

Enrichment Suggestions for Captive-born, Hand-reared Cheetah Held in Captivity

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Enrichment

Animals in captivity have a lot of time on their hands. Whereas wild animals would fill their time with activities such as hunting, searching for water or shelter, protecting their territory or searching for a mate, captive animals very often are provided all of these. This could potentially create problems such as boredom, frustration, stereotypic behaviors and stress. Undesirable behaviours include self-injurious actions like excessive grooming; abnormal behaviours such as regurgitation and reingestion; aggressive behaviours; and stereotypic behaviours. Behaviour is an important indication of welfare and enrichment enhances welfare of animals in captivity.

Enrichment becomes a valuable and necessary practice by creating activities or providing stimulation that maximizes their quality of life and leads to inquisitive behavior. By enriching the animal's environment, you empower the animal to have control over its environment and you give the animal a choice. Ignoring something is still a choice.

Apart from the fact that enrichment provides methods of passing time, the added physical and mental stimulation might also cause better reproductive success and improve visitor's experiences since the image of healthy and well-adjusted animals are promoted.

Different forms of enrichment used for captive animals today include:

- Enclosure Design
- Feeding or foraging
- Visual and Auditory
- Olfactory
- Novel Objects and Toys
- Exercise
- Social Interaction/Tactile
- Behavioural Conditioning

Enrichment should be considered part of the daily husbandry routine at all responsible animal care facilities. An efficient enrichment programme can be more important than the size of the enclosures the animals are kept in. Environmental enrichment is not a luxury but a management tool.

When developing an enrichment programme at a captive facility, the habits, behaviours and nature of the species, and the personality of the specific individual need to be considered.

Enrichment suggestions for the cheetah include the following:

Enclosure Design

Enclosures should be designed in order to address the needs for space, shade, shelter, privacy, stimulation, elevation and where appropriate, public viewing.

When designing enclosure layouts the following should be incorporated:

❑ Vantage Points

These can be supplied in the form of platforms, huts, rocks and earth mounds.

When something of interest is seen or heard, cheetahs will often jump on vantage points such as platforms to investigate and get a better look at the object of interest. Many of the cats use elevated areas as spots where they defecate, urinate and rest, thus it is essential to clean these surfaces on a regular basis. Since earth mounds are difficult to clean they could harbor diseases. To stimulate interest, mounds can be moved or just changed slightly by adding new gravel or rocks to the mound.



When planning to build a platform the following should be considered:

1. Materials used

Non-toxic, safe materials should be used.

2. Placement

The platform should be placed in such a position as not to allow any jumping or climbing over fences or other structures. The platforms are all erected on a flat, open section of grass, well away from any fences, huts or any other structure.

3. Construction

There should be no protruding or sharp objects. There should be no objects that could cut, injure or get the animal entangled.

☐ Shade

Structures providing shade are an essential element in every enclosure. Structures can be made of shade cloth or thatch. The cats use these areas to rest or sleep during the heat of the day.



☐ Shelter

Waterproof huts not only serve as sleeping quarters, but also provide a lookout post to the animals. Straw provides warmth during winter months but should be changed on a regular basis since it often become soaked with urine.



❑ Water

Water should be provided in solid, non-toxic containers. Containers should be placed in an easily accessible and shaded area. All water containers should be disinfected on a regular basis and the same container preferably used for the same cat.

❑ Logs

Big logs can be packed at angles to one another. Alternatively flat pieces of logs can be stacked loosely on top of and against one another. Logs provide an often-visited area to all cats. They are used as a play area, a vantage point and also a place to sniff and scent-mark through urine and faeces.



❑ Privacy

Concealed, private areas should be provided in all enclosures. Rocks, areas of shade cloth, palm bushes, reeds or simple bamboo walls can be used to provide these. Cheetahs will retreat into these areas where public viewing is often impossible or very difficult. Grass should be kept short to eliminate the risk of fire and parasites.



