

OTHER APPROVED ORANGUTAN ENRICHMENT:

TRASHCANS

PAINTS

TEACHER PAPER

TV/ RADIO

BOOMER BALLS

YELLOW PAGES

LARGE PLASTIC BARREL

BLACK TUBS

TREAT STAND

MIRROR

HOLLIE ROLLER BALLS

HOLTZRUGELS

PVC CUPS

TRASHCAN LIDS

REGISTER TAPE

JELLO

CARDBOARD BOXES

PAPER TOWELS

MILKCRATES

Orangutan Enrichment Rotation Week 1

	Sunday	Monday	Tues	Wed	Thurs	Friday	Sat
A.M. FOOD	Juicers	Bleach bottles on cagefront w/ dry koolaid	FP chips pasta	Jello boards and balls	FP shavings & rice crispy or cherios	Large ice treats	FP BOC & dry mix
EXHIBIT	Crickets Sticks	Dry koolaid	Scatter pasta	Scatter rice	Scatter rice crispy or cherios	Large ice treat	Ball w/spices & dry mix
P.M. NON FOOD	Clothes & blankets Keeper play time	Bird paper	TV SUPERbeds - 1 bale woodwool choose cage	PVC pieces (ferret logs only for BSMD)	Spoons if available TP	Scents & heat lamp	Water
P.M. FOOD	Popcorn (make extra for ASH) Worms	Crickets	Small ice treat	Yogurt 1cup per group	Alfalfa	Raisins on floor outside cage	All- U-Can Drink Koolaid
STARCH	Bread	Pasta	Corn cob	Rice	Sweet potato	Corn	Dry Mix
PREP WORK	Mk small ice treats	Sub zupreem chow for 5038 Remove cups & containers	Make jello boards and balls	Make large ice treats	sub 1/4 chow for Raisin Bran	Remove spoons	Pop popcorn for Morning & ASH
CALENDAR	Traps USDA 5	<ul style="list-style-type: none"> ✓ Hay ✓ F.O. ✓ Cooler <i>Remember to order enough timothy for whole week on exhibit!</i>		Straighten B.E. area Traps	Food order Rinse cooler if dirty Defrost 1 bag of corn		USDA 1 & 2 Leave cup & note on log to bring up worms in a.m.

FOOD ORDER FOR WEEK 1

Order 1 bag of substrate for each substrate day unless bin is less than ½ full, then order 2 bags.

2 wood wool (week 1&2)

1 bags bark chips(week 1)

1 Shavings (Week 1)

bed o cobs (week1)

rice (week 1 and 2)

6 rolls TP (week 1)

1 box Post Raisin Bran (week 1)

1 extra yogurt (week 1)

Play time ideas – dancing, singing, spray koolaid in mouth, sweet talking, showing novel objects, bubbles

Easier Orangutan Enrichment Rotation Week 2

	Sunday	Monday	Tues	Wed	Thurs	Friday	Sat
A.M. FOOD	FP woodwool & popcorn	Dry Jello Raisin forage ball to group of choice	FP chips & Rice crispy or cherios	Juicers	Jello boards & balls	Large ice treat	FP chips & pasta
EXHIBIT	Woodwool and worms	Dry jello	FP chips & rice crispy or cherios	Keeper choice	Alfalfa	Large ice treat	Applesauce on branches
P.M. NON FOOD	Clothes and blankets (tie sheets on cage furniture)	TV	Do in a.m. Switch moveable items p.m. mirrors	Shredded paper	Mulch in tubs	Cups and containers	Water Tires (hung or loose)
P.M. FOOD	Cooked rice or bread worms	crickets	Yogurt 1 cup per group	FP w/ shavings & enrich bits	Scatter sunflower seeds (1 c. per group)	Bimples	Applesauce 1 can per group
STARCH	Cooked rice	Pasta	Corn cob	Sweet Potato	Dry mix	Corn	Pasta
PREP WORK	Cook rice Remove PVC	Sub 5ma4 chow for 5038 Shredded paper	Make large ice treats	Make jello boards & balls	sub 1/4 enrich bits for chow amount	Locate newspaper	Acquire 9 phone books Gather browse
CALENDAR	Traps USDA 9	<ul style="list-style-type: none"> ✓ Hay ✓ F.O. ✓ Cooler <i>Remember to order enough timothy for whole week on exhibit!</i>		Traps Straighten B.E. area	Food order USDA 4 Defrost 1 bag of corn		USDA 1 Rinse cooler if needed

FOOD ORDER FOR WEEK 2

Order 1 bag substrate for each substrate day unless bin is less than ½ full, then order 2 bags

2 extra yogurt (week 2)	3 extra applesauce(week 2)	bark chips (week 2)
8 bimples (week 2)	shavings (week 2)	Dry mix (week 2)

Orangutan Enrichment Rotation Week 3

	Sunday	Monday	Tues	Wed	Thurs	Friday	Sat
A.M. FOOD	Browse	Dry koolaid in bleach bottles on cagefront	FP BOC seeds 1C. per group <i>2 T. each M&B</i>	Jello	Juicers with 2x dilute OJ	Large ice treat	FP shavings rice crispy or cherios
EXHIBIT	browse	Juicer in hose hole	scatter 1 cup seeds	Spices on exhibit	Sheets	Large ice treat	FP shavings rice crispy or cherios
P.M. NON FOOD	PVC pieces (ferret logs only for BSMD)	Burlap from clothes barrel 2-pp, 1-m/b, 2-bsmd	Newspaper	Bird Paper	TV TP or phone books	Crib toys	Water & bird mister
P.M. FOOD	Popcorn with dry koolaid (make for ASH too)	Alfalfa	Crickets Dry koolaid on cage front	FP bark with raisin bran	Hard shelled nuts	Frozen yogurt cubes	Bimples
STARCH	Bread	Cooked pasta	Corn cob	Sweet Potato	Rice	Corn	Puffed rice
PREP WORK	Bring 1 juicer & koolaid to office Remove mulch in tubs	Cook pasta Remove cups and containers Sub zupreem chow for 5038	Remove tires Make large veggie ice treats	Freeze yogurt cubes use 1 cont. Remove PVC	Sub 5ma4 chow for 5038		Make jello with small pvc pieces
CALENDAR	Traps USDA 10	<ul style="list-style-type: none"> ✓ Hay ✓ F.O. ✓ Cooler <p><i>Remember to order enough timothy for whole week on exhibit!</i></p>	Straighten B.E. area	USDA 8	Food order USDA 6 Defrost 1 bag of corn		USDA 1 & 2 Rinse cooler if needed

