

Evenomators

The Realm of the Deadly Snakes of North America

Interpretive Program

1.0 Introduction Motifs

Enter the **Realm of the Deadly Snakes of North America** through simulated cave walls and ancient ruins with displays depicting many of the worldwide icons and motifs related to snakes. Included in this component are pictographs and petroglyphs from several continents, as well as bas reliefs and carved sculpture. Photos and graphics illustrate the wide variety and longevity of man's relationship with snakes.

Learning objectives:

- Suggest that Man has a love/hate relationship with dangerous snakes
- Establish the extensive time period of man's relationship
- Show the fine art forms which have evolved around snake icons and motifs

2.0 Snakes Through History

A brief set of photos and graphics illustrates man's attitude and relationship with snakes over the course of time from the Egyptians and Mesopotamians, through Greeks and Romans with their heroic legends, to the Mayan Kukulcan and their calendar. Items such as photos of Domba snake dance are included, as well as a graphic representation of the Garden of Eden and its impact on world culture for 4000 years. A flat modular cabinet displays backlit graphics, photos, headers, maps and line drawings. A series of flip-lids reinforces key concepts in a question-and-answer format.

Learning objectives:

- Awareness that snakes have been part of our culture throughout recorded history
- Indicate that snakes have been part of nearly all religions worldwide
- Show the impact on history that the story of the Garden of Eden has created

3.0 Hindu Snake Charmer

Charmed! This alcove displays a seated manikin, dressed in traditional Indian attire, playing a flute in front of basket with a cobra rising from the opening. The public is immersed in the sounds of the Indian bazaar. A mural behind the figure enhances the setting.

Learning objectives:

- Present an authentic Indian bazaar scene
- Show human interaction with snakes
- Indicate that snakes can have an economic use

4.0 Australian Aboriginal

Snakes for dinner? This alcove displays a squatting Australian Aboriginal figure in front of a small fire roasting a skink lizard and a snake for his dinner. The sounds of a cracking fire and a didgeridoo add to the authenticity of this enclave.

Learning objectives:

- Present another culture which interacts with snakes
- Show an aspect of an authentic Aboriginal culture
- Examine snakes as a food sources

5.0 Hopi Antelope Dancer

This alcove displays two Hopi Indians in traditional kachina costume circa 1903. The atmosphere is enhanced by Indian chanting and drum beats in the background. A mural depicting a Hopi Pueblo is behind the figure.

Learning objectives:

- Show a more local culture that interacts with snakes
- Present an authentic element of American Indian culture
- Indicate a religious activity wherein snakes are used.

6.0 Current Video Screen

Snakes in the movies! This corner cabinet displays a color monitor projecting an endless-loop video with short clips of activities humans still do with snakes today. Included are parades in India to celebrate the cobra; snake charmer shows in the far East; Appalachian fundamentalists handling snakes as a test of faith; snake and bile markets in China, and rattlesnake roundups in Texas.

Learning objectives:

- Show how snakes are currently being used economically, in religious context, and as a food source.

7.0 Walk Over

Snake Pit! Lexan panels under and alongside a plank bridge span a simulated rock creek bed. At your feet, beneath the glass, is an area about 10” deep full of rattlesnakes, creating the illusion of walking over a snake-pit. Handrails and rope railing on each side of the suspension-bridge provide support and keep traffic off the clear surfaces. A path around the section for the “faint-hearted” with a “safer” view into the exhibit is included as an option. Low light levels within the exhibit area and indirect lightning within the “pit” create the illusion of no glass between the snakes and the visitor.

Learning objectives:

- Show that many snakes coexist without harming one another
- Project excitement and an element of adventure into the exhibit in a completely safe manner
- Allow fear to be abated by directly addressing it

8.0 Cottonmouth Diorama

View the Cottonmouth in his native habitat. This display includes information and line drawings about the snake and its history. Views beneath the water add to the description of the swamp ecosystem.

