Proceedings of the 44th Annual National Conference of the American Association of Zoo Keepers, Inc.

August 27th – 31st

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AAZK Professional Certificate Courses

Zoo Nutrition
Zoo Nutrition Professional Certificate Course Sponsored By:

Keeper Excellence in Research
Keeper Excellence in Research Professional Certificate Course Sponsored By:

Reptile and Amphibian Husbandry
Reptile and Amphibian Husbandry Professional Certificate Course Sponsored By:
Developing an Open Forum for Zoological Ethics at Your Facility

Hilary Colton
Chelsea Grubb
How we started

• Goal: to provide a professional environment to discuss topical ethics issues in the field
• White paper to management
• Encouraged to create a productive way to facilitate discussion in a structured environment
Copenhagen Zoo, 2014

• Marius the giraffe culled and fed to collection carnivores
  • Population management euthanasia
  • Culling
• Public education
Zoological Ethics

• Zoological ethics is a fluid term that is difficult to define, even within the field

• Different organizations have their own definitions or descriptions

• Depends who you ask!
AZA’s Code of Ethics

- Promote the interests of wildlife conservation, biodiversity, and animal welfare to the public and to colleagues.
- Endeavor at all times to improve zoos and aquariums.
- Display the highest integrity, the best judgment or ethics possible, and use of professional skills to the best interests of all.
Subjects within Zoological Ethics:

• Animal welfare
• Husbandry practices
• Animal management methods
• Training methods
• Zoos in the media
• Public education
Our First Topic Choice

• Wanted to talk about Copenhagen
• Decided to do Blackfish
  • National Zoo does not exhibit cetaceans
• Provided for multiple directions of discussion not directly related to National Zoo
First topic- Blackfish

• Background research
  • Watched film multiple times
  • Scholarly articles on stress hormones of cetaceans in captivity, social behavior of orcas in wild, longevity studies, etc.
• Public forums following the film of animal husbandry experts
First topic- Blackfish

• Materials sent out to staff who RSVP’d confirmation
  • OSHA citation following SeaWorld safety review
First topic - Blackfish

• Only paid zoo was invited (keeper level up through Zoo Director)
  • 56 people RSVP’d, but we had attendance of 68
• Encouraged viewing the film before the discussion, but not required
• Introduction was read out at the start of discussion, then question was posed:

“Given all of this information and research, should orca whales continue to be housed in captivity?”
First topic- Blackfish

**Code of Conduct:**
This is an open discussion of facts relating to the topic at hand. At no point should this be a “therapy session” for airing grievances about protocols or policy at NZP.

1. Presume positive intent.
2. Respect each other’s opinions.
3. Wait to speak. Speak with civility.
4. Leave this room with respect for one another and the work that we do.
5. What is discussed in this room stays in this room.
6. Accept that AZA has made a public statement about this topic, which we will respect.

**The opinions discussed in this forum will NOT:**
1. Create an official or unofficial stance/statement for NZP.
2. Create talking points to use with the public.
3. Create talking points to discuss with other staff, interpreters, or volunteers.
Blackfish Discussion Debrief

• Introduction was very long (1716 words) with no visual aide
  • Very dry, mostly factual statements
• Initially no response to trigger question
  • We had arranged plants ahead of time for this situation
• Discussion did not go as broad as we had expected
• Well-received
Second topic- Population Management

• Offshoot of original topic choice
• Comfortable with topic that could be applied to staff’s management practices
• National Zoo had hosted David Powell for a presentation regarding this topic in hoofstock management the month prior
Second topic- Population Management Euthanasia

• Refers to the practice of using euthanasia as a population management technique
  • This is used more frequently with egg-laying animals
  • Supporting opinions feel that providing animals the opportunity to breed and raise offspring provides them with good welfare
  • Unwanted offspring are typically culled at the point of natural separation
Second topic - Population Management

• Materials sent to attendees ahead of time:
Population Management Debrief

- Introduction was shorter this time, and accompanied by a PowerPoint
- No trigger question posed
- Used predetermined fictional scenarios
Ambassador Animal PowerPoint presentation
Building Your Own Forum

• Topics- what do you think would be beneficial for your animal care staff to discuss?
• Format- will you pose examples or pose a trigger question?
• Venue- casual roundtable or in an auditorium setting?
• Pre-discussion materials?
Building Your Own Forum

• How much time do you think you need?
• You can decide your audience:
  • Volunteers/docents?
  • Interns?
  • Non-animal care?
• Control the discussion
  • Moderator?
  • Code of Conduct?
  • Fact check?
  • Time limits for comment?
Hidden in Plain View: Blending Enrichment Into Naturalistic Environments

Amy Newman
&
Rebekha Delgado
Workshop Timeline

- Topic presentation (30 minutes)
- Silicone stamp making demonstration (25 minutes)
- Vine making demonstration (50 minutes)
- Question and answer session (10 minutes)

***BREAK (30 Minutes)***

- Sculpting epoxy tutorial (1 hour 45 minutes)
- Question and answer session (15 minutes)
Telling a Seamless Story...

• Each area of Disney’s Animal Kingdom® tells a specific story with a focus on the intrinsic value of nature.

• One way of achieving this is by having different aspects of the environment work together to create an immersive experience.

• Anomalies are things that stand out and detract from how we experience our surroundings.

• Enrichment is vital to the care of our animals, but the way it looks and how it is placed can distract from the narrative.
Design Elements

• Blending
  • Does it make sense in that space?
  • Even small nuances can have a large impact.
  • Considerations: quantity, coloration, shape, size, & texture.

• Theming encompasses all of these things.

• Always remember the tale you want to tell and what you want guests to remember.
Enrichment Development Group

- Group of like-minded individuals who are passionate about enrichment
- Everyone possesses a unique ability

Goals:
- Bolster & diversify our skillsets
- Become resources for our teams
- Innovate
Partnership Development

- Strengthening relationships within Animal Programs
- Inter-departmental partnerships
- External partnerships
Behavior-based Enrichment

• To increase complexity, consider the behavioral goal(s) you are attempting to achieve when creating enrichment.

