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# SAFETY – YOUR FRIEND IN BH





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# SCHEDULE FOR THE DAY

Topic	Presentation time	Hands on time	Presenters
Introduction/Learning Outcomes	10 min		
Navigating the approval process	10	15	
Taxonomic concerns	10	15	
Best Practices in Safety	10	15	
Common Questions/Answers	10	15	
Resources and Wrap-up	10 min		





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# TAKE HOME MESSAGE

**Ownership:** You are responsible for the consequences of the training and enrichment you provide for the animals in your care

**Balance:** Safety does not compromise success, safety compliments success.

**Intentionality :** You must be intentional in your approach to safety. Do not take safety for granted, you must be aware at all times, check, recheck and confirm. Stay focused, be purposeful anytime they are around animals do not be distracted by observers (guests or otherwise).





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# 5 STEPS TO SUCCESSFULLY NAVIGATE THE APPROVAL PROCESS

## ***Know your audience (Zoo Manager, Behavioral Manager, Veterinarian, Director)***

- ❖ Why does your zoo have an approval process?
- ❖ Who has to approve?
- ❖ What does the approving manager value most?

## ***Setting goals***

- ❖ What is the purpose
- ❖ Consider species' natural history
- ❖ Consider individual animals' medical and behavioral histories
- ❖ What are limitations of the setting and/or research,
- ❖ Consider safety for animals and personnel.





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# NAVIGATE THE APPROVAL PROCESS...CONT

## ***Accumulate as much information about the enrichment or training activity as possible***

- ❖ Have you done this before (used this enrichment, or food item, procedure?)
- ❖ Has another department on grounds done this? Has another zoo done it?
- ❖ If it has been done can you get as much documentation as possible
  - ❖ How successful was it?
  - ❖ Were there issues at other places? If so, confront those issues now
- ❖ How much will it cost
  - ❖ Not just \$\$
  - ❖ Keeper time





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# NAVIGATE THE APPROVAL PROCESS...CONT

## ***Be your own critic***

- ❖ What are the stumbling blocks?
- ❖ What have you done to avoid these faults?
- ❖ How will you deal with unexpected?
- ❖ Is there a better alternative?

## ***Articulate the benefits***

- ❖ Does this help with current safety issues? Create a safer environment?
- ❖ How much of a time savings is this
- ❖ Will it make other procedures easier (thus saving time)
- ❖ Will it save \$
- ❖ Will it make your animal more visible
- ❖ Will it encourage more naturalistic behaviors?
- ❖ Good PR
- ❖ New Enrichment is NOT a benefit





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# TAXONOMIC SPECIFIC CONCERNS

- ❖ This is by no means a comprehensive list of safety concerns nor a complete list of species.
- ❖ Our goal is to get you thinking about the safety and trainers at your facility.





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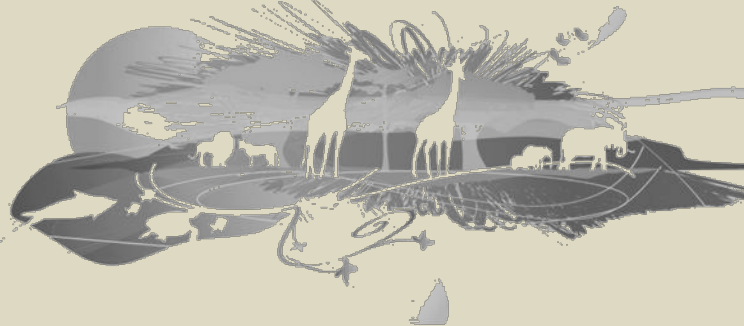
# Enrichment & Mixed Species Habitats

## ❖ Bird Safety

- Birds like to stick their heads in things.
- They can also get their feet or toes stuck in holes, handles or mesh.
- Birds like to peck at things, especially bright shiny objects.
  - Ingestion could cause metal toxicity or gastrointestinal blockage.