Learning objectives:

- Show living snakes in their native habitat
- Illustrate how well they're camouflaged in their own habitat

9.0 Coral Snake Diorama

Enjoy a close-up view of the secretive and beautiful coral snake. A vertical palm trunk and a fallen log with thick leaves on the floor recreate a South Texas Sabal Palm Forest. A set of several flip-lids indicates which are real coral snakes and which are one of a variety of coral snake mimics such as the long-nosed snake, the scarlet snake, and the Mexican milksnake.

Learning objectives:

- Show living snakes in their native habitat
- Illustrate how well they're camouflaged in their own habitat

10.0 Milksnake vs. Coral

Learn to identify these two species! Photographs and backlit graphics illustrate the differences between these two types of snakes. A set of flip lids reinforces the information by allowing the public to physically move an object to find the answer below. Text includes the rhyme we learned as children, "Red and yellow kill a fellow; red and black, friend of Jack." A recording repeats the rhyme in an endless loop, thus reinforcing the information.

Learning objectives:

- Define the differences between milksnakes, other mimics and corals
- Reinforce these differences through interactivity
- Instill the old jingle in each visitor's mind

11.0 Copperhead Diorama

View the Copperhead in his native habitat. Numerous pine trunks, thick needles, and cones on the floor of this space depict the Copperhead's typical Piney-Woods habitat. Other habitat types and copperhead races are also discussed.

Learning objectives:

- Show living snakes in their natural habitat
- Indicate how well they're camouflaged in their own habitat

12.0 Rattlesnake Diorama

Rattlesnake Country! Rocky limestone outcrops with a small cave and large cracks simulate a den site in the arid West Texas habitat of the diamondback rattlesnake. Vivid text and graphics impart interesting information about rattlesnakes.

Learning objectives:

- Show living snakes in their native habitat
- Reinforce how well they blend with their own habitat type.

13.0 Variation

See the difference? A series of photographs and backlit graphics depicts such natural color variations as albinism, melanism, and unusual patterns. A set of flip lids allows the public to test their skill in determining which animals are actually the same, even though they look very different.

Learning objectives:

- Illustrate graphically the range of natural variation in even one species
- Through interactivity reinforce differences and similarities

14.0 Anatomy from the Inside

Crawl through a rattlesnake! A very large model of an open-mouthed rattlesnake allows the public to actually crawl into the belly of a snake and view bas-relief models of the ribs, lungs, heart, stomach, intestines and the other organs of interest. See-through ribs on one side will dispel claustrophobia and allow a complete view of the interior without crawling inside. Exterior graphics display interesting points of snake anatomy.

Learning objectives:

- Stimulate a new view of the anatomy of a different animal
- Illustrate some similarities and some differences between snakes and humans.

15.0 Rattle

Ssssss! A push button causes a large simulated rattle to vibrate while a soundtrack of the rattle is heard simultaneously. Includes cross-sectional diagram and description of how the sound is generated, and its possible evolutionary benefit to the snake.

Learning objectives:

- Create understanding of the rattle's mechanics and function
- Show possible reasons the rattle may have evolved
- Allow the public to hear the actual sound of the rattlesnake's rattle

16.0 Rattlesnake Skull Model

Rattlesnake strike! Push the button to activate this display. A large reproduction of a rattlesnake skull approximately 24 inches long opens its mouth and the fangs move from the at-rest folded position to the extended position when the mouth is fully open. Then the fangs retract and the jaw expands for the act of eating. The jaw will then return to normal and close. Backlit panels light up at each phase to explain the action. Graphics include a sliding scale measuring the mouth opening from 0 to 90 degrees.

Learning objectives:

- Illustrate the mechanics and extent of the jaw as it opens

- Show how the jaw can be expanded for eating
- Illustrate that the fangs are extended from a folded position to an extended one as the mouth is opened.