• Focus on functional behaviors (socializing, feeding, self-maintenance, playing, etc.).

• Chains of behavior: Behavior occurs as a sequence of individual behaviors that follow one another without delay and are linked together to accomplish a goal.
Materials Discussion

- We will be using a variety of Smooth-on products.
- Use Reynolds Advanced Materials for product knowledge & distribution, as well as technical assistance.

- Safety discussion.
Stamp Making: Step 1 - Seal
Stamp Making: Step 2 - Apply
Stamp Making: Step 3 - Cure
Thank you!

We would also like to thank everyone at Disney’s Animal Kingdom®, Disney’s Animal Kingdom Lodge, Reynolds Advanced Materials, and Smooth-on for their continued help and support throughout this endeavor.

Amy.d.newman@Disney.com
Rebekha.a.delgado@Disney.com
Animalenrichment.org
Reynoldsam.com
Materials used in this workshop include the following items:

**Silicone Stamp Materials**
- Super Seal (to pre-treat porous surfaces)
- Ease Release 200 (general silicone-based release agent for non-porous surfaces)
- Rebound 25 (two-part silicone mix)
- Thi-vex Silicone Thickener (add this to Rebound after first coat to thicken the material)
- Silc-Pig Silicone pigment to add color to layers of Rebound

**Epoxy Materials**
- Free Form Habitat Fire Safe with Folding Powder (the sculpting epoxy we used to cover our feeders)
- So-Strong Color Tints (to add color to Habitat)

**PPE**
- Work in a well-ventilated area!
- Chemical resistant nitrile gloves
- Masks
- Eye protection
- Smocks

**Other theming supplies**
- Plenty of mixing buckets
- Paint stirrers, big spoons, or something to remove Habitat from its containers
- Water cups & water
- Paintbrushes
- Stamps or anything else that you want to use to make impressions in your Habitat
- Parchment paper helps to protect your item while it’s drying if you have to lay it down

**Clean Up**
- Supersolve Pro Wipes
Contact and resource information:

Amy.d.newman@disney.com
Rebekha.a.delgado@disney.com
Animalenrichment.org
Reynoldsam.com
How AAZK Professionals Can Get Involved in SAFE: Saving Animals From Extinction

Rob Vernon, Senior VP, External Affairs at Association of Zoos and Aquariums

For decades, conservation organizations around the world, including Association of Zoos & Aquariums (AZA) accredited facilities, have been working to protect animals and habitats. Still, animals that we have the ability to save continue to decline and disappear. With so many species at risk, a new approach to conservation is needed. AZA SAFE: Saving Animals From Extinction was created to do exactly this — to harness the collective power of AZA and its members to lessen species decline around the world in a more impactful way. And to do so strategically — moving from working on many smaller projects, to large and coordinated efforts. SAFE takes a long-game approach to conservation, knowing that each year the activities enacted by SAFE will build on those in the years before. There are many opportunities for animal care professionals to become involved in SAFE. From serving as project coordinators for the many Conservation Action Plans for the 10 SAFE Signature Species to sharing SAFE information with the public, this Open Topical Workshop will present information on SAFE and explore the many ways AAZK professionals can become involved in the effort.
Crisis Management for Zoo and Aquariums

AAZK Conference
Washington, DC
August 27-31, 2017
Kelly Murphy
(Just call me “Murphy”)

• Began zoo career in 2002 at Santa Barbara Zoo until 2007
• Hired at the North Carolina Zoo in 2007
  • Promoted to Senior Keeper – North Carolina Zoo in 2013
  • Current President of North Carolina Zoo AAZK Chapter
  • Current Co-Director of 5K race for local AAZK Chapter

• Current Chair of National AAZK Safety Committee
• Current member of the AZA Safety Committee; ICS Adoption of Member Institutions & Active Shooter Sub-Committees
• Volunteer Fire Fighter - over 10 years
• 7 FEMA Certifications
Applied Crisis Management
Learning Objectives

• What is working for us / against us
• Being “Aware”
• Definition and explanation: **COOP** (Continuity of Operation Plan) and **IC** (Incident Command)
• Development of animal escape & person in dangerous animal areas drills w/progressive complexity; recapture, immobilization or dispatch plans
• Statistics of active shooter; facility response
• Threat levels of bomb/bio-terrorism threat; facility response
• Defining response to public emergencies
What Is Working FOR Us?
What Is Working AGAINST Us?
YOUR Awareness Level

- **Condition White** – State of unawareness. No idea of your surroundings, tired or distracted.

- **Condition Yellow** – A heightened state of alertness. You are relaxed but alert.

- **Condition Orange** – Trouble shows its ugly head. In a state of preparedness to respond to the situation.
YOUR Awareness Level

• **Condition Orange** – Trouble shows its ugly head. In a state of preparedness to respond to the situation.

• **Condition Red** – A time to react. FIGHT OR FLIGHT. If you have preplanned, thought about it, talked about it, and practiced for it via mental imagery your decisions and actions are likely to be smooth and rational.
Crisis Management Planning

Creation of Emergency Response Teams (A-Team/E-Team)

- **Written Response Plan and Training – A (Animal) Team**
  - Recapture, immobilization, dispatch

- **Written Response Plan and Training – E (Emergency) Team**
  - Injuries, public behavior and HazMat response
  - Incorporation of local authorities into ERT response
  - Active shooter response
  - Bomb/bio-terrorism response
  - Employee training (action/injury/evacuation)
Determine Emergency Response

**A/Team**
- Animal Escape
- Person in Dangerous Animal Exhibit
- Animal Aggression/Injury

**E/Team**
- Keeper Injury
- Public Injury

**Local Authority**
- Public Behavior
- Active Shooter
- Act of Terrorism
- Emergency Evacuation
- Animal Escape*
Continuity of Operations (COOP) is the initiative that ensures that Federal Government departments and agencies are able to continue operation of their essential functions under a broad range of circumstances including all-hazard emergencies as well as natural, man-made, and technological threats and national security emergencies.
Incident Command

The Incident Command System (ICS) is a management system designed to enable effective and efficient domestic incident management by integrating a combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure.