FOOD ORDER FOR WEEK 3

Order 1 bag of substrate for each substrate day unless bin is less than ½ full, then order 2 bags.

shavings (week 3)

5 burlap bags

4 QT. OJ (week 3)

1 extra yogurt(week 3)

8 bimples(week)3

Rice

bed o cobs (week 3)

2 bags hard shelled nuts (week 3)

Bird paper if needed

Orangutan Enrichment Rotation Week 4

	Sunday	Monday	Tues	Wed	Thurs	Friday	Sat
A.M. FOOD	Jello in small PVC pieces	Juicers with Koolaid	FP BOC & dry mix	FP shavings & pasta	Large ice treats	Yogurt on cage front 1 cup per group	FP chips rice crispy or cherios
EXHIBIT	Alfalfa	Crickets Browse	Scatter dry mix	FP shavings & pasta	Large ice treats	Yogurt on brnchs	Scatter rice crispy or cherios
P.M. NON FOOD	**Do in AM** Switch cage items keeper playtime	Clothes & blankets	Boxes & spices	Nuts and bolts toys Fan	Scents or fresh herbs Mirrors	Heat lamp and space heaters	Water Pickle buckets
P.M. FOOD	Popcorn (extra for ASH) Worms	Peanut butter on walls outside cagefront (sticks)	Koolaid powder or ketchup in forage tubes onion sub	Honey on cagefront	Alfalfa Browse	Small ice treats	Dry Koolaid in socks
STARCH	Bread	Dry mix	Corn cob	Pasta	Cooked Rice	Corn	Sweet potato
PREP WORK	Locate sticks (in shrew) Leave cup and cricket note on log for a.m. Gather browse	Remove crib toys Make large ice treats		Sub 5ma4 chow for 5038 Make small ice treats- double dilute nectar	Cook Rice Locate socks		Make jello balls Sub apple hi-fiber for 5038
CALENDAR	Traps USDA 5	<ul style="list-style-type: none"> ✓ Hay ✓ F.O. ✓ Cooler <i>Remember to order enough timothy for whole week on exhibit!</i>	USDA 3 & 4	Traps Straighten B.E. area	Food order Rinse cooler if dirty Defrost 1 bag of corn		USDA 1 Ck capture equip and bull horn

FOOD ORDER FOR WEEK 4

Order 1 bag of substrate for each substrate day unless bin is less than ½ full, then order 2 bags.

spices (week 4)

1 extra alfalfa

bark chips (week 4)

2 extra yogurt (week 4)

shavings (week 4)

bed o cobs (weeks 4)

onion sub on Tuesday (reduce cucumber to 2.5 lbs, order 2 lbs onion)

Play time ideas – dancing, singing, spray koolaid in mouth, sweet talking, showing novel objects, bubbles

Orangutan Enrichment Rotation Week 5

	Sunday	Monday	Tues	Wed	Thurs	Friday	Sat
A.M FOOD	Jello balls	Bleach bottles on cagefront with dry koolaid	FP wood wool & dry mix	Juicers with Kool-aid	FP chips rice	Small ice treats	FP shvngs rice crispy or cherios
EXHIBIT	Alfalfa	Juicer in hose hole	Forage ball with spices & dry mix	Sheets/clothes	Scatter rice	Small ice treats	Scatter rice crispy or cherios
PM NON FOOD	TV/VCR	Crib toys	Clothes and blankets (tie sheets on cage furniture)	Water	Spices <i>Nature CD, low lights, incense</i> (over lunch)	Cups and containers	Fan dustpans= keeper choice
PM FOOD	Popcorn(make extra for ASH) Worms	Alfalfa	Forage tubes w/honey 2T each	Crickets Browse	Double dilute nectar cubes	Bimples	Raisin phone books
STARCH	Bread	Dry mix	Corn cob	Sweet potato	Rice	Corn	Pasta
PREP WORK	Bring 1 juicer/koolaid to office for a.m. Remove pickle buckets	Remove nuts & bolts toys	Get phone books Sub zupreem chow for 5038	Make double dilute nectar cubes and small ice treats	Remove crib toys	Sub 5ma4 chow for 5038	Locate sticks (in shrew) Leave cup and cricket note on log for a.m.
CALENDAR	Traps USDA 7	✓ Hay ✓ F.O. ✓ Cooler <i>Remember to order enough timothy for whole week on exhibit!</i>	Straighten B.E. area	Check safety of all rope and cage furniture.	Food order Rinse cooler if dirty Defrost 1 bag of corn		USDA 1

FOOD ORDER FOR WEEK 5

Order 1 bag of substrate for each substrate day unless bin is less than ½ full, then order 2 bags.

8 bimples (week 5) 1 extra wood wool (week 5) shavings (week 5)
bark chips (week 5) Bird paper (week 1)

Great Ape Enrichment Denver Zoo

All toys are rotated daily.

Food enrichment is presented twice a day. Calorie rich items are restricted to twice a week for orangutans.

We try to have a minimum of 2 days between items.

