

POSITIVE REINFORCEMENT TECHNIQUES TO PREVENT UNWANTED BEHAVIORS

Finding the Right Reward

While food is most commonly used as a reward for training, 63% of cats actually prefer a reward other than food, highlighting the need to consider a broader array of rewards when working with cats. In a study of cat preferences:

- 50% preferred a form of human social interaction (e.g., being petted/played with in a cat-preferred manner).
- 37% preferred food.
- 11% preferred toys.
- 2% preferred a scent.

Importance of Tailored Rewards

The best reward to use in training is one that is appealing to the specific cat.

- Since every cat has unique preferences, a caregiver should identify what the cat prefers instead of deciding for their cat, providing the cat with some choice and control. This can be done with a simple preference assessment at the beginning of the training session:
 - Pick a few possible rewards
 - Present them to the cat
 - Observe which item or items the cat interacts with the most
- If a cat is presented with a small amount of lickable tube treat, a feather toy, or petting over the facial glands and the cat spends the most time pawing the toy, this indicates the toy may be the most appealing item for training that day.
- Just like people, cats' preferences can change based on their experiences. The same cat may prefer treats on days when they have already had enough social play.
- For more ideas of rewards, see the Behavior Modification Recommendations for Multiple-cat Households handout from the 2024 AAFP *Intercat Tension Guidelines: Recognition, Prevention, and Management*.

For a reward to serve as a reinforcer (in operant conditioning via positive reinforcement), the reward must strengthen the behavior you are rewarding. It is important to see how the delivery of the reward impacts the cat's behavior. If the behavior does not change in response to the reward, then try changing to another highly preferred reward and see if it reinforces (increases the occurrence of) the behavior.

Timing is Everything

Another consideration is the timing of the reward.

- The reward needs to be delivered immediately after the behavior being reinforced. For example, to reinforce a cat for sitting, the cat should be given the reward immediately upon sitting.
- At times, especially for some advanced behaviors, it may be difficult to reward the cat immediately after they have engaged in the behavior. In these instances, the use of a training tool, such as a conditioned reinforcer (see below), may be appropriate.
- Cats should be trained individually.

Cats learn at different rates—one cat may learn the desired behavior quickly, while another may need more time. Some factors to consider are:

- Do not train if the cat demonstrates protective behaviors (e.g., hiding, crouching, growling, hissing).
- Do not conduct training sessions for ill or painful cats.
- Ensure the reward is highly desirable for the individual, and the timing is right.
- Avoid distractions during training.

In all species, certain individuals are slower learners. Be patient with these cats as long as they are healthy and calm, as they still benefit from learning.

TRAINING TOOLS

Conditional Reinforcers

Conditioned reinforcers—like a sound or word (e.g., a click from a training clicker or pen)—are common in feline training and should only be used during the training session, especially for behaviors that are difficult to reward immediately. For example, when training a cat to give a paw or high-five, it might be hard to reward them right away because you need time to grab a treat or reward. In these cases, a conditioned reinforcer—like a click sound—can be used to mark the exact moment the cat does the behavior, helping connect the action to the reward even if there is a short delay.

How Conditioned Reinforcers Work

- A sound (e.g., a clicker, other noise, or word) or hand signal is classically conditioned to have meaning to the cat by pairing the sound with a reward that immediately follows.
- Over time, an association is built between the neutral stimulus (e.g., clicking sound) and the delivery of a reward.
- Once conditioned, the cat will expect to receive a reward after the newly conditioned stimulus (e.g., clicking sound).
- This then allows the trainer to use the conditioned reinforcer to guide the cat. When a correct behavior is displayed, it is marked with the reinforcer (e.g., clicking sound) and followed up with a reward as soon as possible.

Challenges with Clickers

- Although clickers can be useful training tools that have been successfully used in kitten training and socialization classes, clickers might not be the best training tool for every cat or behavior. Research has found that some cats take longer to learn a task when taught with a clicker.
- The “click” sound can be too loud and aversive to some cats.
 - To soften the sound, the clicker could be placed in the person’s pocket or wrapped in a cloth
 - Social praise, such as saying “Good Kitty!” can also be used in the same way to “mark” a desired behavior and may be less aversive
 - Consider the use of a target stick as a conditioned reinforcer to mark the desired behavior

- For deaf cats and cats that are highly reactive to sounds, use a hand signal to train the cat.
- If clicker training is not possible, caregivers can focus on primary reinforcement of the behavior. In primary reinforcement, the reward is given directly to the cat as soon as possible after the behavior has been displayed, without the use of a conditioned reinforcer between the behavior and reward. Primary reinforcement can be used with other helpful training tools, such as shaping, luring, and targeting, to help teach behaviors. More about each of these is explained below.

