Object and Sensory Enrichment

This is an extremely important part of any enrichment program for captive animals. Some animals that are currently in rehabilitation centres are on a path towards release into semi-wild or wild situations. Therefore, when providing enrichment it is important to focus on activities that encourage natural behaviours and make use of the animal’s cognitive and physical adaptations.

However, captive settings significantly curtail an animal’s ability to make use of their immense intellectual and physical abilities. This is because these unique adaptations will have arisen as a response to selective pressures placed on them by their environment and those organisms which share it.

Acknowledging this fundamental shortfall of captivity is where object enrichment comes in. We must bear in mind that captivity will never be as challenging as a life in the wild, so whilst it is crucial to provide animals with naturalistic activities and challenges it is also important to provide them with novel items that simply encourage play, capture their curiosity and generally keep them occupied. In doing this we may be able to strive towards a more natural energy budget for the animal.

Keeping captive animals interested in their environment is of critical importance for their mental health and welfare. Many captive animals that do not have access to stimulating and varied environments may develop stereotypies, self-injurious behaviours, exhibit behaviours which are indicative of learned helplessness or become catatonic. These behaviours not only indicate poor welfare and psychological suffering but are also clearly not helpful for the animal’s path towards rehabilitation. Therefore, object enrichment that sometimes simply encourages play or causes intrigue is important for both permanently captive animals as well as those on a path to rehabilitation and release.
Mobiles and bunting

Enrichment for: Orangutan

Mobiles and bunting can take many forms and are created using brightly coloured card. These types of displays can be hung either in the night dens or enclosures. They simply add interest and novelty to the environment.
Chalk

Enrichment for: Orangutan

Purchase non-toxic chalk and leave it in the night dens for the orangutan to find for themselves. The orangutan can colour their night dens or their faces and hands; they may also eat the chalk. Due to their tendency to eat this enrichment, it is recommended to only distribute one or two sticks at a time. As well as leaving chalk for them it is also possible to draw pictures with the chalk in the night dens. The orangutan enjoy studying these pictures and will often touch them and examine the colour that is left on their fingers. One can also draw for the orangs on the floor outside their night dens so that they can watch; they are often fascinated by this.
Bubble Wands
Enrichment for: orangutans, gibbons, macaques

These can be used to create bubbles for the orangutan, macaques and gibbons. Always use bubble wands so that no one is blowing bubbles into their faces. This is to mitigate the risk of disease transmission from human to other primates. The orangutan, macaques and gibbons love this game, they will try to catch the bubbles on their lips or clap them between their hands.
Mirrors

**Enrichment for:** orangutan, macaques, gibbons, birds

Like all great apes, orangutans are capable of recognizing themselves in a mirror, indicating that they are self-aware. They like to examine their faces in the mirror and will often make faces or point to various facial features. Looking up their noses or under eyelids is often a favourite pastime when presented with a mirror. Although lesser primates have so far failed the standard mirror test as a measure of self-awareness, there is some indication that gibbons and macaques have varying levels of self-awareness in other tests. Therefore, although they may not necessarily recognise the reflection in the mirror as belonging to them, they enjoy engaging with their reflection none the less.

For all the animals, mirrors can either be presented in the form of a caregiver holding a large glass mirror outside the enclosure. Alternatively when available they can have plastic mirrors in their cages. For the birds, macaques and gibbons, often attach a plastic mirror as part of a mobile and hang it from the ceiling of their enclosure.
Sheets

Enrichment for: orangutan

Brightly coloured sheets are a favourite item. The orangutan enjoy wrestling with the sheets, wrapping themselves in them and using them to soak up water. The brighter and more highly patterned the sheets are the better as these are more visually stimulating. Food parcels can also be made using sheets so that their food is presented in an interesting way as well as giving them an object to play with after their food has been consumed. Another favourite use of sheets is to hang them in the night dens to create “forts”; the orangs enjoy hiding and playing among these before they pull them down to redecorate. This is not recommended enrichment for younger orangutan (<5 years of age) due to the slight choking hazard presented by the hanging material.