## ❖ Hoofstock Safety

- Many hoofed animals will rub on or head butt enrichment.
  - If holes large/deep enough, horns or antlers may get stuck.
    - Especially dangerous with anchored enrichment, potential for hornament (horn + ornament) which animal is able to remove or could expire due to capture myopahty trying to remove object.







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# Enrichment & Mixed Species Habitats Continued.....

- ❖ Many bird toys contain rope or fabric, many hoofstock incessantly chew and/or lick things, this may cause a potential ingestion hazard, entanglement, or accidental hanging.
- ❖ Keep in mind giraffe & okapi are very adept at using their tongues to unscrew, unhook, or unlatch any hardware holding enrichment together.
- ❖ Be cautious feeding/enriching with BOP in mixed species exhibits.
  - Make sure only bird species has access to BOP, as can cause serious health issues for other inhabitants.
  - Hoofstock consuming mammal protein have been linked to contracting Bovine Spongiform Encephalopathy (BSE) and Creutzfeldt-Jakob Disease (CJD).





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# Is it possible to enrich mixed species habitats?

❖ **YES**, but you need to manage the situation to maximize the appropriate enrichment options for all species while minimizing safety concerns.

❖ Options for enriching:

- Offer non-safe enrichment while (if) species are locked in at night.
- Incorporate “creeps” or areas where only animals of a certain size or physical capability can access the area with species specific enrichment.
- Use the animals’ natural abilities, ex: use height of giraffe to offer enrichment above reach of other species.
- Use locking nuts and/or Loctite to secure mounting hardware.  
If using rope or chain, limit the length or house it inside PVC.



# Bird Training



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## ❖ Know your bird!

- What are its precursors?
- Imprinted on people?

## ❖ Train free-contact or protected contact?

## ❖ Potential dangers:

- Strong beaks (parrots, macaws)=crushing injury
- Sharp beaks (cranes, storks, hoopoes, honeyeaters)=poking/stabbing injuries, watch your eyes!
- Feet/nails (ostrich, cassowary, cranes, raptors)
- Wings/flippers=flogged
- Bird spook easily? If yes, where might it fly....power lines, pools, road, another exhibit?





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# More on birds....

- ❖ Do you have the appropriate tools?
  - PPE needed, i.e leather gloves?
  - Target easily destroyed/edible?
  - Delivery of reinforcement
    - Tongs
    - Hand
    - Other ideas





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# Hoofstock

## ❖ Know your hoofstock!

- What are its precursors?
- Is it imprinted on people?

## ❖ Potential dangers:

- Kicking-watch for various angles:  
forward, backward, sideways
- Hooves
- Teeth
- Horns
- Easily spooked-animal may bolt, jump, or lunge
- Fence integrity

## ❖ Tools for training

- Avoid targets with holes
- Target should hold up to occasional nibble (no foam or squishy material)
- Foot targets for hoofcare or x-rays must be stable & sturdy.





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# Carnivore Enrichment

- ❖ Label enrichment items appropriately, so items are used with appropriate animals. Ex. Some cats are not allowed cardboard as they'll ingest it which could lead to an obstruction.
- ❖ When using cardboard, remove all tape & cardboard has glue, monitor closely, mouths have been glued shut before (otters, polar bears).
- ❖ Minimize aggression between cage mates by providing several of the same item and scatter around the exhibit.
- ❖ If animal tends to initially be afraid of new items, don't place the item in an area that may inhibit shifting.
- ❖ Watch for holes animal may get teeth or claws could get stuck in or break off.
- ❖ When using ropes or chains, cover with PVC to try to prevent entanglement/hanging.





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# Carnivores continued....

