

A close-up photograph of a grey squirrel inside a wire cage. The squirrel is reaching up with its paws to touch a blue circular opening on a colorful enrichment toy. The toy is primarily orange and white, with yellow and blue accents. The word "vtech" is printed in blue on the white part of the toy. The background shows a wire mesh fence and some blurred greenery and brown leaves.

Environmental Enrichment in a Rehabilitation Setting: Starting a Dialogue

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My Background



What is Enrichment?

Environmental enrichment is a way to improve an animal's captive environment for the mental and physical benefit of the animal.



Why is enrichment important?

Provides stimulation for the developing brains

"Animals that do not receive the specific stimulus during a sensitive period may still be able to develop particular behavioral traits later in life but will do so less efficiently." (Miller et. al.)



Behavioural competence – Encouraging natural behaviour which increases the chances of survival of the animal upon release



Studies have shown that enrichment “appears to speed-up or facilitate the repair of brain damage and often results in the improvement of cognitive or motor functions.” (Robert J. Young, 2003)

Research has also shown that enrichment helps prevent the deterioration of cognitive function resulting from stress or aging.



Emotional health - decreases the possibility of stereotypic or aggressive behavior caused by boredom



Categories of Enrichment (not mutually exclusive)

- A. Physical
- B. Nutritional
- C. Social
- D. Sensory
- E. Cognitive





Physical

Perching/Climbing
Substrates/Hide boxes
Refuges
Climate gradients





Enclosures should be designed to encourage activity and exploration



Nutritional

Natural foods can be presented in a novel ways



COURTESY OF THE WCV

Insects frozen in ice





COURTESY OF LYNN OLIVER

Novel food items can be offered as long as they do not present a hazard

Social



COURTESY OF LESLIE STURGES
Savelucythebat.org



COURTESY OF LESLIE STURGES
Savelucythebat.org



Raising animal in groups or putting animal in enclosure where they can see co-specifics



- Interaction with caretakers
- Allowing animals to have visual contact with other species IF it does not cause high-levels of stress

Sensory

- Tactile - objects that can be explored and manipulated.
- Olfactory – natural and packaged scents
- Auditory – sounds found in the natural environment and novel sounds such as bells, etc
- Visual – objects that move; mirrors, co-specifics and prey



Cognitive



Mental stimulation

Tiapan using puzzle feeder





Teaching Alfred to station



Marmoset receiving meds



Training is mentally stimulating but can also an important husbandry tool.

Keys to Developing an Enrichment Program

Get started now BEFORE the busy season



Things to Remember

Considers the natural history of the species as well as the individual animal's needs and preferences.

The goal should be to facilitate cognitive and physical development as well as the animal's emotion needs.

Safety and choice are very important part of this process.



Here we go ...

1. Setting a goal – enrichment should be developed with a goal in mind. Based upon the animal's biological, social, cognitive needs, contingent upon encouraging species appropriate behaviors and activity budgets, and mediated by the animal's individual history.

ex. To encourage
raccoon foraging
behavior



Plan

- a. closely mimic natural foraging behavior – behavioral competence
- b. allow animals to have choice to interact - reduces stress
- c. **safety**



Safety and other considerations

Ask yourself these questions:

1. Does the item pose an safety risk to the animal?
Entrapment, falling hazard, oral/ingested, toxic
2. Will the manner of enrichment delivery lead to a problem?
Used as a weapon, enclosure damage or block entrance, maintenance issue
3. Will the animal benefit from the enrichment item?

3. Implementation and Evaluation



Field cameras can be great for evaluating enrichment

4. Document the results - if it didn't work, why and can it be re-vamped for better success?



Excellent

Very good

Good

Average

Poor

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5. Re-adjusting – make the changes and try again.
6. **Have Fun! This process should be enriching for you too.**