❑ Manipulating Enclosure Layout

Gates separating adjacent enclosures can be opened to provide more space and a change in environment. Apart from trying to create interesting living environments, stimulation can also be provided by rotating cats among the different enclosures. Animals can be moved on a daily basis to spend days and nights in different enclosures. Care should be taken to avoid any distress, thus animals should only be moved to areas where they feel secure.

❑ Habitat Modifications

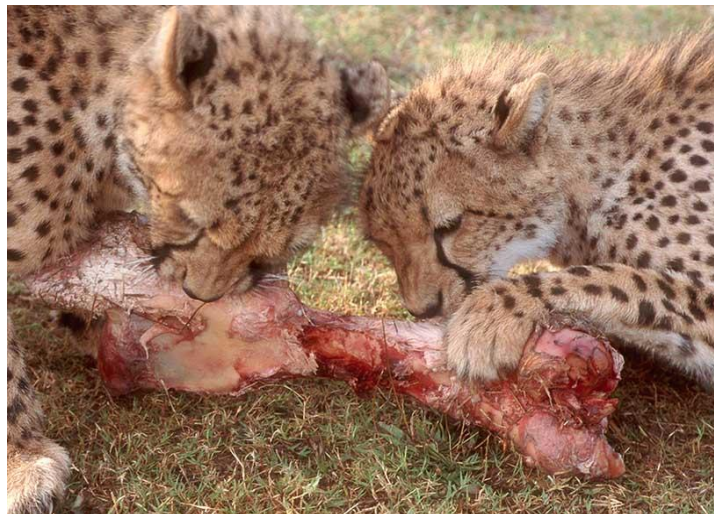
Habitat modification by moving exhibits inside the enclosures might provide stimulation. Care should be taken not to make too drastic changes since this might cause some confusion and insecurity. Consistency and security are imperative to the welfare of animals.

Feeding

❑ Bones

Bones are an important part of the diet, since they help to control the onset and progression of focal palatine erosion and also help to bind the faeces and provide calcium. Turkey bones are a regular part of our cheetahs' diet.

Horse bones are given on a monthly basis and keep the cats occupied for long periods of time. Since they have limited jaw strength, the cheetahs are not able to crush big horse bones and get to the marrow, which is very high in calories. Because of this, it is not necessary to make adjustments to the diet when horse bones are used for enrichment. Bones should always have a fair amount of meat on or alternatively only be given after a meal. Chewing on bones will stimulate the secretion of gastric juices and in the absence of food might damage the gastric mucosa.



☐ Whole or Partial Large Carcass Feeding

Whole or partial large carcasses can provide hours of stimulation and encourage natural hunting and feeding behaviour, including stalking, charging, biting and chewing, carrying 'prey' into cover, and licking fur. The origin and health status of the animal offered should be known and the session supervised.



☐ Animal Skins

Horse or donkey skins result in much sniffing and chewing. They can be thrown to increase excitement and to encourage chasing and pouncing. Skins should only be given after feeding as chewing will stimulate the secretion of gastric juices.



☐ Whole Rabbits

Whole or pieces of rabbits with fur can be given (guts should be removed). Apart from providing roughage, whole carcasses provide much stimulation and increase the length of feeding activity.