Dayroom and Yard

Alfalfa

Black kong-fillers (frozen jello, frozen bran, frozen chow, frozen jello and popcorn, frozen oatmeal)

Brown boomer ball

Browse

Bubble bath (children's)

Burlap smeared with applesauce, jello

Cube with holes – fill with diet items

Essential oils

Forage-cereal, pasta, wheat, rice, Zupreem (peanuts, primate o's, monkey crunch), frozen peas, green beans, frozen corn

Frozen applesauce cups

Frozen bran cups

Frozen chow balls

Frozen jello

Frozen juice

Frozen koolade

Frozen pudding cups

Frozen smoothie cups

Green or brown spool

Grey PVC pipes stuffed with frozen popcorn and jello

Hanging popsicles

Koolade jugs

Large marble boomer ball

Large marble jug

Large open disc

Marble barrel

Marble forage barrel

Marble pill

Marble spinner with holes-fill with diet items

Mirror

Natural logs with filler (same as kongs)

Novel food

Perfume

Small marble jug

Small open disc

Treat boards with filler (applesauce, jello, oatmeal)

Yogurt

Contact information: Orangutan keepers- rpietsch@denverzoo.org, cgunther@denverzoo.org



Great Ape Enrichment Holding Area Denver Zoo

For further information, please contact rpietsch@denverzoo.org or cgunther@denverzoo.org.

Alfalfa
Apple jungle
Applesauce
Barrels
Boomer balls
Broom
Browse
Brush
Bubble bath
Bubbles
Bungee cord
Burlap
Burlap bags
Cardboard
Cargo nets
Cereal
Chalk
Clothing
Coconuts
Combs
Computer
Corn jungle
Crayons
Decaf teas
Deep rock bottles
Edible nylabones
Fabric
Feed tubs
Fishing pipes
Frozen bran cups
Frozen chow balls
Frozen jello & popcorn
Frozen juice
Frozen koolade
Fruit juice
Grass hay
Herbs
Honey
Hose water
Jam/jelly sugar free

Jello
Kiddy pool
Kongs
Koolade
Magazines
Milk crates
Minnows
Mirror
Mixed nuts
Mulch
Musical instruments
Non toxic paint
Nuts
Oatmeal
Onion bags
Operant conditioning
Paper products
Pasta
Peanuts
Phone books
Piñata
Pine cones
Plastic containers
Plastic toys
Playback vocalizations
Popcorn
Pumpkins
PVC pipes
PVC puzzle feeders
Radio
Rice
Rice cakes
Ropes
Sand
Scratch
Seasonal food
Shoes
Snow
Spices
Spools
Sports balls
Straw
Stuffed toys
Sugar free candy
Sugar free syrup
Tires

Trash cans
Treat boards
TV and VCR
Whole grains
Wood utensils
Wood wool
Yogurt
Zupreem monkey crunch
Zupreem peanuts
Zupreem primate o's



ENRICHMENT at Durrell Wildlife Conservation Trust (Jersey)

Six Sumatran orang-utans are housed at Durrell in Jersey. They have daily access to each other and some have access to a pair of Lar Gibbons. Individuals are given access to either one or both of the large outside islands on an alternating basis. The list below represents examples of the environmental enrichment features and the activities that are rotated regularly.

Non naturalistic enrichment

- ✚ Ropes – natural fibre in various sizes/rubber ropes and nylon webbing
- ✚ Fixed metal nest hammocks
- ✚ Mobile trawler netting hammocks
- ✚ Old clothes
- ✚ Strong cardboard boxes
- ✚ Coffee sacks
- ✚ Paper sacks
- ✚ Cardboard carpet tubes
- ✚ Non toxic crayons and paper for drawing
- ✚ Ponds - filled with water in summer/wood shavings etc in winter
- ✚ Access to running water via a hose connected to a fixed scaffold pole
- ✚ Swings made from plastic barrels attached to rubber rope/chain
- ✚ Phone books filled with raisins
- ✚ Bubbles
- ✚ Mirror
- ✚ Sponges and water – as some individuals like to clean their enclosure whilst the keepers are cleaning
- ✚ Old brushes - as some individuals like to clean their enclosure whilst the keepers are cleaning
- ✚ Positive reinforcement training
- ✚ Kong toys

Naturalistic enrichment

- ✚ 1:1 Lar Gibbons
- ✚ Straw, hay, woodwool, shredded paper
- ✚ Deep litter of straw in winter
- ✚ Wood shaving forage piles
- ✚ Piles of leaves
- ✚ Seasonal whole food items such as coconuts - others whole plants collected daily from the organic farm e.g. Maize plants, peas, sunflowers, pumpkin/squash, edible flowers
- ✚ Fresh browse including among others – willows, hazel, Lyme, Holm oak, pseudo acacia, bamboos, ash, alder, apple, banana, elm, lemongrass, elephant grass
- ✚ Seasonal herbs including lavender, lemon thyme, mint etc
- ✚ Dry scatter mix comprising All Bran, maize flakes, porridge oats, whole grains, sunflower seed, pine nuts, pumpkin seeds
- ✚ Wet scatter mix comprising soaked soup broth mix, chickpeas, sprouted mung beans
- ✚ Fish in the moat surrounding the islands including roach, rudd, perch and grass carp
- ✚ Red eared sliders in the moat surrounding the islands
- ✚ Vertical logs drilled with holes in and filled with honey
- ✚ Termite mounds for yoghurt/porridge fishing
- ✚ Fixed tube feeders requiring tool use
- ✚ Rotating peanut puzzle feeder requiring manipulation and tool use
- ✚ Rotting/decomposing tree trunks/logs

Good Enrichment Items

- Paper anything (no staples), magazines, newspaper, wrapping paper, paper bags (any size).
- Cardboard boxes (no staples)
- Old clothes (no buttons or zippers)
- Washed panty hose
- Cleaned plastic bottles
- Phone books and regular books
- Tupperware container
- Sheets and blankets
- Stuffed animals (without eyes or beans)
- Used paper towel rolls
- Burlap bags
- PVC feeders and pipes

Bad Enrichment Items

- Used toilet tissue rolls
- Styrofoam (peanuts)
- Rusty wire
- Egg cartons
- Chemical bottles
- Glass anything
- Paper clips
- Dirty milk or juice containers
- Moldy anything
- Metal objects
- Silica dehumidifier packets
- Foil cutter edges
- Pet hair on anything
- Anything with staples
- Packaging tape (with strings in it)
- Aluminum, tin cans, and coffee cans
- Strings or anything frayed

We love enrichment that is clean and on the approved enrichment list!
Please make sure to check all donated items to see that they are washed, and do not contain any other unsafe materials inside them!
Thank you!

