Safety considerations for enriching primates

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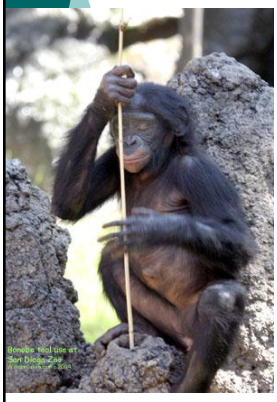
Designing Enrichment: Safety considerations (from Young, 2003)

- Has the device got sharp edges?
  - Run a finger around all surfaces to assess
- Can the primate's digits, limbs or other body appendages become trapped?
  - Holes too small for digit, or too large to allow it to be trapped. Know your primate!

Designing Enrichment: Safety considerations



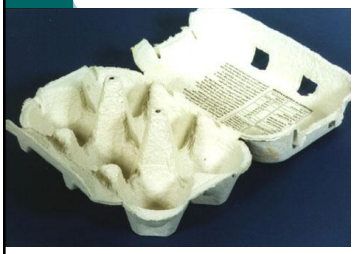
- Could the primate break/dismantle the device?
  - Never underestimate persistence and strength. Primates can use screws. Beware tool use!
- If the device broke, would it become a safety risk?
  - Don't use devices that will shatter into sharp pieces, or where parts may be eaten.

Designing Enrichment: Safety considerations

- Could the device or any part of it be swallowed?
  - Cloth devices may be swallowed and cause gut problems. If need to sew, use single stitches.
- Is the device made of non-toxic material?
  - Check ropes are not soaked in oil or chemicals.

Use fire hose!

Designing Enrichment: Safety considerations



- Could the device carry disease?
  - It is important you do not introduce disease (e.g. Egg boxes)
- Can the device be cleaned adequately or sterilised to prevent disease transmission?
  - Check it can withstand autoclave/scrubbing

Designing Enrichment: Safety considerations

- Could the primate become entangled in the device?
  - Thicker ropes better than thinner ropes, and both ends should be attached to a surface structure.

Designing Enrichment: Safety considerations

- Could the primate use the device as a weapon?
  - Secure using a short chain.
- Could the device be used to facilitate escape?
  - Logs used as ladders/cross moats, and plastic on electric fences!

Other design considerations

- Can the device be maintained and filled quickly?
  - If easy to maintain, will become routine
- Does EE block access or view of care staff?
  - Should not!

Other design considerations

- Does the EE require care staff to enter enclosure?
  - Try to minimise disruption
- Is the design the simplest possible?
  - Complicated designs more likely to break and need specialist to repair

Other design considerations

- Can the device be monopolised?
  - Use multiple devices.
  - May be hard to avoid in some situations, but take care not to create aggression

EE Product testing

- drop test
- sharp seams and edge test
- strength of attachments
- strength of seams
- how quick to remove enrichment items?

Summary of design (checklist)

- Define purpose
- Define design parameters and constraints
- Research and analyse similar options (see database)
- Prioritise design parameters – cost, safety, weight, cosmetics
- Sketch design
- Structural analysis of design
- Model it
- Check functional problems, feasibility
- Safety checks
- Test device under controlled conditions
- Write final design
- Collect data on effectiveness

References and further reading

Young, R. (2003). *Environmental Enrichment for Captive Animals*, Blackwell Science Oxford, UK.

and see

A Veterinary Assessment of the Risks and Benefits of Environmental Enrichment by Ann Duncan (1997)
http://www.enrichment.org/MiniWebs/About_EE/duncan_1997.pdf

Enrichment Gone Wrong! by Valerie Hare, Beth Rich, and Karen Worley (2008)
http://www.enrichment.org/MiniWebs/About_EE/hare_2008.pdf