

## Enrichment for Research Animals

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Environmental enrichment is the process of providing stimulating environments for captive animals in order for them to demonstrate their species-typical behavior, to allow them exercise control or choice over their environment, and to enhance their well-being.

Enrichment includes the design of stimulating and naturalistic enclosures, the housing of appropriate social groups, and the introduction of objects, sounds, smells or other stimuli in the animal's environment.

Environmental enrichment is just as critical to animal welfare as nutrition and veterinary medicine. For many research species it is now legally mandated and accreditation of an institution can hinge on defined enrichment programs. At any institution enrichment should be an integral part of the daily care of the species in ones vivarium. Enrichment has health benefits as well by reducing the levels of cortisol in any animal, in particular anxious or stereotypic animals.

Depending on the items used, enrichment can be very inexpensive. Many institutional or household items can be recycled as enrichment for animals, most commonly toilet paper or paper towel rolls, plastic containers or cereal boxes.

Enrichment is provided in a variety of ways, such as:

**Housing/Enclosure design:** provides a variety of substrates, levels, and complexities.

**Training:** depending on the species and individual temperament interaction with animal care staff and proper training allows an animal to choose to participate. This is also useful in gaining the animal's trust and allows the staff, visual observations of that animal. Many species can even be taught to aid in physical exams, which may reduce or completely eliminate the need for sedation.

**Olfactory:** Staff can introduce natural predator or prey scents, in addition to novel smells or pheromone scents.

**Auditory:** taped sounds or vocalizations can simulate things that an animal may hear in the wild.

**Food related:** this is the most widely used form of enrichment. Animal care staff can present food in a variety of ways such as in a simple puzzle feeder, hidden throughout the enclosure, scattered about the enclosure, or buried in a substrate. To get the food, the animal must use natural foraging behaviors and/or mentally solve the puzzle.

**Novel objects:** various items placed in an animal's enclosure allow the animal to mimic behaviors exhibited in the wild or could challenge them. These items could include burlap bags, sheets, boomer balls, chew toys, or a hammock.

Often, novel objects will be combined with food related enrichment. For example, burlap bags may be filled with hay and treats and tied closed. The animal would then have to get into the bag and sort through the hay to get to the treats. The author's person favorite is adding toy maracas to rabbit cages.

**Research:** Noninvasive participation in a research projects offers mental stimulation.

**Awareness:** Depending on what your institution decides is appropriate for your animals the animals themselves can become their own advocates. Art created by animals is always of interest to the public and offers a wonderful way to allow positive outreach to the public.

Adapted from: <http://nationalzoo.si.edu/scbi/animalenrichment/>

**Please email speaker for photos of enrichment devices**