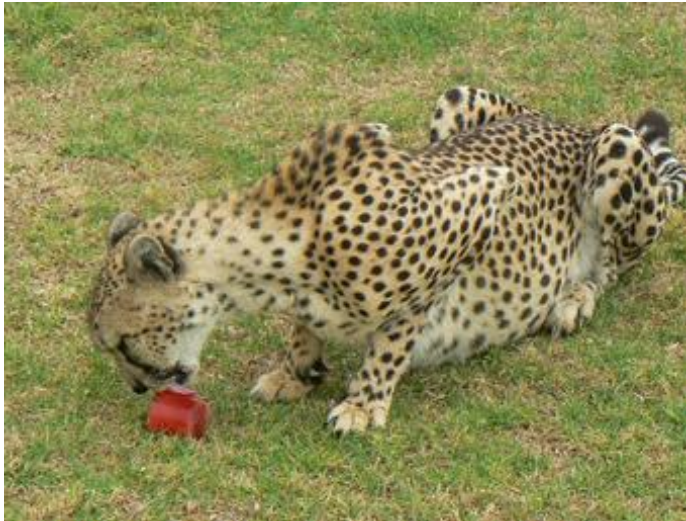
❑ Fur and Feathers

Sections of horsemeat with fur can be given. Apart from providing roughage, it also changes the texture of the food and increases the length of feeding activity. Providing whole chickens with feathers has not been seen as a viable option, since the fat content in the skin is too much but when guinea fowls and other game birds are available, they provide much stimulation and enrichment for the cats.



❑ Bloodsicles

These are made by freezing blood with pieces of meat in small yogurt containers. Most cats love them and they can be a very nice treat on hot days. No more than 2 or 3 bloodsicles per month should be given.



❑ Raw Eggs

Some of our cheetahs enjoy raw eggs. Some cats need the top opened so they can smell the contents and lick them out. Other cats are given eggs intact and they figure out how to bite them open, eating contents as well as shell.



❑ Hiding Food

Varying degrees of success has been seen with hiding food. Since it is well known that a cheetah's sense of smell is not as well developed as most other big cats, it is mostly not seen as a viable technique of enrichment.

We have made use of cardboard boxes where we placed the lids over their food. Some of our cheetahs showed a lot of insight by immediately removing the lid to get to the food. Others lost interest immediately. Pouring blood inside and outside the box will usually elicit a response from the cats. We have also hidden meat inside papier-mâché balls, which the cheetahs will rip up to get at the meat. Again, a little blood poured on the papier-mâché balls will spark more interest in the cats. Pieces of paper should be collected immediately after the cheetahs have retrieved all the meat.

Meat can be hidden under log piles or amongst branches as long as the cat sees you placing it there.



❑ Meat in Watermelons

Putting meat inside a hollowed-out watermelon challenges a cheetah's cognitive skills in figuring out how best to get to the meat. A hole on top and smaller holes on the sides allow the cat to see what's inside. Some of our cats chew pieces off the top hole until it is big enough to get their heads inside and split the watermelon. Others pick up and drop to try and break it open. Even after the meat is gone, some of the cats continue to break the watermelon up and chew on the insides that have been soaked in blood.



☐ Hanging Food

Varying degrees of success has been seen with this. Pieces of chicken can be hung from natural vine, to allow them to “catch” their food. Position the vine in such a way that the meat is hanging approximately one and a half meters above ground level. Some animals are very much aware of what needs to be done and will jump up and grab it. Others, however, will continue searching for the meat on the ground even after being shown the meat hanging from the vine.

Visual and Auditory

Objects that provide visual and auditory stimulation include the following:

☐ Outside Stimuli

These can include passing trains, motorbikes, bicycles, golf carts, wheelchairs, running children and other animals. Having visual access to some of these not only provides mental stimulation, but can also provide good exercise since some animals will chase some of these objects and show much interest.

☐ Other Cheetahs

More distinct pathways are often seen on adjoining fences in cheetah enclosures, suggesting a tendency to pace more along these fences than along outside ones. This might indicate patrolling territorial boundaries or simply an interest in other cheetahs’ activities.



Olfactory

☐ Moving Cheetahs Between Enclosures

Cheetahs can be moved into a foreign or lesser-known enclosure. Intense sniffing, investigating, scent-marking and vocalization, such as stutter-call and chirping, normally result. The flehman response might be exhibited continually.

Wild male cheetahs mark to define their territories while females advertise their hormonal status. It is assumed that marking in captivity would convey the same messages. From investigating scents, cheetahs should be able to determine the sex of an animal, its physiological status and how recently the scents were left.



☐ Providing Scents

Scents can be provided by using spices such as cinnamon, chili powder and ginger. These can also be used in combination with one another and with flour to add a visual stimulus.