17.0 **How fast are you?**

This game includes a set of colored lights which count down to zero; hit the button to see if you are faster than a rattlesnake's strike. A timer shows elapsed time of the visitor in relation to the snake. If you are faster in milliseconds, you win! In either case your time is shown next to the snake's time and you may decide to play again or move on. Graphics demonstrate how a snake strikes and their limitations.

Learning objectives:

- Illustrate different reaction times between snakes and humans.
- Describe the limits of the snake's abilities from a physical standpoint
- Create understanding of the reasons for a snake strike

18.0 **Infrared "Vision"**

Experience a snake's unique vision! An infrared camera in a fiberglass model of a snake's head will be mounted to a swiveling post allowing visitors to "see" what a rattlesnake perceives with its heat sensory loreal pits. Graphics and photos explain this concept, similar to the alien's view of living organisms in the movie *Predator*. This view of other people and objects shows the various amount of heat they give off. Downloading this information to a color printer will allow sales of infrared "photos" to the public.

Learning objectives:

- Explore a different "view" of the world around us
- Show the sensory abilities of other species as different and superior sometimes

19.0 **Walk Thru**

Enter a rattlesnake den! Follow the path through a naturalistic canyon of rugged limestone with many cracks and crevasses. At ground level and in some of the ledges angled glass to disappear. In these recesses are live rattlesnakes of several species. The public can experience the snakes in their natural setting. As the canyon turns, duck your head under the rock overhanging and enter the cave. A large plexiglass dome accommodates several visitors. See the serpents literally face-to-face. Small steps allow people of all heights to experience the same view.

Learning objectives:

- Allow the visitor to enter an actual habitat where snakes would live.
- Show a den site from a new view—the inside.
- Present another opportunity to be physically close to dangerous snakes in a safe environment

20.0 **Snakebite**

Photographs of actual snakebites are augmented with statistics showing how rare bites really are (inflicted mostly upon amateur snake handlers). Graphics include the percentage of bites in the population, dry bites and other factors including current mortality rates of other causes, such as insect stings and bites by domestic dogs, which put snakebites in its proper perspective. Flip lids reinforce the graphic information.

Learning objectives:

- Indicate the relative danger of these animals
- Show that more “friendly” creatures may be more dangerous than snakes
- Discuss the large portion of “dry bites” that occur
- Create understanding that most bites occur in handling

21.0 Venom Extraction

Venom anyone? This panel about venom production includes graphics, photographs and a short video of a technician actually performing the procedure, along with a display of actual equipment.

Learning objectives:

- Show the procedure of extracting venom from a snake
- Indicate its importance to making antiserum and other medicinal uses

22.0 Antivenin

How does it work? This display includes a graphic demonstration of how antiserum is made and how it works in the body in non-technical terms.

Learning objectives:

- Create understanding of what antivenin or antiserum is and how it works.

23.0 Prevention

This display includes equipment and clothing shown to be effective in the field to avoid snakebite.

Learning objectives:

- Show some effective equipment for field use in snake-infested areas

24.0 Snakebite First Aid

Small panels with graphics, photos and text illustrate various treatments which have been used through time. Without promoting a specific treatment regimen, we advocate common sense measures and seeing a doctor as quickly as possible.

Learning objectives:

- Present historical “cures” that have proven incorrect
- Show current thinking and treatment for snakebite
- Strongly advocate receiving medical treatment

25.0 Snakes as Beneficial

Good snakes? A positive statement effected through graphics and photos demonstrates how helpful and economically beneficial snakes are to the homeowner and farmer. The Exhibit presents a positive image and seeks to change the public perception that the only good snake is a dead snake. A flat panel cabinet graphically illustrates the result of rodent population without predators and the long-term results to the ecosystem.

Learning objectives:

- Show that all snakes have their place in the eco-system
- Create understanding that killing snakes has a negative result
- Impress upon the visitor the importance of snakes to man
- Explain clearly that even potentially dangerous snakes have a benefit in nature