What is Enrichment?

Encourage Natural Response In Captive Habitat

Enrichment means encouraging natural behaviors by providing incentives for animals to make choices, be active and explore. This can be accomplished in many ways.

Why Enrichment?

- Stimulate Social Behavior
- Stimulate Intelligent Behavior
- Stimulate Foraging and Food Processing Behavior
- Stimulate Arboreal Behavior
- Stimulate Object-Oriented Behavior
- Stimulate Curiosity Behavior

How Enrichment is provided?

- **Exhibit design:** provides a variety of substrates, levels, and complexities.
- **Training:** interaction with the keeper and proper training allows an animal to choose to participate. This is also useful in gaining the animal's trust and allows the keeper close, visual observations.
- **Olfactory:** a keeper can introduce natural predator or prey scents, in addition to novel smells or pheromone scents.
- **Auditory:** taped sounds or vocalizations can stimulate things that an animal may hear in the wild.
- **Food related:** this is the most widely used form of enrichment. Keepers 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 animals 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 hammocks.

Orangutan Enrichment Q&A:

How many orangutans do you have? Are they Bornean or Sumatran?

- We have 7 orangutans: 3 Borneans, 2 Sumatrans, and 2 hybrids.

-Are these animals kept solitary or in groups? What age groups are they?

- We use flexible social housing for our animals, and by that I mean we change things up according to the needs of the collection. Right now, we have 3 groups: 2.1 Borneans (adult male-21 years old, adult female-26 years old, and 3 year old infant) who are together outside on exhibit, but when inside, the male is separated from the baby and dam. The next group is our 1.2 group: an adult female hybrid-34 years old, who is a surrogate mother to the 1.1 young Sumatrans (2 and 5 years old), and they are together all the time. However, while inside, the youngsters have access to an extra cage that they can get into via a creep door, so that they have a separate space from the adoptive mom. And, the third "group" is our adult male hybrid-28 years old, who is solitary (with visual/auditory/olfactory access to all the others) most of the time, due to the presence of the youngsters in the other groups. He is occasionally allowed together with the adult female hybrid when we can separate her from the two adopted kids.

-What does the enclosure look like?

- The outdoor exhibit is a fairly large, naturalistic, grassy enclosure, with rock walls, a moated area, and a viewing window. It has two large rock structures as well as a large wooden platform with several levels, and there are numerous climbing ropes that allow arboreal access. There is a small, shallow pool that provides fresh running water. They share the exhibit with two Mandarin ducks, many turtles, and koi in the moat. The indoor enclosure is a "C" shaped area with 6 connected rooms with polyurethane benches, PVC horizontal props, mesh walls, concrete floors, skylights and hydraulic doors. There are two doors leading to the outside exhibit, so that animals can be shifted in and out through either door. This allows us to rotate the groups through the rooms, out to the exhibit, and back inside into different rooms in a circular fashion, which is part of their enrichment activity throughout the day.

-What kinds of materials or toys do you offer to keep them occupied?

- I have attached a list of enrichment items that we use and we are always trying to expand our repertoire of items. I will group these items into general categories:

-Substrates: pine bark, wood shavings, Beta chips, sand and any other material that can be put on the ground or surface area. These are great to scatter forage foods through (like rice, peas, cereals, seeds, oats, etc.) and this will encourage micro-manipulation of the substrate to get at the forage foods. The youngsters also play vigorously in these substrates by rolling in them or throwing them around.

-Browse: is provided daily and the orangutans manipulate it, eat it, strip it, wear it, and hang off ropes with it.

-Fabric: sheets, pillowcases and blankets are used in many different ways: they get under the material and play with each other (wrestling, rolling), they use lightweight fabrics as sunshade, they dip it in water and wear it to cool off in the summer, they get under blankets to keep warm in cooler weather, they rip it and manipulate it in innumerable ways. We are careful to avoid/discard frayed fabric and do not give fabric to babies under 2 years old for safety reasons.

-Paper and cardboard: From shredded paper, newspaper and boxes to crepe paper, wax paper and butcher paper, we use a wide variety of paper items that are safe, easy to collect (volunteer donors provide a lot of this stuff for us) and provides a lot of fun for the orangutans. They nest in it, rip it, get into boxes, roll around and play in it various ways...it's versatile and easy to use. Toilet tissue, paper towels, etc. all make inexpensive and fun enrichment items.

-Plastic items: We get empty juice and soda bottles, kitty litter containers, and all sorts of buckets, trays, big barrels and plastic toys of various sorts and these are excellent, reusable enrichment items. They are easily disinfected and provide a wide variety of colorful and interesting items for all ages.

-Scents: We provide various scents to them in many forms: dog and cat "perfumes" like apple, vanilla and berry (all non-toxic) and also use spices like cinnamon, and fresh and dried herbs like basil, parsley or dill weed.

-Activity based enrichment: We give the animals chalk, finger paint and other non-toxic paints to use. They will paint with their fingers, lips, tongue and we have even modified some paint brushes for them to use safely. They will also paint with browse stems. This has grown into a very large program in which we frame the paintings and sell them to use the funding for conservation to help orangutans in the wild. If you would like more information about this program, called "Pongos Helping Pongos", we would be delighted to give you further details about it.