The paired stimuli should be placed within a meter of each other and behaviors towards these can be monitored and recorded. Types of behavior seen among lions when using this activity, included lying and rolling on the scents, social activities such as rubbing against one another, and even running and chasing one another. No undesirable aggression was ever seen.

Lavender is not seen as a viable herb to use since it is known to contain secondary plant compounds that might cause mild toxicity.

Perfumes or lotions can provide stimulation. At the Bronx Zoo in New York, female cheetahs have been seen to rub against tree trunks sprayed with perfume; their favorite being Calvin Klein's Obsession. At another facility, logs and trees have been sprayed with star anise and vanilla steeped in water by using a squirt gun. Scented items should only be given in open, airy areas to provide adequate ventilation.

Catnip has been given to cheetahs and the cats were seen to then sniff it and roll in it. Urine from other cats can be placed in enclosures as long as the health status of these cats is known.

☐ Moving Objects Between Enclosures

Some of the exhibits can be moved from one enclosure to another. The health status of all animals should always be known. Objects should never be moved from a sick or compromised cat to the enclosure of a healthy cat.

Novel Objects and Toys

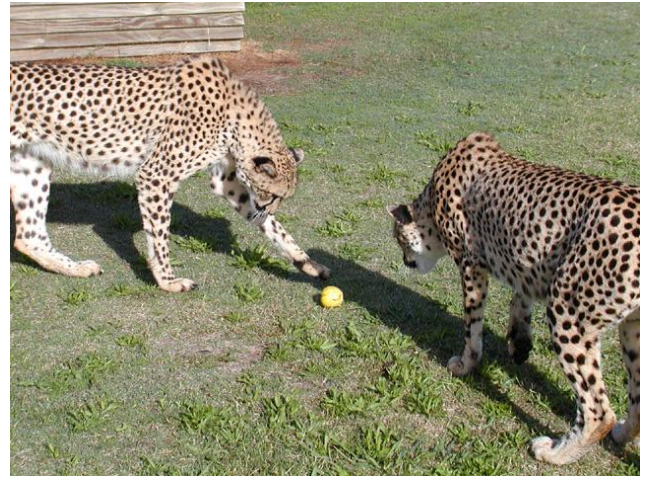
Toys encourage young cheetahs to play with and direct their energy towards objects and not people. When there is no supervision, toys should be taken away and be put out of reach, to avoid being ingested. Toys may include the following:

☐ Fluffy Toys

When choosing objects for animals to play with, care should be taken that these objects are non-toxic and preferably organic in nature. Inside stuffing as well as solid objects such as button eyes should be removed before allowing the cheetahs to play with these toys.

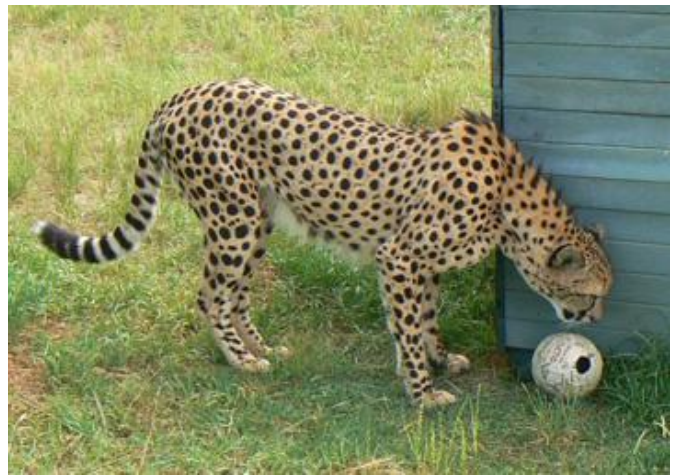
☐ Balls

Balls will trigger curiosity and playful behavior, especially with cubs who enjoy chasing and batting them around and battling each other for possession.