ICS is normally structured to facilitate activities in five major functional areas: command, operations, planning, logistics, Intelligence & Investigations, finance and administration.
INCIDENT ORGANIZATION CHART (ICS 207)

1. Incident Name: Free Fun Friday 2017

2. Operational Period:
   Date From: 8/11/2017  Time From: 10:00 am
   Date To: 8/11/2017    Time To: 4:00 pm

3. Organization Chart

   - Operations Section Chief
   - Staging Area Manager
   - Vehicle Group Supervisor
   - Parking Strike Team
   - Visitor Parking Strike Team
   - Satellite Parking Strike Team
   - Bostoon Police & Mass State Police
   - Traffic Strike Team
   - Administration Support Team
   - Pedestrian Flow Branch
   - Admission PF Group Supervisor
   - Visitor Service Center
   - Gift Shop
   - Security Strike Team
   - Playground Strike Team
   - Gift Shop Strike Team
   - Guest Experience Branch Director
   - Members Strike Team
   - EMT Task Force
   - EMS
   - Planning Section Chief
   - Situation Unit Leader
   - Renovation Unit Leader
   - Demolition Unit Leader

4. Prepared by: Anne Knapp
   Position / Title: Planning Section Chief
   Signature
   Date / Time: 8/12/2017

Span of control
The appropriate number of individuals that can be effectively managed
Should be between 3 and 7, with 5 direct reports being ideal.
Incident Command

- **Incident Commander** - the person responsible for all aspects of an emergency response

- **Public Information Officer (PIO)** - the communications coordinator or spokesperson

- **Safety Officer (SO)** – the person who will develop and recommend measures for assuring personnel safety,
Incident Command

- **Liaison Officer** - responsible for coordinating multi-agency responses to some type of incident.

- **Operations Section (OPS)** - is responsible for the management of all operations directly applicable to the primary mission.

- **Planning Section (PSC)** - is responsible for the collection, evaluation, dissemination and use of information about the development of the incident and the status of resources.
Incident Command

• **Logistics Section** – is responsible for providing facilities, services and material, in support of the incident.

• **Finance/Admin Section** – is responsible for fiscally manage the incident, including claims processing, contracting, and administrative functions.
Animal Escape & Person in Dangerous Animal Area
Animal Escape

Any event when a zoo collection animal is no longer securely enclosed by the primary containment.
Person in a Dangerous Animal Area

A person (zoo visitor, employee, work contractor, or other) is observed or reported to have entered a dangerous animal habitat while the dangerous animal(s) are present.

This includes situations when an employee accidentally enters any dangerous animal habitat with the animal present (via internal containment breach, staff miscommunications, shift door left open, etc.)
What Dictates Dangerous?
A/Team Emergency Response Planning

• Develop Procedures
  • Identify *species* or *conditions* that will cause an animal to be “dangerous”

• **Dangerous** dictates:
  • Level of response
  • Recall vs recapture vs dispatch*
  • Local authority response
A/Team Emergency Response Planning

- Communication
  - Codes or colors – or as it is
  - Radio protocol

- Angle of Approach
  - Quiet, controlled, coordinated
  - Forming perimeter

- Action Plan
  - Recall
  - Recovery
  - Distraction / Rescue
  - Dispatch
  - Remembering all plans are “fluid”
Emergency Response Training

- **Monthly Drills**
  - Plan review
  - Recovery options
  - Post drill follow up

- **Shooting Team**
  - Weapon selection
  - Ammunition selection
  - Quarterly field qualification

- **Keeper Roles**
  - Training
  - Animal knowledge

- **Facility Roles**
  - Media relations training
E/Team Emergency Response

• Incident Command
  • Radio communication control

• Public Safety
  • Evacuate or shelter
  • Closing facility
E/Team Planning and Response Injury Treatment

• **Emergency 911 Notification**
  • E/Team notification

• **Triage**
  • Training w/outside agencies
  • Staff first aid training
  • Staff training and equipment
  • Good samaritan act*
Active Shooter
Active Shooter

The United States Department of Homeland Security defines the active shooter as "an individual actively engaged in killing or attempting to kill people in a confined and populated area; in most cases, active shooters use firearms and there is no pattern or method to their selection of victims."
Active Shooter FBI Study

The FBI identified 160 active shooter incidents between 2000 and 2013 (non-zoo related).

• An average of 11.4 incidents occurred annually with an increasing trend from 2000 to 2013.
• An average of 6.4 occurred in the first 7 years studied and an average of 16.4 occurred in the last 7 years.

UPDATE

According to the FBI, 2014 and 2015 each saw 20 active shooter incidents. That’s more than any two-year average in the past 16 years, and nearly six times as many as the period between 2000 and 2001, the starting point for the FBI’s review.

In all, not including any of the shooters, 92 people were killed and another 139 wounded in active shooter incidents last year and the year before, according to the FBI.
Active Shooter FBI Study

Casualties:

• 486 people were killed in the 160 incidents and 557 were wounded.

