions fall into six categories: learning, exercise, play, relationship building, husbandry, and shows.

Through the years, millions of people have visited zoological parks such as SeaWorld to see animals they do not have the opportunity to observe in the wild. Watching and learning directly from animals increases public awareness and appreciation of wildlife. Animal training also benefits the following:

Husbandry — Routine medical examinations are essential to animals' health. Animals are trained to present various parts of their bodies for examination, measurements, and blood sampling. They are trained to get on a scale and to hold still and remain calm throughout examinations, including x-rays and sonograms.

Research — By training animals to respond to various stimuli in their environment, researchers gather scientific information that would not be otherwise available. The information collected at SeaWorld has contributed to the body of knowledge for many animals.

Physical and mental stimulation — SeaWorld's complex and interactive animal habitats and training sessions provide animals with physical and mental stimulation. The various training sessions provide a variety of enriching challenges.

Background (continued)

SeaWorld animal training is based on three building blocks — building a positive relationship, positive reinforcement, and target recognition.

Relationship building — The key to successful training is building a strong relationship between trainer and animal. This relationship is based on a history of positive and stimulating interaction. By creating a motivating environment and reinforcing desirable behavior, trainers have great success in building strong relationships with their animals.
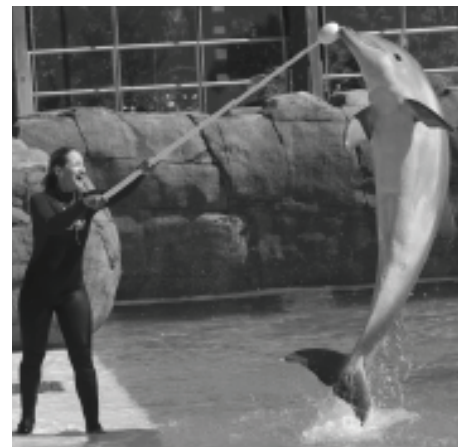
Positive reinforcement — When an animal performs a behavior that produces a positive result, the animal is likely to repeat that behavior. The positive result is called a positive reinforcer. Humans learn by the same principles. If student behavior is reinforced by attention and praise, students are likely to repeat the behavior. Training at SeaWorld is based on a variety of positive reinforcers including food, rub-downs, ice cubes, toys, and one-on-one time with a trainer. When an animal performs an unwanted behavior, the trainer uses a LRS — least reinforcing scenario. The trainer does not reinforce the animal for the unwanted behavior and after a brief period of calmness, the trainer provides the animal with another opportunity for reward.

When behaviors are done correctly, they must be quickly reinforced. Often, behaviors occur far away from the trainers, so they cannot immediately reinforce the animal. To communicate to the animal they have performed a correct behavior and they will be reinforced, a trainer uses a bridge signal — to bridge the gap between behavior and reward. The bridge signal may be a whistle (for whales and dolphins) or the word "okay" for sea lions and otters.

Shaping, targeting, and signals — Most behaviors cannot be learned all at once. Complex behaviors are shaped through small steps. For example, when children learn how to ride a bicycle, most begin on a tricycle, then a bicycle with training wheels, and then a larger bicycle. To help shape behaviors, trainers teach animals to target. Trainers use their hands as a target: animals are trained to come to the trainer's hand, touch it, and await the next signal. When a behavior takes place away from the trainer, a target pole — a long pole with a white float on the end — is used to direct the animal. Each time the animal touches the target, they are reinforced. By repositioning a target, the animal can be lead through a series of steps to build a complex behavior.

Animals are trained to associate a signal with each behavior they learn. The signal — which may be visual, auditory, or tactile — is the stimulus for the animal to do a particular behavior. The more behaviors animals learn, the more they must learn to make distinctions to determine which behavior the trainer expects.

Action

1. Introduce training principles and techniques to students. To demonstrate these techniques choose one student (the "performer") to be "trained." Have that student stand outside the classroom.

2. With the rest of your class, ask them to choose a behavior they would like to teach their classmate. Examples include: jumping up-and-down, shaking his/her head, or spinning in a circle.

3. Invite your performer back inside. Ask him/her what kind of reinforcement they would like (students clapping, small candy, etc.).

4. Using your hand (or a yard stick) as a target, guide the performer to the first step of the behavior. Each time he/she touches the target, "bridge" him/her (blow the whistle or say the word "okay"). Then, provide them with the positive reinforcement of their choice.

5. For example, if you are trying to get the performer to shake his/her head, move the target on the left side of his/her head. When he/she touches the target, bridge and reinforce. Move the target to the right side, then bridge and reinforce when they touch the target again. You can speed up the movement of the target until the performer achieves the desired behaviors. Don't forget to LRS as needed.

6. Hopefully your performer will be able to follow the target and catch on to the behavior. Once the performer has achieved the desired behavior, try it again using small hand signals instead of a large target.

7. To see how much your students learned, pair them up to train each other. You can time them, assign specific behaviors, or record their successes on the board.

Discussion Questions

What are some of the challenges to animal training? How do trainers overcome these challenges?

Why is a LRS successful? How else can you use this technique in your daily life?

What would happen if the same type of positive reinforcer was used over and over again?

Challenge students to train their family pet. Ask them to document their successes (with photos or videos) and present to the class.