Shaping

Shaping is the practice of teaching behaviors in small, incremental steps, using operant conditioning via positive reinforcement. Shaping allows a caregiver to slowly train a behavior instead of expecting a cat to pick up on a complex behavior immediately.

Case Example: How Shaping Works

Shaping a behavior means teaching the behavior step-by-step. Each small step builds on the last, and the cat gets a reward for completing each one. As the cat learns, the steps get a little harder. For example, to teach a cat to use a cat door, the steps might look like this below. Note—a cat might skip a step, but should be rewarded each time to reinforce that step as part of the behavior being trained.

The steps to reinforce with a reward would be:

1. Any time the cat looks at the cat door.
2. Any movement toward the cat door.
3. The cat standing near the cat door.
4. The cat putting any part of their body on the cat door.
5. The cat putting one paw on the cat door.
6. The cat putting one paw through the cat door.
7. The cat putting the head through the cat door.
8. The cat putting the front of their body through the cat door.
9. The cat walking fully through the cat door.

Using the plan above, we see how a complex behavior can be broken down into manageable steps that slowly build on the behavior. Shaping is an extremely useful tool for training cats, but even more success can be achieved when pairing shaping with other training tools.

Luring

Luring is the practice of using a reward to directly guide a cat's behavior. Luring is also an application of operant conditioning via positive reinforcement.

How Luring Works

- Returning to the cat-door shaping plan (see Case Example: How Shaping Works box on the prior page), a bit of food can be placed in front of the cat and used to slowly guide them toward the front of the door, effectively skipping to Step Three.
- If the cat prefers playing, use their toy to guide them to the front of the cat door, and then lure them through the door with the toy.
- After the cat has engaged in the behavior, reinforce the cat with their preferred reward, then try to repeat the behavior.

Challenges with Luring

Because the desired behavior is initially induced by the caregiver, and not independently and voluntarily initiated by the cat—which is a fundamental first step to learn via operant conditioning—luring may be less effective than shaping and capturing (see page 21) for teaching complex behavior.

Targeting

Targeting is the practice of teaching a cat to approach and touch an object. Options for target sticks include a commercial target stick that extends (best for cats that nip hands) or a household item such as a chopstick or a pen with the cap on as their target stick (see the Behavior Modification Recommendations for Multiple-cat Households handout).

How Targeting Works

To teach targeting, the following shaping plan can be utilized:

1. Place the target stick directly in front of the cat's nose and reward the cat for touching the stick with their nose.
2. Place the target stick slightly further from the cat's nose and reward the cat for touching the stick with their nose.
3. Place the target stick several inches from the cat's nose and reward the cat for approaching and touching the stick with their nose.
4. Place the target stick a foot away from the cat's nose and reward the cat for approaching and touching the stick with their nose.
5. Continue to increase the distance between the cat and the target stick.

By using the steps above, caregivers can train their cat to approach and touch the target stick. Eventually, the cat will learn that approaching and touching the stick leads to something good (the reward). The stick can then be used for training to guide the cat's behavior.

Targeting and Luring Together

To further facilitate learning, a lure could also be used to teach targeting (the cat approaching and touching an object). A preferred soft food or lickable tube treat could be placed on the end of the target stick, which will encourage the cat to sniff the stick and lick it to be immediately rewarded for the targeting behavior.

Capturing

Capturing involves the practice of reinforcing a behavior that your cat already performs.

Natural Behavior Capture

- Cats naturally sit down. This “sit” behavior can be captured and reinforced by rewarding the cat when they sit on their own.
- When the caregiver sees the cat sit, the cat can be rewarded with social praise, such as saying, “Good job!”
- Caregivers can also have treats or a toy handy, so they are prepared to reward the cat with their preferred treat following the sit behavior.



Image courtesy of Dr. Ilona Rodan

Identifying Opportunities for Behavior Capture

- Caregivers can watch their cat's daily activities and find times when their cat often does the behavior they want to capture (e.g., the cat sitting while waiting for their meal).
- Capturing a behavior induces very effective learning via operant conditioning, as the desired behavior to reinforce is independently and voluntarily offered by the cat.