- ❖ Only carcass feed from reliable sources Have carcass feeding policy in place to ensure proper handling.
- ❖ Use caution when offering hides, if give too often, may cause stomach irritation or intestinal blockage which may require surgery.
- ❖ Too much perfume could be overwhelming in indoor exhibits/holding or too much of a spice could be toxic or cause digestive issues.
- ❖ When using feces, bedding, antlers, feathers, or fur, check for parasites.
- ❖ Monitor reactions to mirrors, may cause aggression.
- ❖ If items are secured to parts of the exhibit, make sure they can withstand the full force of the animal pulling, jumping, and/or hanging on it.





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# Carnivore Training

## ❖ Know your animal!

- Aggressive tendencies toward trainer, other animals?
- Precursors

## ❖ Familiarize yourself with area safety protocols.

## ❖ Be aware of your location in relation to the animal at all times.

- How much give does the mesh have?
- How big are the gaps of the bars/mesh?

## ❖ Reinforcement should be given in a way to reduce the risk of biting

- Hand feeding

vs

- Feed sticks/tongs







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# Primate Enrichment

❖ Primates need psychological & behavioral enrichment!

**\*\*Required by USDA\*\***

➤ Without it, their behavior may become aberrant and repetitive, some may indulge in self mutilation or become aggressive towards cage mates and/or keepers.

❖ Does the animal brachiate or is more ground dwelling .

❖ Does it have opposable thumbs or use tools?

❖ Limit dietary enrichment, as may lead to obesity, tooth decay, allergies, gastric problems.

❖ Social concerns of subordinates being “trapped” in inescapable places, negative interactions between animals.





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# Primate Training



- ❖ Know your animal!
  - ❖ What's your role in the social structure?
  - ❖ Will training cause aggression in group?

- ❖ Wear PPE
  - ❖ Mask, gloves, etc.

- ❖ All loose items secured to prevent entanglement?
  - ❖ Hair, jewelry, lanyards, pouches, tools, etc.

- ❖ Keep your focus on the animal....
  - Don't turn your back on the animal or bend down during training.
  - Minimize or eliminate distractions or conversations with others.
  - Watch placement of your body in relation to the animal.

- ❖ Reinforcement should be given to, not taken by the animal.





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# Elephant Enrichment

- ❖ Keep in mind, their intelligence, size and strength when creating enrichment for elephants!
- ❖ Well adapted to manipulate their environment in order to meet their needs.
- ❖ Habitat Enrichment should provide for space for it's denizens, as well as variety of choices and opportunities to interact with their environment and conspecifics and/or other species.
- ❖ Offering different scents is an excellent way to introduce novel stimuli, as elephants have a great sense of smell.
- ❖ The challenge of pushing, pulling, shoving, throwing, climbing, rubbing, and manipulating objects is excellent enrichment.





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# Elephant Training

- ❖ One of three types of management styles are used today-Free Contact, Protected Contact, and Confined Contact.
- ❖ Some tools used in training, such as elephant hook, may seem severe; however, when used properly these tools provide trainers/handlers a safe and humane way to communicate with their elephants.
- ❖ “It is the responsibility of today’s elephant handlers to learn the accepted/recommended practices and to pass this skill on to subsequent generations of handlers” ( Elephant TAG).





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# Marine Mammal Enrichment & Training

❖ Traditionally receive much of their enrichment through social and cognitive means since they tend to be show animals rather than exhibit animals.

❖ Know your animal!

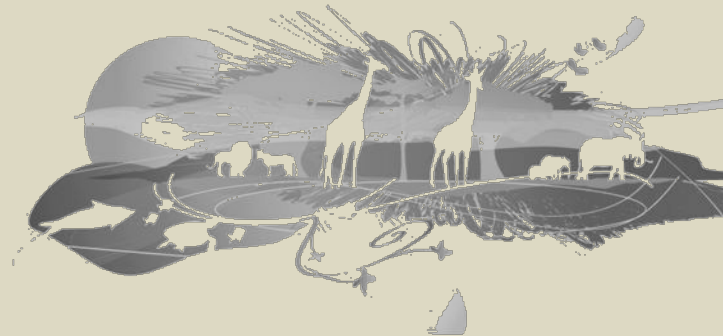
- History
- Precursors
- Aggressive tendencies

❖ When training in the water, the animal has the upper hand.



