



# OKLAHOMA 4-H

## HOW PETS LEARN



### HOW PETS LEARN

Training animals is an exciting and fun activity that both you and your pet can enjoy. It provides both of you exercise, a great bonding experience and gives your pet some much needed mental stimulation.

There are many methods and tools for training and none of them will work effectively for all dogs and all situations. The training approach you take with your pet may very well determine the type of relationship that you and your pet will share.

Understanding how your pets learn and what motivates them is the first step towards knowing the best way to train them. Your knowledge will help you choose the best tools and methods for each pet and behavior that you are trying to teach.

This sheet will provide insight into some of the science of how animals learn. Although most of the examples in this handout refer to dogs, these learning principles apply to most animals, from pets such as rats and rabbits to zoo animals such as elephants and gorillas.

### THE LAW OF EFFECT

In the early 1900's psychologist, Edward Thorndike, set up experiments to observe animal behavior. As a result of his observations he proposed the Law of Effect;

*If a consequence is pleasant, the preceding behavior becomes more likely. If a consequence is unpleasant, the preceding behavior becomes less likely.*

Here are two examples of how consequences affect the likelihood of a child repeating a behavior.

A child eating a snow cone outside on a hot day.

Behavior = eating a snow cone

Consequence = cool and tastes good

Result = Increased likelihood of repeating the behavior

A child gets grounded for not doing their homework.

Behavior = not doing homework

Consequence = getting grounded

Result = less likely to repeat the behavior

### PREPARED BY

Stephen Beck,  
Assistant Extension Specialist, 4-H  
Oklahoma State University

### REVIEWED BY

Cathy Allen  
Assistant Extension Specialist, 4-H  
Oklahoma State University

Alissa Cable  
Owner/Trainer  
Sit, Stay, Go Dog School  
Stillwater, OK

## OPERANT CONDITIONING

The law of effect provided the framework for behavioral psychologist, B.F. Skinner, to develop principles of learning known as Operant Conditioning. Operant Conditioning is when an animal “operates” on his environment by his behavior. In Operant Conditioning there are four possible scenarios, two that will increase (reinforce) a behavior and two that will decrease (punish) a behavior.

|  |  |
|--|--|
| <p><b>POSITIVE REINFORCEMENT</b></p> <p>Positive Reinforcement is when you give something good, to increase a desirable behavior.</p> <ul style="list-style-type: none"><li>• You get a paycheck for delivering newspapers.</li><li>• You give your dog a treat for sitting when you ask him to sit.</li></ul> | <p><b>NEGATIVE REINFORCEMENT</b></p> <p>Negative reinforcement is removing something bad to increase a desirable behavior.</p> <ul style="list-style-type: none"><li>• Your parents require that you do your homework before going outside to play.</li><li>• You go to the dog park and your dog keeps pulling on the leash, you make him sit before removing the leash.</li></ul>  |
| <p><b>POSITIVE PUNISHMENT *</b></p> <p>Positive punishment involves giving a bad consequence to decrease a undesirable behavior.</p> <ul style="list-style-type: none"><li>• You mom scolds your for eating cookies before supper.</li><li>• Your dog gets in the trash and you yell, “no!”</li></ul>          | <p><b>NEGATIVE PUNISHMENT</b></p> <p>Negative punishment involves removing a good consequence to decrease an undesirable behavior.</p> <ul style="list-style-type: none"><li>• You get grounded from watching TV because you were picking on your little sister.</li><li>• You pull away the treat you were about to give your dog because he jumped up to snatch it away.</li></ul> |

\*Providing corrections (Positive Punishment) can have a negative impact on the relationship you have with your dog. Corrections often lead to dogs becoming fearful and possibly aggressive. If corrections don't take place within a couple of seconds of the behavior, the dog will not be able to associate his behavior with the consequence. Unfortunately, rather than associating getting in the trash with a negative consequence he may decide you are unpredictable and should be feared.

### GNAW THIS OVER

Think of a couple of behaviors that you do that result in good consequences.

| BEHAVIOR                | CONSEQUENCE                               |
|-------------------------|---|
| <i>i.e. Good Grades</i> | <i>Parents take you out for ice-cream</i> |
| _____                   | _____                                     |
| _____                   | _____                                     |

Would you feel any different about doing these behaviors if you never received any good consequences?

Now list some behaviors you would like your dog to do more often and some rewards you can give him to increase that behavior.

| BEHAVIOR                     | CONSEQUENCE  |
|------------------------------|--|
| <i>i.e. Sitting Politely</i> | <i>Gentle petting and telling him he is a good dog</i> |
| _____                        | _____  |
| _____                        | _____  |

## OPERANT CONDITIONING AT WORK

Good animal trainers understand how important it is to recognize the relationships between consequences and behaviors. Use your knowledge of pet training to label each example PR for **positive reinforcement**, NR for **negative reinforcement**, PP for **positive punishment** or NP for **negative punishment**.