❑ Papier-Mache Balls

Balls made with newspaper, flour and water are an inexpensive form of enrichment. Holes placed in the balls arouse curiosity, and pieces of meat and blood dripped inside encourage much sniffing and excitement. Balls are usually ripped open to get at the treats inside and pieces should immediately be removed. Cubs also enjoy batting and chasing the balls around.



❑ Plastic Bottles

Plastic bottles are a big favourite among cheetahs and have the added bonus of being inexpensive and readily available. The noise and crunchy texture when bitten and chewed add excitement. They can be tied to a whip to chase or thrown like a ball.



❑ Splash Pools

Floating objects in small paddle pools can provide much amusement and keep cheetahs, especially cubs, entertained for extended periods of time.



❑ Cardboard Boxes

Cardboard boxes are stalked, carried around, chewed and ripped apart. Any harmful substances such as staples or plastic tape should be removed first and cheetahs should be carefully supervised while playing to make sure they do not eat and ingest part of the cardboard.



☐ Cardboard Prey Animals

Cardboard in the shape of prey animals offers a more exciting variation on the cardboard box. Cats approach cardboard animals warily, sniff, carry around in their mouths and even take up on their platforms. Our cats often end up ripping pieces of animals off and chewing on them. Only non-toxic glue and paint should be used to make cardboard prey animals.



☐ Mirrors

Interest has been shown in mirrors, especially by some of our young cubs.

☐ Miscellaneous

Rose flowers have been given to felids to smell and to play with at the Phoenix Zoo with some success.

Feathers have been given to cats at some facilities to play with. It is imperative to make sure these are disease- and parasite-free. This can be done by freezing, washing,

microwaving or leaving the objects in the sun. Felids have been seen to toss feathers as well as chase them and pounce on them.

Hanging objects that can move when the wind blows.

Cheetahs can be very inventive and you would sometimes see them play with pieces of bark, bamboo or some other type of natural object from their enclosure.

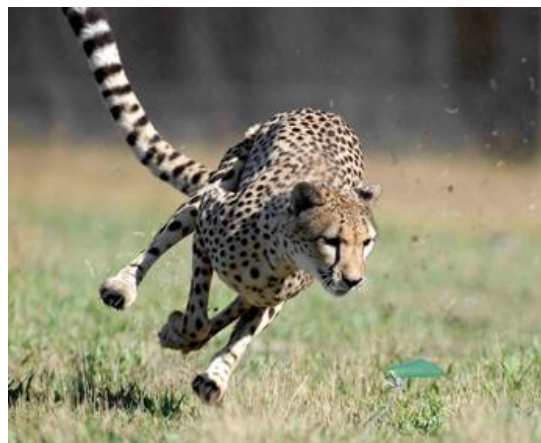
Exercise

Exercise is essential and is a part of husbandry that cannot be compromised on. Not only does the activity help to maintain a healthy physical condition, but it also provides excellent mental stimulation. Exercise can be provided by the following means:

❑ Runs

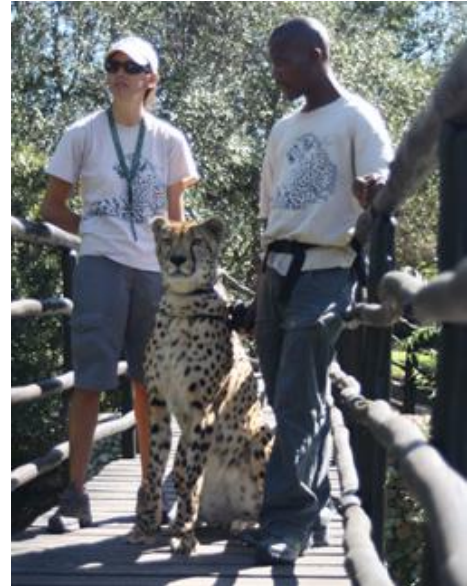
Different lures can be tried, since individual cheetahs favour different lures. Objects that work well are colorful rags, pieces of fluffy toys, plastic strips cut from plastic bottles and pieces of plastic bags. It is important to approach this with a dynamic philosophy and make adjustments when necessary. Changing the lures and the direction of the lure will maintain their interest and keep the exercising session challenging.