❖ Know your exit routes

- While this is true for many species, aquatic habitats really limit your escape routes.





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# COMMON SOLUTIONS TO COMMON PROBLEMS

- ❖ It takes too long to go through the approval process
- ❖ We have too many restrictions which have been put in place
- ❖ Management always over-reacts when things go wrong
- ❖ My co-workers operate in an unsafe manor
- ❖ We have never used this \_(insert item or food, etc.)\_\_\_\_\_ here before
- ❖ We have a no contact rule at our zoo
- ❖ How do I document my enrichment
- ❖ My supervisor asks why am I even doing that?
- ❖ There are no resources available (money, knowledge, etc.)
- ❖ What safety precautions should I use when creating enrichment devices in house?
- ❖ Which training tools are commonly used?

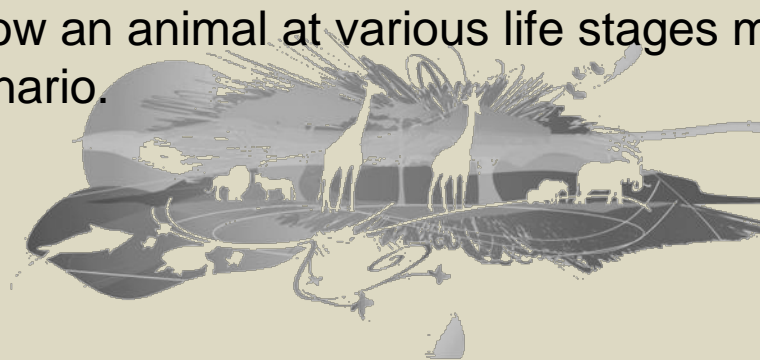




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# 7 BEST SAFETY PRACTICES

- ❖ Build time into your task to make sure everything is safe.
  - Take one last minute to double check everything.
  - Take a minute to gather yourself and think through the activity.
  
- ❖ Test drive it before you implement it
  - Try out that enrichment, have other keepers try it, walk through the training process, etc.
  
- ❖ Double check your device before each use.
  - Just because an enrichment device has been given a multitude of times, it doesn't mean that it is 100% safe. Look over devices for new potential hazards each time used & check hardware
  - Take the time to observe!
  - Be aware of how an animal at various life stages might interact with an item, or in a scenario.





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# BEST SAFETY PRACTICES CONT.

- ❖ Have someone watch your training sessions and/or video tape yourself.
  - Always watch your body in relation to the animal during a training session. Complacency can lead to accidents and injuries.
  - Placing too much trust in an animal can lead to injuries.
  
- ❖ Go into each interaction with a clear head
  - Read the species behavioral state indicators as well as individuals personality traits to know when it is a good time to train or a good time to stop.
  
- ❖ Be aware of what you are feeding
  - What is the long-term dietary safety concern of using "treat" foods versus diets in routine training and enrichment scenarios.
  - Know browse species - don't just feed it because someone else put it there
  - Offer food in a safe way - tongs, feeding sticks, juice/milk squirt bottles







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# AVAILABLE RESOURCES

- ❖ AAZK Behavioral Husbandry Committee
- ❖ [www.AAZK.org](http://www.AAZK.org)
- ❖ Animal Keeper Forum
- ❖ Youtube
- ❖ Training Tails column
- ❖ AKF
- ❖ [www.AZH.org](http://www.AZH.org)
- ❖ Tool use videos or websites
- ❖ Other workshop attendees
- ❖ Shape's safety database
- ❖ Environmental Enrichment Risks Article
- ❖ Enrichment Gone Wrong Article
- ❖ Ramirez Book
- ❖ TAG behavior lists
- ❖ TAGs
- ❖ SSPs





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# THANK YOU!!