Newspaper and cardboard boxes

Species: orangutan, macaques

Many of the orangutan love to play with newspaper. They will flatten it out, turn the pages and then many use it as hats, bedding or incorporate it into their night nests. Newspaper can also be used to create food parcels with daily feeds, presented with empty newspaper parcels too, promoting foraging behaviour,
Clothing

Species: orangutans

Many orangutans will choose to put clothing enrichment on themselves; some because they have worn clothes in the past, though others because they have simply observed the behaviour in humans. They are free to do as they please with the clothing enrichment presented to them, and this ability to make a choice is an important thing to offer wherever possible as captivity, even in good conditions, grossly limits the animals’ ability to make decisions and take control over their environment.

Tennis Balls and footballs

Species: orangutan

The orangutan, macaques and gibbons enjoy playing with tennis balls. Orangutans in particular will spend quite a long time bouncing them before they inevitably destroy them. However, some have been observed to bite the tennis balls in half and then continue to play with them by pressing down on the half and watching it bounce away.
Magazines
Enrichment for: orangutan, gibbons, macaques

Orangutan will often study each page intently before turning to the next. Magazines present very good visual enrichment as well as an object that can repurposed and enjoyed as a hat or incorporated into night nests.

Wood shavings
Enrichment for: Orangutan

Sawdust can be used in a variety of enrichment activities. However, the orangutan also love to just play with plain sawdust. Fill a large hessian bag with wood shavings and leave them to it to let the fun begin!
Baths

Enrichment for: orangutan, sun bear, macaques

Many of the animals enjoy simply playing in baths, and macaques in particular get quite playful and will submerge themselves and swim around in the tub. There are several variations that can make bath time even more enriching:

- Hiding food in the tub: dense food items such as fruit are used so that the item sinks to the bottom. Each individual will approach this differently; some will scoop the water out, some will tip the tub up and others will get right in in order to get the food out.
- Crabs for the macaques: catch live crabs and place these in the tubs for the macaques to “fish”. Giving live prey to a captive animal which would have access to live prey in the wild is great enrichment as it requires them to engage their natural hunting skills.
- Bubbles: use non-toxic children’s shampoo or bath gel to create bubble baths. The orangutan in particular love to play with bubbles and this can keep them occupied for hours.

Hessian Sacks

Enrichment for: orangutans, macaques

Hessian sacks can be used to make a number of great enrichment items. However, the orangutan and the bears enjoy using a plain hessian sack to play with, use as shelter and to nest with. Some of the bears will scratch them into shreds to make a nest around themselves.
**Termite Nest**

*Enrichment for: Sun bears, orangutan*

These are a natural food item of both the sun bears and the orangutan and thus giving these items to them allows them to engage in natural foraging behaviours and consume a natural protein. Collection of termite nests may occur once every 6-8 weeks for select animals at a park/centre due to wild animals also utilizing these items as a food source.
Twine Ball

Enrichment for: Leopard cat and clouded leopard

Construction time: 30 minutes per nest

Materials:
Hessian and twine

Directions:
- using hessian make a ball shape
- wrap cotton twine around the ball until it resembles a ball of wool
- sprinkle scents on it
- hang the ball to a structure within the cage. Where possible use a bungee cord to hang the item.

Natural behaviours encouraged or benefits of this enrichment:

Felids hunt and stalk live play, which moves dynamically. This enrichment encourages play by simulating the movement of a prey item. By scenting the ball we aim to encourage the first use with the item. A bungee cord is particularly good as felids pin their prey down and thus simulating that with a toy which can potentially then ping away from them will encourage them to exercise by jumping or running after it and potentially “stalking” it. As well as encouraging play and exercise, this enrichment offers scent enrichment. Felids are very scent focused and adding new scents to their enclosure encourages movement around the enclosure as well as their own scent marking.
Browse

Enrichment for: Orangutan, sun bears, clouded leopard, civets, binturong, macaques, gibbons, birds

Browse is excellent enrichment and can be used in a variety of ways

Directions:

Orangutan:
It is best to ensure every orangutan gets browse every day.
• Do not give the orangutans any pieces of browse which are long and/or strong as they can use these items to break or fish for things outside their enclosures that may be dangerous to them or to others.
• The browse can be used to decorate the night dens, and the orangutan’s daily feed can be hidden among the browse or food can be hidden in parcels and tied to the browse.