• In at least 15 incidents, family members were targeted resulting in 20 killed and 1 wounded

• In 16 incidents, current, former or estranged wives as well as current or former girlfriends were targeted, resulting in 12 killed, 3 wounded and 1 unharmed. In addition 42 others were killed and 28 wounded.
Active Shooter FBI Study

Locations:

• Commerce – 73 (46%)
  • Businesses open to pedestrian traffic - 44 (27.5%)
  • Businesses closed to pedestrian traffic - 23 (14.3%)
  • Malls – 6 (3.8%)
• Education – 39 (24%)
• Government – 16 (10%)
Mentality of an Active Shooter

- Desire to kill and seriously injure without concern for his safety or threat of being caught

- Normally has intended victims and will search them out

- Will continue to move throughout building/area until stopped by law enforcement, suicide or stopped by victims
Characteristics Associated with Violent Behavior

• Impatient, stubborn, low tolerance for frustration
• Loner/withdrawn; poor coping skills; frequent mood swings
• Problems with authority; suspicious of others
• Views world as hostile/threatening; blames other for problems
• Poor employment history; ignored by co-workers
• Obsessed with weapons, violent movies, music and games
Notifications

• Staff & Emergency Notifications

  • Making sure emergency personnel are being called; Police, SWAT, Fire, EMS
  • Making sure employees are being notified; radio, telephone, mass text
  • Making sure guests are being notified; employees, monitors
Procedures

• Close down facility

• Facility in complete lockdown

• Evacuate within safe limits

• Shelter in place
RUN

• If there is an escape path, attempt to evacuate
• Evacuate whether others agree to or not
• Leave your belongings behind
• Help others escape if possible
• Prevent others from entering the area
• Call 911 when you are safe
HIDE

• Lock and/or blockade the door
• Close blinds and block windows
• *Silence your cell phone (but keep it on!)*
• Hide behind large objects
• Remain very quiet
• If you are with others attempt to keep them as calm and quiet as possible
FIGHT
As a last resort, and only if your life is in danger!

• Attempt to incapacitate the shooter
• Act with physical aggression
• Improvise weapons
• Commit to your actions

• Do the best that you can – choose to survive!!
911
When Law enforcement arrives

• Remain calm and follow instructions
• Keep your hands up and visible at all times
• Avoid pointing or yelling
• Know that help for the injured is on its way
• The priority of SWAT is to stop the shooting as quickly as possible
• They may be dressed in regular patrol uniforms, or they may be wearing external bulletproof vest, Kevlar helmets, and other tactical equipment
911
When Law enforcement arrives

• Safety corridors may be established. This may be time consuming
• Remain in secure areas until instructed otherwise
• You may be searched
• You may/may not be escorted out of the building by law enforcement personnel
• After evacuation you may be taken to a “holding area” for medical care, interviewing, counseling, etc.
A/Team Emergency Response Planning

• Communication
  • Codes or colors – or as it is
  • Radio protocol

• Public Safety
  • Evacuate within safe limits
  • Shelter in place
  • Closing facility
E/Team Planning and Response

Active Shooter

• Emergency Notification
  • Staff notification
  • Radio protocol

• Lockdown Procedures
  • Evacuation
  • Shelter-in-place

• Run, Hide, Defend...
# Active Shooter

## COPING WITH AN ACTIVE SHOOTER SITUATION
- Be aware of your environment and any possible dangers
- Take note of the two nearest exits in any facility you visit
- If you are in an office, stay there and secure the door
- Attempt to take the active shooter down as a last resort

## PROFILE OF AN ACTIVE SHOOTER
An active shooter is an individual actively engaged in killing or attempting to kill people in a confined and populated area, typically through the use of firearms.

## CHARACTERISTICS OF AN ACTIVE SHOOTER SITUATION
- Victims are selected at random
- The event is unpredictable and evolves quickly
- Law enforcement is usually required to end an active shooter situation

## HOW TO RESPOND WHEN AN ACTIVE SHOOTER IS IN YOUR VICINITY
### 1. Evacuate
- Have an escape route and plan in mind
- Leave your belongings behind
- Keep your hands visible

### 2. Hide Out
- Hide in an area out of the shooter’s view
- Block entry to your hiding place and lock the doors
- Silence your cell phone and/or pager

### 3. Take Action
- As a last resort and only when your life is in imminent danger
- Attempt to incapacitate the shooter
- Act with physical aggression and throw items at the active shooter

## CALL 911 WHEN IT IS SAFE TO DO SO

## INFORMATION
- Location of the active shooter
- Number of shooters
- Physical description of shooters
- Number and type of weapons held by shooters
- Number of potential victims at the location
Bomb/Bio-Terrorism Threat
Phoned Threat

• Remain calm and **DO NOT HANG UP**
• If possible, signal other staff members to listen and notify Zoo Security/Supervisor
• Write down the **EXACT** wording of the threat
• Keep the caller on for as long as possible
• Record, if possible
• Be available for interviews with law enforcement
Verbal Threat

• If the perpetrator leaves, note which direction they went
• Notify your supervisor and Zoo security/supervisor
• Write down the threat exactly as it was communicated
• Note the description of the person who made the threat
Verbal Threat

• Note the description of the person who made the threat;
  • Name (if known)
  • Gender
  • Body size (height/weight)
  • Distinguishing features
  • Race
  • Type/color of clothing
  • Hair and eye color
  • Voice (loud, deep, accent, etc.)
Emailed Threat

• Leave the message open on the computer

• Notify Zoo security/supervisor

• Print, photograph or copy the message and subject line; note the date and time
Written Threat

• Handle the document as little as possible
• Notify Zoo security/supervisor
• Rewrite the threat exactly as is on another sheet of paper and note the following:
  • Date/time/location document was found
  • Full names of any personnel who saw the threat
  • Secure the document; **DO NOT** alter the item in any way
Suspicious Item

A suspicious Item is defined as any item (package, vehicle) identified as potentially containing explosives, and IED, or other hazardous material that requires bomb technician diagnostic skills and specialized equipment for further evaluation.

Suspicious indicators are based upon the prevailing and/or communicated threat, placement, and proximity of the item to people and valuable assets. More tangible aspects include, but are not limited to, unexplainable wires or electronics, other visible bomb-like components, unusual sounds, vapors, mists or odors.

From Department of Homeland Security
If Suspicious Item is Found

• **DO NOT** touch, tamper, move the item
• Immediately report item to Zoo security and supervisor
• Zoo security and management will;
  • Ensure area is secured and cleared of personnel
  • Contact 911 and ensure they are briefed on situation
**BOMB THREAT CALL PROCEDURES**

Most bomb threats are received by phone. Bomb threats are serious until proven otherwise. Act quickly, but remain calm and obtain information with the checklist on the reverse of this card.