Putting Behaviors on Cue

Once you have taught a behavior (such as the example of sitting described above), that behavior can be put on a cue so that the caregiver can ask the cat to engage in that behavior when desired by the caregiver.

Integrating Cues

- A verbal word (such as “sit”) or a visual cue (such as a hand signal) can be integrated so it can be used to ask the cat to sit in the future.
- The cue should be introduced after the cat reliably engages in the behavior (e.g., sitting); then, the cue can be presented at the same time as the behavior (e.g., by saying the word “sit” at the same time the cat sits). Then, start to introduce the cue immediately before the cat engages in the behavior and gradually increase the time so that the cue precedes the behavior. For example:
 1. Watch for the cat to sit. When the cat sits down fully, say the cue word “Sit” and provide a reward. Repeat this step several times.
 2. Watch for the cat to sit. Just as you see the cat beginning to sit (but before the cat’s behind is on the ground), say the cue word “Sit” and provide a reward. Repeat this step several times.
 3. Now say “Sit.” The cat should sit in response to the cue.

Cooperative Care

- Cooperative care is training a cat to willingly cooperate in their own care, both at home and in the veterinary practice.
- As with all positive reinforcement training, it should occur in healthy and not painful cats and when they do not demonstrate fear-anxiety or other protective emotions. Cooperative care requires a team approach, with veterinary professionals educating caregivers how to train their cat to willingly cooperate with their care in a safe place in the home environment.
- Common cooperative skills include training targeting and stationing, asking the cat to move into a certain position, or teaching the cat to offer their tail or limb voluntarily.
- Cooperative care replaces physical restraint, minimizing fear-anxiety and other feline protective behaviors, as well as subsequent human injury. See *2022 AAFP/ISFM Cat Friendly Veterinary Interaction Guidelines: Approach and Handling Techniques*.

Implementing Training Tools in Cooperative Care

- Targeting is a great skill to start with because it can be used to “ask” the cat to do a behavior, rather than force them to do the behavior.
- For example, a caregiver can use the target stick to guide the cat into the carrier and then reinforce the cat once they have stepped into the carrier. This again gives the cat more agency and control over their own behavior and environment.
- The table below highlights a few skills that could be trained, along with a brief explanation of how to train each skill.

TABLE: COOPERATIVE CARE TRAINING TABLE. EACH SKILL CAN BE ADAPTED TO THE INDIVIDUAL CAT'S PREFERENCE AND COMFORT LEVEL

TRAINING TOOL	COOPERATIVE SKILL	HOW TO TRAIN
Targeting	Guide the cat to location (e.g., into a cat carrier or onto a scale) or ask cat to change body position (e.g., stand up).	Shape behavior by reinforcing approaching and touching of the target stick with the cat's preferred reward. Start with a target stick directly in front of the cat and slowly increase the distance the cat needs to move to touch the target stick.
Lure	Guide cat to the location (e.g., into a cat carrier or onto a scale) or ask cat to change body position (e.g., stand up).	Use an appetitive reward, such as a piece of food or a toy, to guide the cat's behavior.
Capturing and Shaping	Place one leg outstretched (to cooperate in future venipuncture or vaccination procedures).	Watch for times when the cat outstretches their leg, such as before or after a nap, when a cat is likely to stretch. When the cat's leg is outstretched, reward the cat. Do this several times. Then, slowly increase the amount of time the cat must keep their leg outstretched before they can receive the reward.
Capturing and Shaping	Open mouth (for oral examination).	Watch the cat for any time their mouth may be open, such as when playing with a toy. Reinforce (reward) the mouth being open and then slowly increase the criteria so that the cat's mouth needs to be open for longer periods of time before the cat gets the reward.

Carrier Training

- Carrier training a cat is one of the most beneficial steps a caregiver can take, as it makes ongoing trips to the veterinarian smoother and reduces fear-anxiety for the cat while lowering stress for the caregiver.
- For veterinary professionals, a carrier-trained cat arrives with fewer stressors, creating a calmer environment and a more pleasant visit for everyone involved. Tips for caregivers can be found in *Getting Your Cat to the Veterinarian* on catfriendly.com.
- All of the Training Tools listed in this section (e.g., capturing, luring, etc.) can be used to associate positive associations with the carrier, train a cat to enter their carrier, and accept it as a safe place.
- More information can be found in the *2022 AAFP/ISFM Cat Friendly Veterinary Interaction Guidelines: Approach and Handling Techniques* and the *2022 ISFM/AAFP Cat Friendly Veterinary Environment Guidelines*.