*NOTE: Hay is given daily for nesting material and is not considered to be part of their enrichment; it is a necessity for them. Very occasionally, an equivalent amount of either wood wool/excelsior or shredded paper or even fabric is substituted for hay. We provide about 1 flake of coastal hay per adult for bedding each day. We also give large rubber tubs which they frequently make their night nest inside (at least the females...the males are too big to fit into the tubs!)

-Why do you use these materials or toys?

- We have discovered through trial and practice over the years that orangutans are so intelligent that they may safely have items given to them (like fabric and plastic) that other primates would ingest or use inappropriately. We try to engage all of their senses and allow them to behave in a species-typical manner. We also encourage play behavior, as well as asking them to work for their food by scattering or hiding forage food, biscuits and even produce. Our main motivation for all of the enrichment we give all of our primate collection is: to provide **choice**, give the animals **control** over their environment, and provide **change** in their lives.

-How long are these materials/toys kept in the enclosure?

- We change out enrichment items daily and keep a monthly chart on what is used, so as not to repeat items too often. The plastic items like barrels, crates and bottles are washed and re-used as long as they stay in good shape.

-Do you use different materials/toys for different age groups?

- We use basically the very same enrichment for all age groups with the exception of fabric: we do not give very young babies fabric/pantyhose or anything that might pose a strangulation or entanglement risk.

We also have recently put into use some wonderful latex rubber tubing, available from [McMaster.com](https://www.mcmaster.com) in sections. It's fairly expensive but it is one of the most useful and durable enrichment items we've used.

PRIMATE ENRICHMENT ITEM LIST

The following items can be used safely to enrich all of our primates:

- **Burlap bags (apes only)**
- **Sheets (apes only)**
- **Pillowcases (apes only)**
- **Blankets (apes only)**
- **Boomer balls**
- **Horse balls**
- **Cardboard boxes (no staples)**
- **Paper bags (no staples)**
- **Laundered clothes (no buttons-apes only)**
- **Newspaper**
- **Magazines**
- **Shredded paper (no staples)**
- **Wood wool, or excelsior**
- **Rolls of paper towels**
- **Paper towel tubes**
- **Butcher paper**
- **Phone books**
- **Bubble wrap (for selected apes only)**
- **Milk crates/bread crates**
- **Heavy plastic baskets/bins**
- **Balls of various sizes (tennis balls, basketballs, soccer balls)**
- **Parking cones**
- **Substrates: sand, woodshavings, pine bark mulch, Beta chips, hay**
- **Firehose hammocks**
- **Differing social groupings**

Bad enrichment items include: used toilet tissue rolls, Styrofoam, metal or glass items, egg cartons, paper clips, dirty milk or juice containers, moldy anything, silica dehumidifier packets, pet hair on anything, or anything unclean at all. If you collect enrichment for primates, it should be clean!

THANK YOU SO MUCH FOR THINKING OF THE PRIMATE SECTION!

Orangutans

Items Approved for Enrichment

April 1, 2004

Enrichment Item	Main Exhibit	Day Room	Bedrooms	Comment, if not approved
Grass Sod	X	X	X	
Bark	X	X	X	
Straw	X	X	X	
Hay	X	X	X	
Excelsior / Wood wool	X	X	X	
Clean Shavings	X	X	X	
Hoofstock Shavings	NO	NO	NO	Disease Transmission
Shredded paper	NO	X	X	Un-naturalistic
Leaf Piles	X	X	X	
Tarps	X	X	X	
Burlap Sacks	X	X	X	
Canvas Sacks	X	X	X	
Browse Nets	X	X	X	
Grain sacks	NO	X	X	No plastic insert
Rugs	NO	X	X	Un-naturalistic
Towels	NO	X	X	Un-naturalistic
Blankets	NO	X	X	Un-naturalistic
Sheets	NO	X	X	Un-naturalistic
Pillow Cases	NO	X	X	Un-naturalistic
Clothes	NO	NO	NO	Anthropomorphic
Brown Construction Paper	X	X	X	
Children's Swimming Pools	NO	NO	NO	Break easily
Rubber Tubs	X	X	X	
Plastic Trash Cans and Lids	NO	X	X	Un-naturalistic
Plastic tubs	NO	X	X	Un-naturalistic
Plastic Buckets	NO	X	X	Un-naturalistic
Laundry baskets	NO	X	X	Un-naturalistic
Brown Cardboard Boxes	X	X	X	No writing on the boxes
Cereal Boxes	NO	X	X	Un-naturalistic
Kleenex Boxes	NO	X	X	Un-naturalistic
Sparklett's Bottles	NO	X	X	Un-naturalistic
Plastic Jugs	NO	X	X	Un-naturalistic
2-liter Bottles	NO	X	X	Un-naturalistic
Paper Mache Piñatas	X	X	X	
Bamboo Shakers	X	X	X	

Stuff-it-logs	X	X	X	
Large Raisin Logs	X	X	X	
Small Raisin Logs	X	X	X	
PVC Puzzle Feeders	X	X	X	
PVC Jell-O Tubes	X	X	X	
Kong Toys	NO	X	X	Un-naturalistic
Wicker Baskets	NO	X	X	Un-naturalistic
Gourds	X	X	X	
Coconut Puzzle Feeders	X	X	X	
Pinecones	X	X	X	
Palm Inflorescence	X	X	X	
Giant Bamboo Sheaths	X	X	X	
Corn Husks	X	X	X	
Paper Bags	NO	X	X	Un-naturalistic
Egg Cartons	NO	X	X	Un-naturalistic
Paper Rolls	X	X	X	
Paper Tubes	X	X	X	
Socks	NO	X	X	Un-naturalistic
Barrels	NO	X	X	Un-naturalistic
Boomer Balls Puzzles	10" size	X	X	
Jolly Balls	NO	X	X	Un-naturalistic
Bobbins	NO	X	X	Un-naturalistic
Traffic Cones	NO	X	X	Un-naturalistic
Tires	NO	X	X	Un-naturalistic
Plastic Children's Toys	NO	X	X	Anthropomorphic
Lego	NO	X	X	Anthropomorphic
Plastic Kitchen Utensils	NO	NO	NO	Anthropomorphic
Toothbrushes	NO	NO	NO	Used in Training Sessions
Scrub Brushes	NO	X	X	
Broom Heads	NO	X	X	
Stuffed animals	NO	NO	NO	Anthropomorphic
Telephone Books	NO	X	X	Un-naturalistic
Magazines	NO	X	X	Un-naturalistic
Picture Books	NO	X	X	Un-naturalistic
Posters	NO	X	X	Anthropomorphic
Register tape	NO	X	X	Un-naturalistic
1'-2' Paper Rolls	X	X	X	
Firehose Vines	X	X	X	
Woven Rope Vines	X	X	X	Not Twisted Rope
Rope Hammocks	X	X	X	
Firehose Hammocks	X	X	X	