**If a bomb threat is received by phone:**
1. Remain calm. Keep the caller on the line for as long as possible. DO NOT HANG UP, even if the caller does.
2. Listen carefully. Be polite and show interest.
3. Try to keep the caller talking to learn more information.
4. If possible, write a note to a colleague to call the authorities or, as soon as the caller hangs up, immediately notify them yourself.
5. If your phone has a display, copy the number and/or letters on the window display.
6. Complete the Bomb Threat Checklist (reverse side) immediately. Write down as much detail as you can remember. Try to get exact words.
7. Immediately upon termination of the call, do not hang up, but from a different phone, contact FPS immediately with information and await instructions.

**If a bomb threat is received by handwritten note:**
- Call
- Handle note as minimally as possible.

**If a bomb threat is received by email:**
- Call
- Do not delete the message.

**Signs of a suspicious package:**
- No return address
- Excessive postage
- Stains
- Strange odor
- Strange sounds
- Unexpected delivery
- Poorly handwritten
- Misspelled words
- Incorrect titles
- Foreign postage
- Restrictive notes

**DO NOT:**
- Use two-way radios or cellular phone; radio signals have the potential to detonate a bomb.
- Evacuate the building until police arrive and evaluate the threat.
- Activate the fire alarm.
- Touch or move a suspicious package.

**WHO TO CONTACT (select one)**
- Follow your local guidelines
- Federal Protective Service (FPS) Police
  - 1-877-4-FPS-411 (1-877-437-7411)
- 911

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**BOMB THREAT CHECKLIST**

Date:  
Time: 

Time Caller
Hang Up:  
Call Received: 

**Ask Caller:**
- Where is the bomb located? (Building, Floor, Room, etc.)
- When will it go off?
- What does it look like?
- What kind of bomb is it?
- What will it explode?
- Did you place the bomb?  Yes  No
- Why?
- What is your name?

**Exact Words of Threat:**

---

**Information About Caller:**
- Where is the caller located? (Background and level of noise)
- Estimated age
- Is voice familiar? If so, who does it sound like?
- Other points:

<table>
<thead>
<tr>
<th>Caller’s Voice</th>
<th>Background Sounds:</th>
<th>Threat Language:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accent</td>
<td>Animal Noises</td>
<td>Incoherent</td>
</tr>
<tr>
<td>Angry</td>
<td>House Noises</td>
<td>Message read</td>
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<tr>
<td>Calm</td>
<td>Kitchen Noises</td>
<td>Taped</td>
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<tr>
<td>Clearing throat</td>
<td>Street Noises</td>
<td>Irrational</td>
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<tr>
<td>Coughing</td>
<td>Booth</td>
<td>Profane</td>
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<td>Cracking voice</td>
<td>PA system</td>
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<td>Crying</td>
<td>Conversation</td>
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<td>Deep</td>
<td>Music</td>
<td>Well-spoken</td>
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<tr>
<td>Deep breathing</td>
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<td>Disguised</td>
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<td>Distinct</td>
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<td>Static</td>
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<td>Stutter</td>
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<tr>
<td>Soft</td>
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**Other Information:**
LOW RISK

Lacks Realism: A threat that poses a minimum risk to the victim and public safety. Probable motive is to cause disruption.

• Threat is vague and indirect
• Information contained within the threat is inconsistent, implausible, or lacks detail
• Caller is definitely known and has called numerous times
MEDIUM RISK

Increased Level of Realism: Threat that could be carried out, although it may not appear entirely realistic.

• Threat is direct and feasible
• Wording in the threat suggests the perpetrator has given some thought on how the act will be carried out
• May include indications of a possible place and time
• Indication the perpetrator has details regarding the availability of components needed to construct a bomb
• Increased specificity to the threat ("I’m serious" or "I really mean this!")
HIGH RISK

Specific and Realistic: Threat appears to pose an immediate and serious danger to the safety of others

• Threat is direct, and realistic; may include names of possible victims, specific time, and location of device
• Perpetrator provides his/her identity
• Threat suggests concrete steps have been taken toward carrying out the threat
• Perpetrator indicates they have practiced with a weapon or have had the intended victim(s) under surveillance
What YOU Should Know...

• Training with local squad can only help your facility;
  • Knowledge of areas vehicles won’t be able to travel
  • Radio failures, if any
  • Determine what animals are in what areas and building structure

• Have Crisis Response Plan, Bomb Threat Plan and Crisis Management Plan on hand

• Have phone numbers of ATF, FBI as well as local authorities

• Responding units for a bomb/bio-terrorism call;
  • Bomb squad
  • Fire department (Fire Trucks, EMS, Battalion Chiefs)
  • Command vehicles from 2-3 fire departments and law enforcement
  • Law enforcement to provide security
  • Federal law enforcement
Post-Emergency ERT Action

• **12-24 Hours Post Incident**
  • Assemble critical staff
  • Not to determine fault
  • Proactive incident review
    • Deficiencies
    • Corrective Action
    • Counseling
    • Re-training
Key Statements

• “What we know so far is.....” (only give out factual statements decided by PIO)

• “We are working with (name of local/state authorities) to review what happened.”