The running track should be well maintained with the grass kept short and any holes or depressions leveled. Exercise sessions should preferably be scheduled for early morning or late afternoon as to take advantage of the cooler parts of the day.



❑ Walks

Walks in new environments not only provide exercise but much visual, auditory and olfactory stimulation in the form of people, other animals, vehicles, bicycles, bridges, stairs, trees and water. Walks are important for ambassador cats as they instil confidence in new surroundings and make it easier to move them from one location to another. Whenever a cat is walked outside an enclosure, it must have 2 leads and be accompanied by 2 qualified people.



❑ Mop

An old fashioned mop can be used to entice cheetahs to run, by having a person run ahead and dragging it behind on the ground. Once caught, it might be difficult to get the animal to give it up, so having treats on hand is a good idea.



❑ Whip with Novelty Item

A piece of string can be attached to a whip or a stick with a novelty item attached on the other side of the string. Plastic bottles seem to work very well. The cats love the sound the bottle makes as well as the texture of the plastic and will try chewing it once they catch it.



☐ Public Events

Public events can form part of an exercise regime with animals that are accustomed to public appearances.



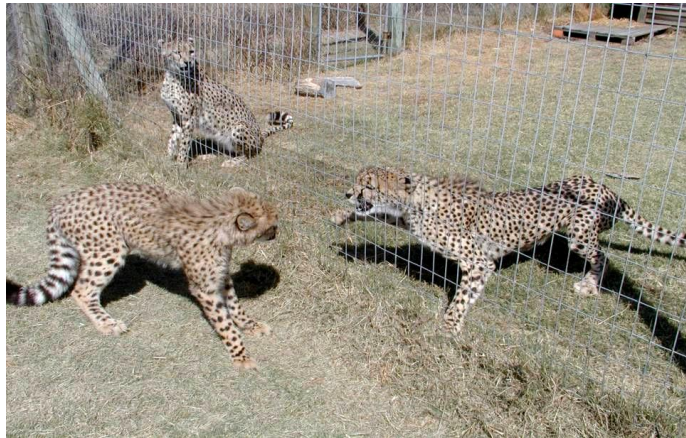
☐ Food

Food such as turkey drumsticks can be thrown instead of just being placed down for cheetahs. Some cats spring after them and carry them to the shade to eat while others lose interest and return to their bowl. Care should be taken not to throw the drumstick on thorns or pebbles, since ingestion any of these might be harmful.

Social interaction/Tactile

❑ Interaction with Other Cats

Interaction with other cats can be achieved in different ways. The easiest way is to move cats to different enclosures where they share a fence with cats they are not normally in close proximity to. This will evoke a lot of interest among the cats, shown by pacing, sniffing, touching noses through the fence, scent-making and vocalizations such as stutter-calling. Aggressive behavior such as growling, hissing, moaning, stalking and whacking with front paws can be seen.



❑ Interaction with Siblings

Cheetahs that are raised together develop very close bonds and enjoy each other's company, often lying next to each other, grooming and playing together.



❑ Interaction with Staff/Volunteers

Social interaction with humans is an integral part of any touch programme. Staff and volunteers can communicate with the animals physically and verbally. Apart from conveying feelings of affection, this hands-on contact also allows for examination as far as injuries, parasites, growths and general condition go. Hand-reared cheetahs find security and comfort in having positive and stable bonds with people.

For animals kept in captivity and thus exposed to people, it is to their benefit to view humans positively. This greatly minimizes one of the main stresses in captivity.



❑ Interaction with other animals

Strong bonds can be formed between cheetahs and dogs if they are allowed to interact from a very young age. Dogs can assist with rearing of cubs and can become constant companions to accompany ambassador cheetahs. Interaction through fences with other animals can be of great interest to some cats.