Canvas Hammocks	NO	X	X	Un-naturalistic
Raffia	X	X	X	
Velcro	X	X	X	
Mirrors	NO	X	X	Under Keeper Direction
Music	NO	X	X	Anthropomorphic
Sounds	X	X	X	
Scents	X	X	X	
Perfume	X	X	X	
Spices	X	X	X	
Bubbles	NO	X	X	Anthropomorphic
Feathers	X	X	X	
Fur	X	X	X	
Snake Sheds	X	X	X	
Finger Paint	NO	X	X	Anthropomorphic
Tempera Paint	NO	X	X	Anthropomorphic
Beads	NO	X	X	Anthropomorphic
Snow	X	X	X	
Ice	X	X	X	
Icicles	X	X	X	
Popsicles	X	X	X	
Frozen Bamboo Sticks	X	X	X	
Frozen Gourds	X	X	X	
Frozen Pumpkins	X	X	X	
Frozen Watermelons	X	X	X	
Crickets	X	X	X	
Mealworms	X	X	X	
Christmas Trees	X	X	X	
Approved Browse	X	X	X	
Tub Gardens	X	X	X	
Enrichment Garden Plants	X	X	X	

X – Item is approved to use with keeper discretion.

Orangutans

Approved Enrichment Treat Items for 4 Orangutans

Enrichment Item	grams	Tbsp	Cup	Comments
Shredded Wheat *	50 g		1	OK
Puffed Rice	16 g		1	OK
Puffed Wheat	16 g		1	OK
Puffed Corn	16 g		1	OK
Puffed Millet	16 g		1	OK
Puffed Kashi	16 g		1	OK
Popcorn	6 g		1	OK
Dried Hibiscus Flowers				OK
Dehydrated Veggies	5 g	3		OK
Bird Seeds				OK
Wheat, Rye Grains				OK
Enrich Bits				OK
Granola Low-Fat	5 g	1		No added sugar.
Snack Trail Mix *	9 g	1		OK
Pasta *	7 g	1		Dried or cooked. Not for diabetics.
Raisins	10 g	1		
Quick Oats	5 g	1		OK. Dry measurement
Mustard	15 g	1		
Crushed Garlic	15 g	1		OK
1 Mashed Potato *	200 g			Not packaged. Fresh. Not for diabetics.
Peanut Butter *	32 g	1		
Almond Butter *	32 g	1		
Cashew/Macadamia Butter *	32 g	1		
Fruit Spread *	20 g	1		
Apple Sauce *	17 g	1		
Sugar Free Juice	8 g	1		Diluted 50/50.
Coconuts - Whole	380 g			OK. Measurement for 1 coconut.

* Use these items very sparingly as they are high in fat and/or carbs.

Orangutans

Approved Enrichment Treats for 4 Orangutans

All the Orangutans are on strict diets in order to keep their weights and sugar levels at optimum levels. Although we do not presently have any orangs with diabetes, we must offer sweet treats very sparingly to avoid future complications.

Minyak has different dietary needs that are controlled strictly by the keepers. Please check with keepers prior to preparing any items for Minyak.

The amounts approved are as follows: Each orang (Minyak excluded) can have 50 g of enrichment treats daily. That's 200 g between all of them. Enrichment treat items will be delivered on a month to month basis. Please follow these weight guidelines for the health of our orangs.

“dry” stuff	shredded wheat*, puffed cereals, popcorn, dried hibiscus flowers, dehydrated veggies, seeds, enrichbits, pasta*, granola, trailmix*, raisins
“sticky” stuff	mustard, quick oats, crushed garlic, garlic mashed potatoes*, fruit spread*, apple sauce*, peanut butter*, almond butter*, cashew/macadamia butter*
“liquid” stuff	50/50 diluted tomato juice, 50/50 diluted sugar free juice

Quick Reference Weights

4 cups shredded wheat	200 g
12 cups puffed cereal	192 g
33 cups popcorn	198 g
2 1/3 cups granola	199 g
1 1/3 cups trailmix	197 g
1 2/3 cups pasta	187 g
1 cups raisins	170 g
2 cups quick oats	170 g
1/3 cup mustard	165 g
1/3 cup crushed garlic	165 g
6 tbsp peanut butter	192 g
9 tbsp fruit spread	192 g
½ cup applesauce	170 g
1 ½ cups diluted juice	168 g

Sample menus

2 cups puffed cereal	32 g
4 cups popcorn	24 g
4 Tbsp granola	20 g
2 Tbsp raisins	20 g
2 Tbsp mustard	30 g
1 Tbsp peanut butter	32 g
4 Tbsp diluted juice	30 g = 188 g
1 cup shredded wheat	50 g
2 cup puffed cereal	32 g
3 cups popcorn	18 g
6 tbsp dehydrated veggies	10 g
2 tbsp pasta	14 g
2 tbsp fruit spread	40 g
2 tbsp applesauce	34 g = 198 g