• “We will continue to provide additional information as it becomes available.”
ERT Planning and Response Media (PIO)

• Speaking with “one voice”
• Know your facility’s “message”
• Filling in the huge hole of social media and the Web
• Updating multiple agencies, more social media
• Different audiences require different channels
• **Recognize the frailty of the human body and spirit!**
Special Thanks To

- Terry Hairston – Defend and Protect Inc., Wake County, NC

- John Bolland – Assistant Fire Marshall/Bomb Technician, Prince William County, VA

- Brad Miller - Incident Management Coordinator, Fairfax County, VA

- Karen Auman – Safety Officer, North Carolina Zoo

- Guy Lichty – Mammal Curator, North Carolina Zoo
Extra Special Thanks To

• Sara Venable, Dominic Dongilli, Caroline Spencer, Kara McSweeney – My Amazing Safety Committee

• Ed Hansen and Bill Steele – The Dynamic Duo

• The North Carolina Zoo & North Carolina Chapter AAZK

• My Friends and Family – For putting up with me
Helpful Websites

- [https://emilms.fema.gov/is906/assets/ocso-bomb_threat_samepage-brochure.pdf](https://emilms.fema.gov/is906/assets/ocso-bomb_threat_samepage-brochure.pdf)


- [https://www.dhs.gov/bombing-prevention-training](https://www.dhs.gov/bombing-prevention-training)

- [https://www.dhs.gov/counter-ied-awareness-products](https://www.dhs.gov/counter-ied-awareness-products)


- [https://youtu.be/5VcSwejU2D0?list=PLUra6uw6CXK9SNLZeddcLiufDY5OfnMpU](https://youtu.be/5VcSwejU2D0?list=PLUra6uw6CXK9SNLZeddcLiufDY5OfnMpU)
QUESTIONS?
An In-depth Look at the Unique Morphology and Husbandry of Two-Toed Sloths
Debra Dial, National Aquarium

The National Aquarium’s Rain Forest exhibit has been home to Linne’s two-toed sloths (*Choloepus didactylus*) for the past ten years. Our initial 1.2 sloths were released into the densely planted, .15 acre, mixed species, walk-through exhibit in 2007. Free roaming within the exhibit, the sloths are managed with minimal intervention. To date, six offspring have been produced and many unique observations, including the birth process, have been noted.

This workshop will focus on natural history, social interactions, morphological considerations and captive husbandry. Topics will include safe handling techniques, non-invasive ways to encourage/discourage sloth movement, methods for identifying individual animals, visual sexing techniques, diets, and hand rearing protocols.
Site Planning + Design
Balancing the Demands of People, Land and Animals
The goal of this workshop is to challenge norms of the zoo design process using techniques we rely on while refreshing our voices and finding inspiration from new perspectives.

Objectives:

• To develop an empowered voice by familiarizing or refreshing what you know about the design process, tools and techniques;

• Tap into your own expertise, be inspired by others in smaller group discussions on behavior-based design modifications.
Site planning is the art of arranging structures on the land and shaping the spaces between, an art linked to architecture, engineering and landscape architecture, and city planning.

Kevin Lynch and Gary Hack, *Site Planning*
Landscape Architects?
163 acres

888 parking spaces

874 employees, volunteers, researchers

2.6 million individual visits

31,000 visitors on a peak day
Animals
Land
People
Animals
Land
People
Refine the design language
Enhance visitor experience
Integrate informal learning
Promote sustainability
Design is the search for forms that satisfy a program. Kevin Lynch and Gary Hack, *Site Planning*
Design Process

- Project Definition/Initiation
- Research + Site Analysis
- Design
- Construction Documents
- Construction
- Maintenance/Development
- Post-Construction/Evaluation
Enriched habitats result from an enriching design process.

J. Coe
The S.P.I.D.E.R. Framework

S – Setting Goals
P – Planning
I – Implementation
D – Documentation
E – Evaluation
R – Re-adjustment
Setting Project Goals

PROJECT GOALS

*Provide an immersive, multisensory visitor-friendly experience that orchestrates Wow! moments and opportunities for interaction and reflection.*

*Inspire visitors to find a connection to the wonder of migratory birds.*

*Provide the best avian animal care to support bird well-being, enrichment, diet, husbandry, and health maintenance of a diverse collection of species.*

*Build opportunities for special experiences and events that promote education, social interaction, and revenue generation.*

*Provide an efficient, durable and low-maintenance facility that demonstrates and validates sustainable principles.*

Smithsonian
National Zoological Park
Conservation Biology Institute
Behavior Based Design

Environmental choice:
natural gradients, artificial gradients, social choices
Opening Scene

Kid (visiting zoo): "This animal is boring!"
Lion (living at zoo): "I'm bored."
Kid "It doesn't do anything!"
Lion "There's nothing to do. Meal time isn't until sunset."
Kid "... and look how fat that lion is! Bet he couldn't catch any zebras."
Lion "Should I mark my turf again? Naw, I've already done that 12 times today. Wish I could see what's going on next door." (Lion wanders back to shady spot in corner of exhibit).
Kid "That does it. Now I can't even see him. Next time I'll go to the mall!"
Observation and evaluation make design a continuous self-correcting process. As a result, behavioral enrichment evolves from remediation to facilitation in the creation of artificial habitats that have diversity and choice... Coe 1992 – define SPIDER model
Get same angle @ cheetahs
Diversity & Inclusion in Animal Care Sciences

HILARY COLTON, SMITHSONIAN NATIONAL ZOOLOGICAL PARK
DEVIN MURPHY, SMITHSONIAN NATIONAL ZOOLOGICAL PARK
CRAIG SAFFOE, SMITHSONIAN NATIONAL ZOOLOGICAL PARK
JUAN ROGRIGUEZ, SMITHSONIAN CONSERVATION BIOLOGY INSTITUTE
ISH GANAME, MEMPHIS ZOO AND AQUARIUM
KATIE ZIMMERMAN, GREATER BALTIMORE AAZK
Diversity vs. Inclusion

Diversity
the collective mixture of differences and similarities that include, for example, individual and organizational characteristics, values, beliefs, experiences, backgrounds, preferences, and behaviors

Diversity is being invited to a dance;
Inclusion is being asked to dance once there

Inclusion:
the achievement of a work environment in which all individuals are treated fairly and respectfully, have equal access to opportunities and resources, and can contribute fully to the organization’s success
Workplace diversity

What it means to be “diverse” continues to evolve

Diversity in the workplace is not only skin-deep
- Ethnicity
- Gender
- Sexual orientation
- Age
- Socioeconomic background
- Education
- Language
- Religion or lack thereof
Diversity in Animal Care

5 different zoos/aquariums from across the US

- **Northeast**
  - 83 keepers, 7% diverse

- **Southeast**
  - 57 keepers, 3.5% diverse

- **Rocky Mountain**
  - 100 keepers, 10% diverse

- **Midwest**
  - 5 keepers, 0% diverse

- **Southwest**
  - 35 keepers, 17% diverse

“Just as biodiversity strengthens natural systems, the diversity of human experience strengthens our conservation efforts for the benefit of nature and all human beings.”