Sun bears:
• The bears can have very large leafy pieces of browse in their night dens.
• Unlike the orangutans there is no constraint on the size or strength of the browse they can have.
• Browse can be hung from the ceiling and wedged between the slats of the platforms.
• Small amounts of condiments can be smeared on the browse to encourage foraging behaviour.

Binturongs and civets:
• The civets and binturong can have large leafy pieces of browse with small amounts of jam, peanut butter or raw egg smeared randomly through the leaves to encourage foraging behaviour.
Clouded leopard:
- Indoor or outdoor enclosures can be decorated with very large leafy branches.
- Branches can be wedged between the slats on platforms, hung from ceilings or projected from cage structures.

Birds:
- Hang browse from the ceiling or other existing structures
- Leave some areas or levels of the enclosure free of browse so that the birds still have a flight path.
- Smear porridge jam or peanut butter on the leaves

Gibbons and macaques:
- The gibbons and macaques can have large leafy pieces of browse
- The browse can be hung from the ceiling as well as from existing platform or logs.
- For the gibbons in particular it is nice to have a lot hanging so that they move as the gibbon brachiates through them.
**Natural behaviours encouraged or benefits of this enrichment:**

**Orangutan:** In the wild, orangutans make nests in the trees to sleep in every night. They generally construct the nest by breaking several branches inward in the same direction to create a bowl-type shape without actually completely ripping the branches off. However, they might loosely weave the branches together to create the nest. When provided with browse, the orangs will eat things like ferns and wild ginger and use the rest of the browse to construct their nest. Some of the orangs make quite intricate nests by weaving the browse together. Nest building and recognizing edible plants are critical skills that orangutans must possess in order to survive in the wild. Therefore, it is essential that on their path to rehabilitation, they are exposed to browse every day so that they might engage in these natural behaviours. It is also important for fully captive animals to be given the opportunity to express this natural behaviour.

**Binturongs and civets:** Smearing treats on the browse stimulates their sense of smell and encourages them to move about in their enclosures in search of the treats.

**Clouded leopard:** Clouded leopards are nocturnal animals that rest during the day in lairs. Browse creates areas within the enclosure that the clouded leopard can hide out of sight. Adding browse also increases the leopard’s activity level as they take the opportunity to scent mark all new items present in their enclosures.

**Macaques and gibbons:** Browse offers both a novel climbing structure and a place to hide food, thus this encourages foraging and exercise. The macaques spend a significant amount of time active and playing among the browse. Their activity levels increase in the few hours after the addition of new browse. The browse offers the gibbons a new structure to brachiate from and they can be seen doing so for hours after the addition of the browse.

**Birds:** Hanging the branches carefully so that they swing and by also hiding foods within the leaves stimulates the trees and the natural foraging behaviour of birds. It also provides disposable items that some species can chew through and destroy.
Christmas Tree

Enrichment for: **orangutan**

**Materials:** sticks, twine, scissors, browse

**Directions:**

- Using sticks make a pyramid shaped frame
- Weave leaves and branches in and out of the frame
- Decorate with food items

**Natural behaviours encouraged or benefits of this enrichment:**

This is a fun novel way to present food. Not only does it provide a tasty treat in the form of the food that is on the tree but the leaves themselves can be consumed or used to make a nest when the orangutan is finished playing/ demolishing the tree.
Scents

Enrichment for: orangutan, macaques, binturong, clouded leopard, leopard cat, gibbons, sun bears

A holistic enrichment program will involve scent enrichment. For many animals olfaction is an incredibly important and heightened sense and one that should be kept stimulated in captivity. This is particularly true for sun bears, felids, binturong and civets. However, scent enrichment should be incorporated into enrichment for every species.

Items such as herbs and spices as well as non-toxic fragrances and vegetable and meat stocks can be introduced into the animals’ environment or incorporated into other enrichment.

Scent enrichment adds another dimension to enrichment and for felid species, civets and binturong in particular it may elicit increased activity and natural scent marking behaviours.

Ideas for scent-based enrichment include:

- Filling the animals’ night den with a carpet of newspaper, fabric or cardboard boxes then sprinkling herbs and spices through.
- For orangutan scattering herbs and spices through the pages of a magazine.
- Spraying diluted non-toxic fragrances or meat stock on surfaces within the enclosure or perhaps on some browse that can be added to the night den.