Examples of enrichment



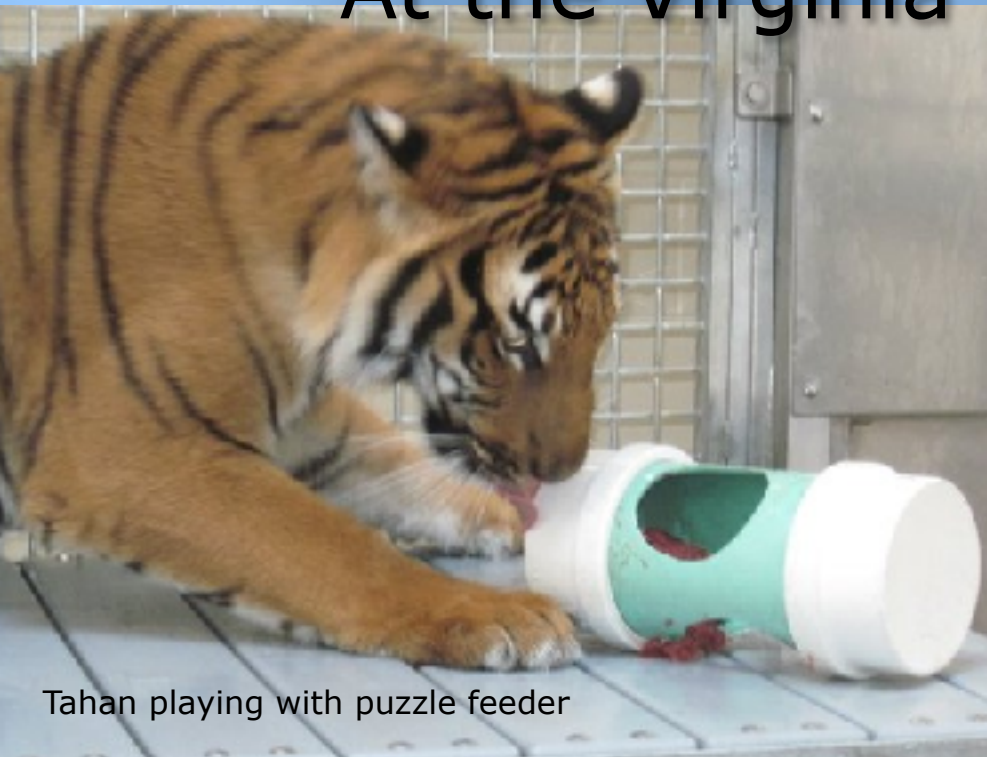


1st birthday cake



Yes, I killed this all by myself!

At the Virginia Zoological Park



Tahan playing with puzzle feeder

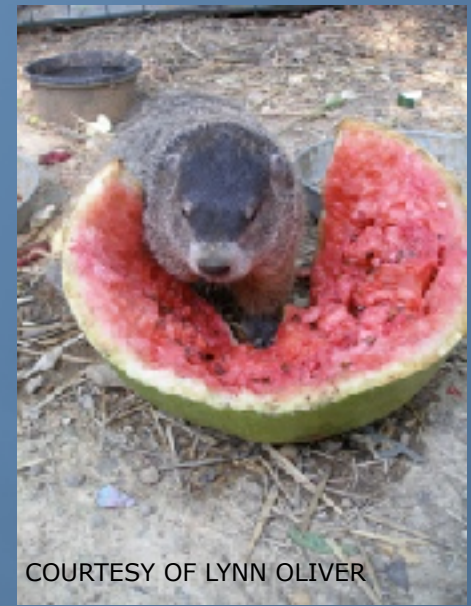


Mramba enjoying his new tire

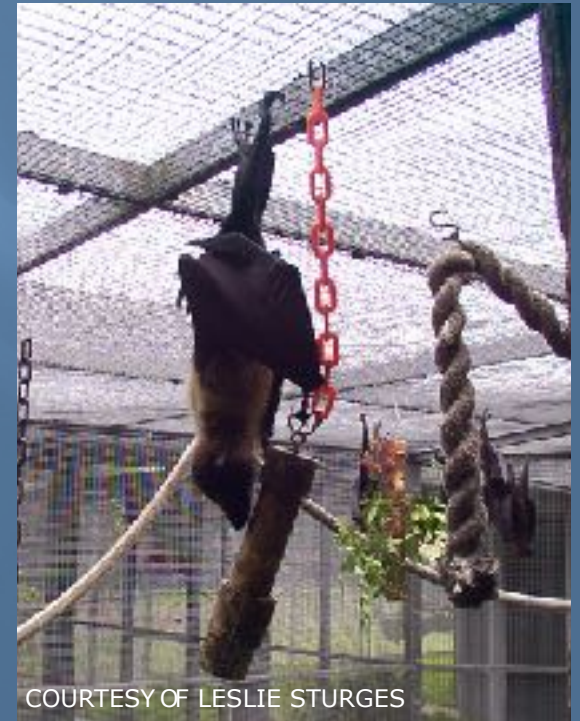


Courtesy of Lynn Oliver

Man-made objects like these can provide many of the same benefits as natural objects with the advantage of being more easily cleaned.



COURTESY OF LYNN OLIVER



COURTESY OF LESLIE STURGES



Courtesy of animalenrichment.org



Use what you have on hand or purchase items from thrift stores, yard sales, on-line etc.