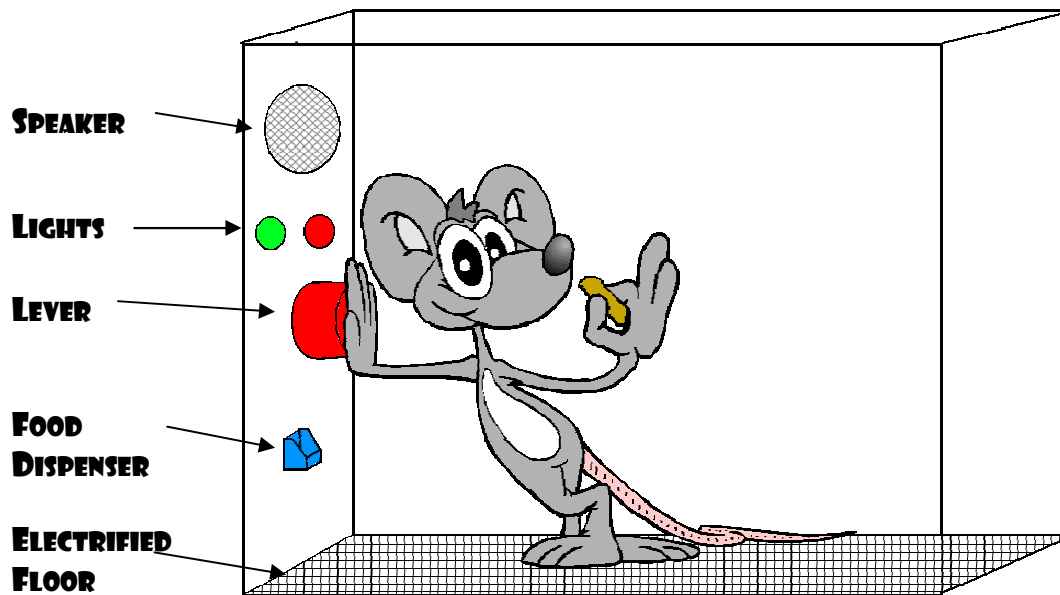
|  |   |
|--|---|
| <p><b>POSITIVE</b><br/>(ADD SOMETHING GOOD)<br/><b>REINFORCEMENT</b><br/>(INCREASE BEHAVIOR)</p> | <p><b>NEGATIVE</b><br/>(TAKE SOMETHING BAD AWAY)<br/><b>REINFORCEMENT</b><br/>(INCREASE BEHAVIOR)</p> |
| <p><b>POSITIVE</b><br/>(ADD SOMETHING BAD)<br/><b>PUNISHMENT</b><br/>(DECREASE BEHAVIOR)</p>     | <p><b>NEGATIVE</b><br/>(TAKE SOMETHING GOOD AWAY)<br/><b>PUNISHMENT</b><br/>(DECREASE BEHAVIOR)</p>   |

1. NP A child gets in a fight at school so he has to spend the next 5 recess periods in detention.
2. \_\_\_\_\_ Your parents will not let you leave your room until you complete your homework.
3. \_\_\_\_\_ A dog corners a skunk and gets sprayed.
4. \_\_\_\_\_ You helped your mom clean up the kitchen and she thanked you with a big hug.
5. \_\_\_\_\_ You came home after curfew, so your dad took away the car keys.
6. \_\_\_\_\_ You ask your dog to sit and he does so you throw the ball for him.
7. \_\_\_\_\_ Your dog sees you getting the leash and starts barking excitedly, so you put the leash away until he stops barking.
8. \_\_\_\_\_ Your dog jumps up on you and you stick out your knee to get him off.
9. \_\_\_\_\_ You give your dog a treat for coming to you when called.



## THE SKINNER BOX

In order to test his theories about operant conditioning, B.F. Skinner developed a type of lab equipment that is widely referred to as a Skinner box. In a typical Skinner box there will be some type of behavior that the animal will perform such as pushing a lever, in response to a certain cue such as a sound or a light. When the behavior is done the animal will receive a positive consequence such as a food treat or in other cases the animal might receive a negative consequence such as an electric shock.



Skinner boxes are still used by scientist today and provide lots of valuable information that help in understanding behavior, including your dog's behavior. One such experiment has to do with the rate of reinforcement, how often an animal should be rewarded for doing a correct behavior. In this experiment, all the rats have learned that pushing the button provides a food treat. After learning this behavior, some of the rats continue to receive a reward every time they push the button while the other rats are rewarded some of the time but not every time they push the button. Later, the treats are completely removed. The rats that are used to being continually rewarded became easily frustrated and quickly gave up pushing the button, however, the rats that occasionally received a reward were not as easily frustrated and continued to push the button for a long time in hopes of receiving a reward.

This is important to dog owners because if your dog gets a treat every time he sits, he may become easily frustrated and quit offering sits whenever treats are not available, such as in the show ring. You can avoid this frustration by only rewarding your dog some of the time. This way your dog will learn that sometimes it takes a little extra effort to receive a reward.

Keep in mind that you should only decrease the rewards after your pet has learned the behavior. While learning a new behavior your pet should be reinforced often!

### ANSWERS TO OPERANT CONDITIONING AT WORK

1. NP—To decrease fighting, recess is taken away
2. NR—To increase doing homework right away, the bad consequence of staying in your room is removed
3. PP—To decrease being cornered, the skunk gave a stinky spray
4. PR—By getting a hug, you are more likely to help again
5. NP—To decrease broken curfews, car keys were taken away
6. PR—To increase sit on command, a game of fetch was given
7. NP—To decrease barking excitedly, going for a walk was taken away
8. PP—To decrease jumping up, a painful knee was given (ouch!)
9. PR—To increase coming when called, a treat was given