- Audubon Society
Diversity in Animal Care

AAZK 2016 Survey

- 641 responses
  - 95.1% White/Caucasian
  - 3.28% Hispanic/Latino
  - 2.5% Asian/Pacific Islander
  - 1.9% African American/Black
  - 1.4% American Indian or Alaskan Native

Ethnicity of Animal Keepers in AAZK

- White/Caucasian
- Hispanic/Latino
- Asian/Pacific Islander
- African American/Black
- American Indian or Alaskan Native
Unconscious bias

**Prejudices we have but are unaware of**

- **Affinity bias**: the tendency to prefer people like ourselves
- **Halo effect**: think everything someone you like does is good
- **Perception bias**: stereotypes or assumptions about certain groups make it difficult to be objective about members of that group
- **Confirmation bias**: seek information to support pre-existing beliefs or assumptions
- **Microaggression**: small act of non-physical aggression based on bias and stereotypes
- **Group-think**: bias that occurs when people try to fit in to a group by mimicking others or holding back opinions
  - Leads to organizations losing out on creativity and innovation
Awareness

- A significant portion of our job is educating the public about what we do and why it is important.
- Cultural challenges exist in not thinking of working with animals as a career.
- A lack of awareness directly leads to a lack of diversity.
- People will never pursue a career that does not occur to them as an option.
Costs to visit

- Zoo admission ranges from $0-119.00 per person in US
- Annual zoo membership can be as high as $299.95 for a family

DC estimated field trip cost

<table>
<thead>
<tr>
<th>Bus per child</th>
<th>$12.00</th>
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<tr>
<td>(Require chaperones)</td>
<td></td>
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<td>(Additional cost of lunches)</td>
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Cost for 60 kids = $720.00
Outreach

- What is the most common kind of educational outreach you do?
  - Keeper chats
  - Field Trips
  - Camp groups

- What schools do you partner with?

- Career Day opportunities

- Where are you advertising volunteer or internship opportunities?
How can we improve diversity and inclusion?
Resources

“Diversity in STEM- What it is and why it matters,” Scientific American

Science of Diversity- National Institutes of Health
https://diversity.nih.gov/

Mentoring/Sponsorship
“Traditional” path to leadership...
1. It’s not about the animals... it’s about the people

10 Hard-learned lessons
1. It’s not about the animals… it’s about the people
2. Know yourself. Empathize with others.
1. It’s not about the animals... it’s about the people
2. Know yourself. Empathize with others.
3. Trust your team.
1. It’s not about the animals... it’s about the people
2. Know yourself. Empathize with others.
3. Trust your team.
4. Master communication, conflict resolution & feedback.

Challenging coworkers are an opportunity. You can learn more from them than anyone.

Choose your battles.

Almost 50% of keepers say biggest job challenge is with their coworkers/team
Over 50% of managers say biggest job challenge is with their coworkers/team
1. It’s not about the animals... it’s about the people
2. Know yourself. Empathize with others.
3. Trust your team.
4. Master communication, conflict resolution & feedback.
5. Solve your own boredom.

Find your own projects.
Find a way to re-engage or find a new challenge.
See projects through.
1. It’s not about the animals... it’s about the people
2. Know yourself. Empathize with others.
3. Trust your team.
4. Master communication, conflict resolution & feedback.
5. Solve your own boredom.
6. Find a mentor.

Be up front about your career goals.
Seek advice & assistance.
Modesty can get you overlooked.
1. It’s not about the animals... it’s about the people
2. Know yourself. Empathize with others.
3. Trust your team.
4. Master communication, conflict resolution & feedback.
5. Solve your own boredom.
6. Find a mentor.
7. Establish your work/life balance.

Giving 120%
Find a role model
Make your partner a real partner
Role of men at home
Don’t leave until you leave
Coming back from leave
10 Hard-learned lessons

1. It’s not about the animals… it’s about the people
2. Know yourself. Empathize with others.
3. Trust your team.
4. Master communication, conflict resolution & feedback.
5. Solve your own boredom.
6. Find a mentor.
7. Establish your work/life balance.
8. Read, read, read.
1. It’s not about the animals... it’s about the people
2. Know yourself. Empathize with others.
3. Trust your team.
4. Master communication, conflict resolution & feedback.
5. Solve your own boredom.
6. Find a mentor.
7. Establish your work/life balance.
8. Read, read, read.
9. APPLY.

Confidence?
Misperception of the hiring process
Don’t fear failure: embrace the experience
Ask for help (remember modesty?)
1. It’s not about the animals... it’s about the people
2. Know yourself. Empathize with others.
3. Trust your team.
4. Master communication, conflict resolution & feedback.
5. Solve your own boredom.
6. Find a mentor.
7. Establish your work/life balance.
8. Read, read, read.
9. APPLY.
10. Understand the big picture.
Greatness in YOU.
You’ve got the skills. You’re smart, hard-working, committed, trustworthy & resilient.

Engaging the greatness in others.
Good with guests, empower your team, embrace conflict resolution, good communicator.