St. Paul's Como Park Zoo

Primate Enrichment Proposal

Date of Enrichment: _____

Species: _____

Enrichment Item/Activity: _____

Type of Enrichment (*i.e. forage, olfactory, browse, etc.*) _____

Intended for indoor/outdoor display: _____

Intended use of Enrichment Item/Activity: _____

Materials used: _____

Materials supplies by volunteer: _____

Materials supplied by zoo: _____

Notes/ Comments: _____

Approved by Zookeeper

**ST PAUL'S COMO ZOO
PRIMATE ENRICHMENT CATEGORIES & ITEMS**

****Special Note: Not all items can be used with some species. Seek approval prior to use.**

FURNITURE

New ropes
Branches
Crates
Nest boxes
Mister
Swings
Boards
Bamboo poles
Bark chips
Stock tank
Logs
Hanging buckets
Pools
Barrels (inside exhibit unless attached outside)
PVC
Black rubber tubs
Benches
Artificial vines/plants
Tires
Cargo nets
Steel tire rings
Trapeze
Ladder
Spools
Hanging water jugs

TOYS

Cardboard boxes
Pools w/various items: brushes, buckets, sponges & baby soap (orangutans)
Boomer balls
Hard hats
Various balls
Tires
Hula hoops
Stuffed animals
Back packs
Buckets
Strainer
Shovels
Measuring cups

TOYS continued....

Spools
Plastic pumpkins
Playskool toys
Phone books/magazines
Hanging water jugs

**DIET PRESENTATION =novel items;
differing form/consistency**

Blend; mash; steam; dice
Whole fruits/veggies
Frozen diet
Treats: juice, fruit roll-ups...
Nuts
Dried fruit
Bread
Yogurt
Dyed monkey chow
Insect popsicles
Sweet / sour
Jello
Frozen juice/jello
Dye monkey chow colors w/food coloring
Food in melons/squash
Live food: meal worms, crickets
Corn stalks
Pumpkins
Special recipes from primate cookbook

TACTILE

Misters
Bark chips
Excelsior
Shredded paper
Water in tubs/pools
Clothing
Sheets/blankets
Different fabric textures
Door mats/rugs
Stuffed animals
Brushes
Ice / snow

**ST PAUL'S COMO ZOO
PRIMATE ENRICHMENT CATEGORIES & ITEMS**

****Special Note: Not all items can be used with some species. Seek approval prior to use.**

FORAGE = search out food!

Hiding diet in browse
Burlap bags
Hanging in containers/baskets/bags/crates
Hide within other foods Ex. Corn husks,
leaves, hollow melons/pumpkins
Pine cone treats
Paper mache shapes hung on vines
Hanging fabric with the pockets
Log feeders
Hide diet in back packs/bags
Grapevine/grapevine balls
Milk jugs
Wiffle Balls
Wooden board feeders
Woven baskets
Grapevine shapes
Pill containers
Plastic pumpkins
Sandwich boards
Hanging plastic sandwich dish
Treats in substrate
Gum Arabic
Browse
Treat smears
Seeds/nuts
Edible flowers
Insects
Cereal scatter

OCCUPATIONAL = work for treats!

Kongs
Puzzle feeders
Boomer balls
"Pill" Boomer
Keg Boomer
Gourd Boomer
The "Log" Boomer

OCCUPATIONAL = work for treats!

continued...

Knotted fabric/rope (orangutans)
"Treat table" on keeper side
Weave rope over crates/5 gallon buckets
Ball of fire hose
Plastic containers with lids closed
Film containers with lids closed
Wiffle balls
Closed pill containers
Suet feeders
Diet kabobs
Treat tubes
PVC feeders
Treats on opposite side of mesh
Misc hanging feeders

VISUAL

Disco ball
Decoys
Laser pointer
Mirror
Videos

AUDITORY

Terri's instruments
Nature sounds
Play recordings of other animals/primates
Show videos
Play species-specific sounds
Radio

ST PAUL'S COMO ZOO
PRIMATE ENRICHMENT CATEGORIES & ITEMS

****Special Note: Not all items can be used with some species. Seek approval prior to use.**

OLFACTORY

Different scents sprayed on clothes/sheets
Scents placed in plastic containers with
holes in container
Scents sprayed on artificial vines/leaves
Various animal scents: objects from another
animal area
Oils/perfumes
Hunting scents
Spices/extracts

BROWSE

Elm
Grapevine
Mulberry
Bamboo
Herbs
Wheatgrass
Edible flowers
Banana leaves
Newly approved items.....

BEHAVIORAL

Predator avoidance (decoys, carnivore
vocals)
Keeper play sessions
Informal training session
Add new training activity
Painting w/Amanda
Change up shifting
Any species-specific behaviors

St. Paul's Como Zoo
Enrichment Documentation Form
 Year _____

Species: _____ **Individuals:** _____

Date	Type of Enrichment	Activities	Location	Initial
01 Sept.	Auditory			
02 Sept.	Forage			
03 Sept.	Browse			
04 Sept.	Occupational			
05 Sept.	Toys			
06 Sept.	Volunteer Team			
07 Sept.	Diet Presentation			
08 Sept.	Tactile			
09 Sept.	Behavioral			
10 Sept.	Furniture			
11 Sept.	Forage			
12 Sept.	Browse			
13 Sept.	Volunteer Team			
14 Sept.	Olfactory			
15 Sept.	Visual			
16 Sept.	Occupational			
17 Sept.	Toys			
18 Sept.	Forage			
19 Sept.	Behavioral			
20 Sept.	Volunteer Team			
21 Sept.	Furniture			
22 Sept.	Auditory			
23 Sept.	Visual			
24 Sept.	Diet Presentation			
25 Sept.	Tactile			
26 Sept.	Browse			
27 Sept.	Volunteer Team			
28 Sept.	Occupational			
29 Sept.	Olfactory			
30 Sept.	Toys			

Como Zoo and Conservatory Primate Enrichment Observation Form

Date: _____ Species: _____ Observer: _____

Time of Observation: Start: _____ End: _____

Enrichment Item(s)/Activity: _____

Circle type of enrichment: forage, olfactory, auditory, other-describe _____

Comments: _____

Time spent with Item/Activity: _____ minutes

-Did animal(s) go right to the enrichment? Yes No Comments:

-Were all animals in the exhibit interested in the enrichment? Yes No Comments:
If no, which animals were not interested? _____

-Did any animals respond negatively to the enrichment? Yes No Comments:
If yes, please explain _____

-Were visitors present? Yes No If yes, did interpretation take place? Yes No

-Weather: **Temp:** _____ **Precip:** none rainy snow **Sky:** clear partly cloudy overcast
Wind: none light strong

UTAH'S HOGLE ZOO
APPROVED ORANGUTAN ENRICHMENT

Sensory: Auditory, Visual, Tactile, Olfactory

5 gal bucket noise maker (lid w/ no rubber seal)

Antlers

Audio recordings

Body sprays

Bubble bath

Bubble machine

Bubbles

Camel hair

Chalk

Crayons-non toxic

Deer & Elk hides (see hide protocol)

Diluted extracts

Disco ball (outside of exhibit)

Essential oils

Feathers

Feces (check approved list)

Game caller

Goldfish in bowl (outside exhibit)

Hand held or box fan (outside of exhibit)

Lava lamp (outside of exhibit, downstairs only)

Looky Lou Mirror (Otto Environmental)

Lotions

Mirror mobile (outside of exhibit)

Mirror-outside exhibit

Noise Maker

Non-toxic paint

Perfume tester pages

Pinwheels (outside of exhibit)

Plexiglass shield

PVC Clacker (Leather Elves): Must be mounted in a way to limit destruction

Rainmaker Stick (outside of exhibit)

Scent sacs

Snake shed

Snow

Spices-sage, cinnamon, oregano

Sprinkle scents on clothes/substrates

Squirrel call

Straw from Gorillas

Sun catcher (presented outside of enclosure)

TV
Urine
Videos
Wiggly Giggly sound stick
Window treatments (on outside of glass; paper, paint, stickers, etc.)

Foods and Feeding

4 " PVC Treat Tube (Leather Elves): Must be mounted in a way to limit destruction
Amazing Graze
Barrels
Black tub on post
Boomers
Burlap treat bag
Cardboard boxes
Cardboard tubes
Crates (chained together or hung outside exhibit)
Donut w/ holes
Edible flowers (in some type of device)
Fishing Stations
Frozen plastic bottles of water
Frozen PVC tubes
Fruit/Vegetable fiber from juicer (in some type of device)
Gourd Feeder
Grasshoppers
Healthy edible (all natural dog chews)
Honey dipper (4 in PVC pipe suspended on door with food oatmeal, peanut butter, rice)
Humus (in some type of device)

Ice blocks
Jell-O (in some type of device)
Jello sticks
Kegs (Kracor)
Kool aid ice cubes
Kool aid liquid (in some type of device)

Lemur balls (in some type of device)
Log Feeder by Otto Environmental
Mealworm barbell (mounted)
Natural juice ice cubes
Oatmeal (in some type of device)

Paper mache pockets
Paper plates with food smeared on it
Pills
Pillowcases

Pinecone treat feeders
Plain ice cubes
PVC Cap Puzzle
PVC Feeder
PVC Square Feeder
Raisin bran (in some type of device)
Sandbox feeder (1/4 barrel outside exhibit)
Spool w/ holes
Sunflowers
Tubs of water
Water cooler jug puzzle feeder
Wooden post w/ rubber tub

Manipulative Items/Toys

12x12 cube (from Sanctuary Supplies)
70 or 100 gallon utility tank for fishing, etc.
Black plastic corrugated drain pipe
Black tubs
Bobbins
Books
Boomer balls
Boxes wrapped in newspaper
Burlap
Cardboard boxes/tube
Chalk
Clothing items (no uniforms, restrictive areas opened, zippers, buttons, tags, bands, etc. removed OFF EXHIBIT ONLY)
Cups/plastic bottles
Fire hose pieces
Floating items in water
Garbage cans/lids
Gloves (OFF EXHIBIT ONLY!)
Gourd (from Kracor)
Hula hoop (cut in 1/2) straws (AKA Reach toys)
Kiddy pool
Magazines
Milk crate/crates

Newspaper
Nyla Frisbees
Paper bags
Paper mache' piñatas
Paper towels
Pill (from Kracor)
Pillow case
Pink plastic squares

Plastic automotive funnels (in neutral colors)
Plastic Keg from Kracor or Desert Plastics
Puzzle barrels-50 gallon hard plastic syrup containers
Rock barrel-made from 50-gallon hard plastic syrup barrel cut in half
Rubber auto tire
Sand box
Sheets
Shredded paper
Telephone books
Toilet paper
Towels
White barrel
Wooden logs

Physical Environment: visual barrier, climbing structure, substrates, rest/sleep areas

Access to holding
Cover windows with Paper (peek-a-boo)
Dirt
Excelsior
Fire hose hammock
Hula skirt visual barrier (glass fronted exhibit)

Mister
Mud
Rope Ladder
Sand
Sod
Spagnum moss
Swings
Toilet paper exhibit
Varied substrates (small amount)
Visual barrier

Behavioral/Social

Animal pinwheels (outside of enclosure)
Approved Training Programs
Artificial snake (presented outside of enclosure)
DAF animals
Decoys (outside of enclosure)
Keeper games
Mineral Oil treatments (approved keepers only)
Peek-a-boo
Pink flamingos (presented outside of enclosure)
Predator decoy
Puppet

Remote control toy
Stuffed animals (presented outside of enclosure)
Tail wagger
Tug-o-war (between keeper/animal or animal/animal)
Water from hose
Weasel ball
Window walker

“Acara”ORANGUTAN (baby)

See as posted for adults above w/ these exceptions:

- No burlap or pillowcases
- All chains tightly sleeved- no gaps
- Crates tied w/ fleece only
- No plastic bottles