❑ Interaction with the public

This could be by means of personal encounters at the facility, school visits, private functions, public events and photographic or film shoots.

Ambassador cats should be selected carefully and only include animals that are temperamentally suited to having interaction with the public.



Traveling to venues away from the facility provides a lot of mental stimulation, with opportunities for the cheetah to experience new locations, people, scents and situations. During trips to outside venues, special care should be taken to always ensure the safety and comfort of the cat. No people or animals should be allowed to approach the vehicle, visual stimulation should be kept to a minimum, and access into buildings should be carefully planned to provide the shortest and safest route to the area where the cat is needed. A strict protocol, never to be compromised, should be adhered to when showing cats in outside venues.



Fundraising through photographic shoots or working on film sets provides an immeasurable amount of stimulation. During these sessions, the cats might be exposed to interesting props, dresses, and very often scenic and interesting backdrops, such as open fields, vineyards, sand dunes, beaches, and game reserves. Since specific poses, positions or activities might be requested, these sessions also involve stimulation in the form of mental challenges.



Behavioral Conditioning

Behavioral conditioning is very important since it provides mental stimulation and increases the intellectual focus of an animal. It also strengthens the bond between caretaker and animal. The level of conditioning depends on the individual and might be one or all of the following:

❑ Lead Walking

Lead walking begins at an early age in order for young cats to get accustomed to the restricted feeling of a collar, harness and lead. Lead walking is essential for all ambassador cats.



Lead walking starts from about 3 months of age and involves a gradual process during which the cheetahs are made to feel completely relaxed and comfortable while wearing a collar, harness and lead. Initially the collar and harness are left on for short periods of time to get them used to the pressure against their bodies. Once they seem to be confident with this, walking very short distances start.

Lead walking is always done by means of positive reinforcement. Special care should be taken during walks with regard to the tone and intensity level of your voice. Your voice should convey authority, but should also reassure the animal. The bond you form with a cat is in part dictated by what the cat perceives your intentions to be. Your attitude should always be one of concern and respect.

❑ 'Up, Up' Command /Sitting on Tables

Conditioning cats to jump on tables and other elevated services with an 'up, up' command is essential for ambassador cats, especially those that take part in private functions, film and photo shoots and other fundraising events. Walks are a good time to practice this command, encouraging cats to jump on table, benches and other objects during the walk. Positive reinforcement should always be used once the cat has followed the command.



❑ Station Holding

Station holding entails the use of verbal commands and hand signals to teach an animal to jump on an object and remain there until released with a reward. Station holding can be used to facilitate feeding, slow down eating, control an animal while people are doing husbandry duties in an enclosure as well as provide mental stimulation. Some of the cheetahs at Cheetah Outreach learn quickly and enjoy these sessions.



☐ Clicker Conditioning

This type of conditioning is used to shape behavior by means of positive reinforcement. Use of a clicker can be extremely helpful in situations where you might have to manipulate the animal's movements, such as on a film set. It is essential that the handler display a good sense of timing when using a clicker.

☐ Transportation

Since an ambassador cheetah will most likely travel, it is important to incorporate traveling at an early age. Traveling inside a familiar crate can start as early as 3 ½ months of age. Once cubs are used to the sound and feel of the vehicle, and are comfortable with a harness and lead, they can be loaded in the back of the vehicle without crating.

Crates may still be used to transport adult cheetahs to the vet or in the event of a fire or other emergency. Reinforcing familiarity with crates can be done by feeding cats inside the crates on a rotational basis. This will ensure that they do not harbor negative feelings toward the crate. This is very often the case since the crates are used to transport them to the vet and represent negative experiences. Crates should always be disinfected before being moved to a different enclosure.

Crates will also be needed in the event of a fire and being able to load the cats quickly and without resistance might mean the difference between life and death. By increasing the length of time the cat stays in the crate, you can condition them to accept the crate as a safe place for flying etc.