Understanding where the organization is going.
What is your role in moving the organization forward?
The Shovel & The Pike Pole

Kelly Murphy
Kelly Murphy
(Just call me “Murphy”)

- Began zoo career in 2002 at Santa Barbara Zoo until 2007
- Hired at the North Carolina Zoo in 2007
- Promoted to Senior Keeper – North Carolina Zoo in 2013
- Current President of North Carolina Zoo AAZK Chapter
- Current Chair of National AAZK Safety Committee
- Current member of the AZA Safety Committee; ICS Adoption of Member Institutions & Active Shooter Sub-Committees
- Over 10 years experience as a volunteer Fire Fighter; VA & NC
- 7 FEMA Certifications
Role Models

Charlie’s Angels (version 1)  Bionic Woman (version 1)
History of Women in Fire Service

- Molly Williams in New York City, NY – 1815
- WW II women across the country entered volunteer fire service
- Wildland Fire Service first all female crew in 1940’s
- Sandra Forcier in Winston-Salem, NC – 1973 (Public Safety Officer)
History of Women in Fire Service

- Judith Livers in Arlington, VA – March 1974 (First Woman Career Firefighter)
- Genois Wilson in Fort Wayne, IN – 1975 (First African-American Female Firefighter)

Now more than 11,000 hold career firefighter/officer positions and 49,000 hold volunteer positions in the United States.
What We Know About Women in Zookeeping

• Typical European Zookeepers in the early 1900’s were white, always male and often young

• Successful Zookeepers, “as a rule, are sympathetic and intelligent”

• Typical US Zookeepers were mostly male, who were either janitors, or cowboys/farmers.
Women Working in a “Mans” World?

• Sat down with over 40 different women in both fields and asked them the same questions. (4 fire fighters)

• Top positions still held by men. (AZA, Chiefs)

• Older generation have male mentors, younger generation struggles to find mentors.
Women Working in a “Mans” World?

- There is an equal amount of male to female and female to female competition.
- Balancing work vs. home has been a challenge.
- Lots of challenges with stereotypes.
- When asked who has inspired/motivated them.....
In Closing

• How far we have come

• Where we are going

• What’s next…
SAVING SPECIES THROUGH SIGNS, SOUNDS, SCULPTURES, AND MORE!

Cheryl Braunstein, Manager of Exhibit Planning and Development, Smithsonian’s National Zoo

Some zoo and aquarium staff save species through their care of animals and their participation in active conservation programs. But visitors also have a role in saving species; they discover the difference they can make when you effectively engage them in your exhibit graphics and interpretation.

When a keeper or volunteer isn’t present to interact with visitors, well thought out exhibit interpretation can carry your messages. With local sign shops and online printing resources becoming increasingly accessible and affordable, it’s now possible for even the smallest institution to produce good looking, high quality signage—if you know what to ask for. Through this proposed workshop, participants will get a basic overview and learn some tips of the trade when it comes to developing graphics and exhibit interpretation.

Through presentations and exercises led by exhibit developers, designers, and fabricators from the National Zoo’s Exhibits team, participants will gain a foundation in how well-crafted and accurate text, attractive and accessible design, and the use of objects and media can effectively communicate messages that enhance the outreach from staff and volunteers. Participants will be introduced to exhibit evaluation, try their hands at writing text, and gain a fundamental understanding of best practices in exhibit design. They will also get a primer on materials, learn some pros and cons about interactive solutions, and understand why exhibit maintenance must be considered when making interpretive decisions.
SO YOU THINK YOU WANT TO HAVE KIDS....

- The Decision
  - Is there ever really a “perfect time” to have kids?
  - What is factoring into “your” decision

- Making a Plan
  - Doctors and diapers and daycare...Oh my!
  - Things to think about
YOU ARE PREGNANT...  Now what?
TELLING YOUR LEADERS AND CO-WORKERS

- Who needs to know, and when?
- How to tell them?
- HR and Leave Policy
- Communication, Communication, Communication
NOT FEELING 100%...TAKING CARE OF YOURSELF AND YOUR BABY

- The joys of morning sickness...in a zoo
- Body aches and pains, Fatigue
- Clothing
- Working in tight spaces
- Dr. Appointments
- Eating right and often
- Taking time for you!
YOU HAD A BABY!
CHALLENGES

- Maternity Leave
- FMLA
- Coverage at work
- Planning ahead
  - Child care
  - Back up plan
  - Sick time
REST AND RECOVERY

- Taking time to heal and adjust
- It can wait— the balance of staying connected and disconnected
- How to slowly organize life
- Support system (mom group, family, friends, medical)
- Healthy eating, low impact exercise when you’re ready & cleared by Dr.
HI HO HI HO IT’S BACK TO WORK I GO
HOW DO I GO BACK?

- Ease back into it if possible
  - 1-2 days/week, ½ days, etc...you never know until you ask!
- Be communicative with HR/Supervisor and have paperwork aligned
- Adjusting your timing to include child care drop off/pick up when necessary
PUMPING

- Where, when, how, and you know why!
- Time and timing
- Guilt
- Know your rights and communicate needs
COMMUNICATING YOUR NEEDS

- Honest & Open, Understanding in both directions
- With work- Higher ups, coworkers, etc.
- Home and Family
- Aligning time off- work, childcare, back up/family, etc.
- Embrace & support each person’s needs.
  - Everybody has something important to them
  - Having a family is an asset
ON THE PLUS SIDE...

- Transferable skills
- Having a career can make you a better parent
- Having children can make you a better teammate/leader
- Perspective
- Priorities
YOU GOT THIS!

- You are totally rockin’ this! You have your vibe going and are in your routine…so what’s next?

- Enjoy it while it lasts. It is important to take a breath when things are grooving and stay in that moment.

- While you are doing that…you also need to start planning for the next phase.
ROOM FOR MORE?

- When and how many do you want?
- How many can you afford?
- Other things to consider
I just had this kid! How can they already need to go to school?!?

- Challenges due to work hours/days
- Before and after school options
- Activities
SHOW ME THE MONEY!

- Daycare
- School age care
- Activities
COMPROMISE — LEARN TO LOVE IT

- Schedules
- Working in a less desirable area because it has a better schedule
- Putting “your” needs on hold for the better of the family
IT’S A BALANCING ACT

- “Me” time
- “Mommy and Daddy” time
- Ideas for making all that happen
THE FUTURE

- Career change? Move to Management
  - Thinking long term, what is best for both you and your family
- There are options
  - Think outside the box