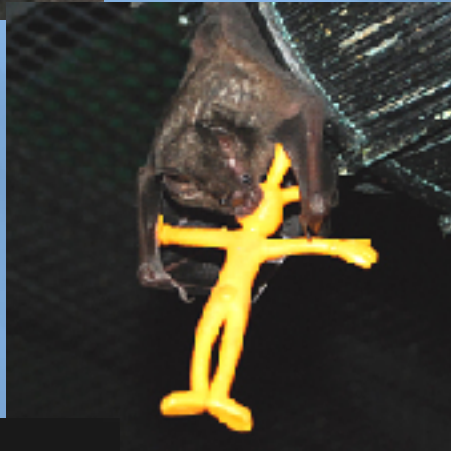
COURTESY OF LYNN OLIVER



COURTESY OF LYNN OLIVER



COURTESY OF
BAT WORLD SANCTUARY





Snake Climbing
structure
Brandywine Zoo





Sometimes enrichment doesn't work

COURTESY OF THE WCV

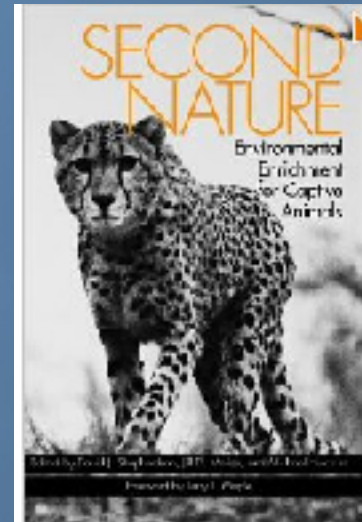
Have fun and use your imagination!



Resources for enrichment ideas

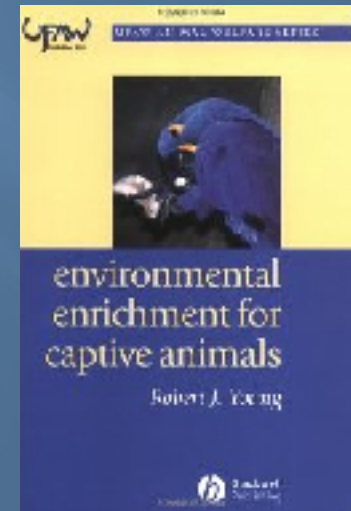
Second Nature

*Ed. By David J. Shepherdson,
Jill D. Mellen, and Michael Hutchins*

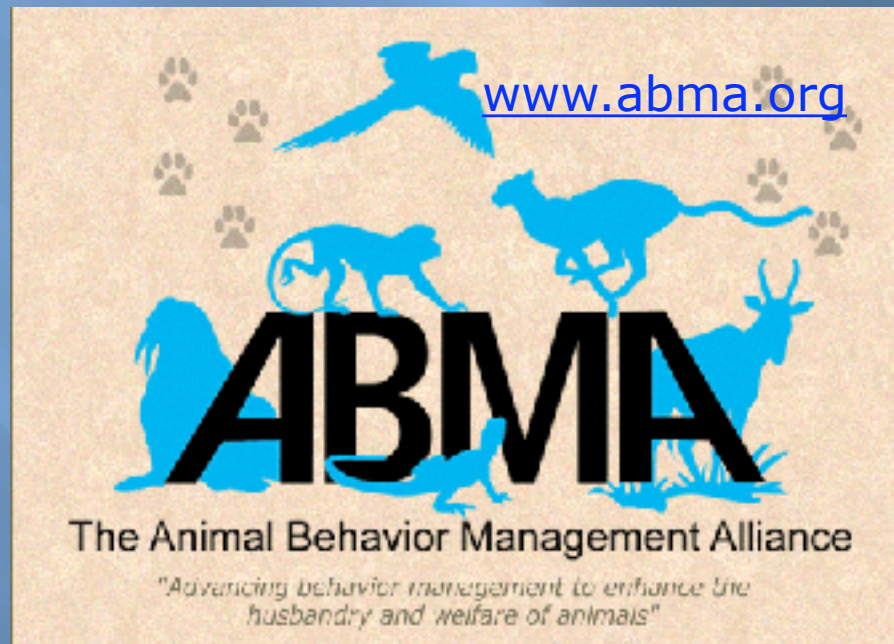


Environmental Enrichment for Captive Animals

by Robert J. Young



On-line resources:



Environmental Enrichment Scrapbook –

<http://www.well.com/user/abs/dbs/eesb/index.html>

2nd Chance Sanctuary - Environment Enrichment Program

<http://www.2ndchance.info/Enrichment.htm>

U.S. and international zoo sites

Reptelligence - Facebook page

Talk to each other! Share what has worked AND what has not!

So let's start a dialogue