Images courtesy of Dr. Katrina Breitreiter

Training in Multi-cat Households

- Joint training sessions are not recommended for cats with a history of tension, as they could increase conflict.
 - In these cases, it is best to separate the cats during training. If two people are available, each person can work with one cat at the same time
 - If only one person is available, provide the other cat with a food puzzle or enrichment activity in another room to keep them occupied. Once the first training session is finished, switch the cats and allow the first cat to enjoy the enrichment in a separate room while the other cat takes their turn for training
 - If the cats have not been separated and another cat walks up and sees a cat being rewarded with a treat, ask the cat who approached to perform a simple behavior they already know, such as to sit. If the cat is not yet trained to do a behavior, use a treat to lure them to a specific spot and then reward them. This ensures the new cat earns a reward for doing a behavior, either sitting or following. Afterward, shift your focus back to the other cat, ask for an easy behavior, reward them, and then alternate between the two. Keep in mind separation is best for cats that are not bonded
 - In certain situations, separation may not be possible. An example of this might be if you are training a cat to use a scratching post, and they wake up from a nap and immediately go over to scratch the post (as there is not time to separate the cats). Here, you could praise them by saying, "Good job, Fluffy!" If another cat runs over after hearing the praise (which is common), ask the new cat to do a simple behavior, like "sit," and then reward them for that (see above)
- Joint training sessions work best for cats who are bonded or generally get along well.
 - In these cases, consider each cat's individual skills and tailor your training accordingly. If one cat reliably sits on cue, ask for that behavior, and if the other cat is good at following a target, use that instead. Focus on each cat's strengths and keep behaviors simple at first. Work up to more complex behaviors as the cats get more comfortable training together
 - Alternate between cats, asking them each to do their behavior (which might be different). Often, this timing works out well and by the time one cat finishes their turn and is rewarded, the other cat has finished eating their treat and is ready to show their next behavior
 - Try to keep cats spaced, with about three feet or so between them. If needed, the treat can be used to move one cat farther from the other cat

- If one cat starts to show signs of frustration, wrap up the training session but aim to finish on a good note. You can again ask them to do a simple behavior, praise the cats for a good job, and then end the session by rewarding each of them with their treat/meal or a bout of play

Reinforcement to Improve Welfare

- Cooperative care allows us to reinforce behaviors useful for working with our cats, rather than against our cats.
- There are other behaviors that are important to teach which provide cats with the opportunity to express natural behavior. This can increase feline welfare and reduce unwanted behaviors.
 - For example, many cats would benefit from safe outdoor experiences (e.g., outdoor catio, cat enclosure, walking on a harness and leash), which can enhance a cat's wellbeing, allowing them to engage in natural behaviors, such as sniffing, scent marking, and exploration
 - This can be done through the provision of an outdoor catio or cat enclosure. The cat can be trained to enter and exit through a cat door, as described above
 - A cat can also be trained to walk on a harness and leash
- Other welfare behaviors, such as scratching, can be reinforced the same way.
 - When a cat is seen using their scratching post, the caregiver can praise the cat and reinforce with a treat or bout of play
 - The more this is done, the more the cat will scratch the post, rather than the person's favorite piece of furniture
- Training that allows cats to solve problems enhances their welfare and reduces unwanted behavioral issues.

KEY TAKEAWAYS

- **Finding the Right Reward:** Food isn't always the best reward; many cats prefer human social interaction or toys.
- **Importance of Tailored Rewards:** Identify what a specific cat prefers by presenting options and observing their interactions. A cat's preferences can also change daily.
- **Timing is Everything:** Deliver the reward immediately after the behavior you are reinforcing.
- **Training Tools:** Tools like a conditioned reinforcer (e.g., clicker or verbal praise) can be used to "mark" a behavior when an immediate reward isn't possible.
- **Shaping:** Teach a complex behavior in small, incremental steps, reinforcing each step with a reward.
- **Luring:** Use a reward to guide a cat's behavior, but know that it may be less effective for complex behaviors.
- **Targeting:** Teach a cat to approach and touch an object, which can then be used to guide their behavior.
- **Capturing:** Reinforce a behavior that a cat already performs on their own, such as sitting.
- **Cooperative Care:** Train a cat to willingly cooperate in their own care, which can replace physical restraint and minimize fear and stress.

