

Wild Side Wrap Up

Animal Habitat Design

In this episode of The Wild Side of STEAM, we met Matthew, a landscape architect at the Smithsonian's National Zoo and Conservation Biology Institute. We learned how Matthew designs engaging and naturalistic exhibits for the Zoo's animals.

ACTIVITY 1: What is a landscape architect?

1. Watch the Wild Side of STEAM: Exhibit Design webinar. If you missed the live event, the video recording is available on the Zoo's website: <https://nationalzoo.si.edu/education/wild-side-steam>.
2. Consider the following:
 - a. What are some of the things around the Zoo that landscape architects plan?
 - b. What factors must landscape architects consider when designing an animal exhibit?
 - c. How do exhibit requirements change for different species?

ACTIVITY 2: How do architects design an exhibit?

Help design an exhibit! The Zoo is getting some new animals and needs your help to build an exhibit. Follow the steps below to design species-appropriate habitats for them.

1. First, we need to know more about an animal before we can build them a habitat. Use the links to research the eastern indigo snake, tiger, and striped skunk, paying attention to their habitat needs.



EASTERN INDIGO SNAKE

Zoo Animal Info Sheet: Eastern Indigo Snake

<https://nationalzoo.si.edu/animals/eastern-indigo-snake>

AZA* Animal Care Manual: Eastern Indigo Snake

https://assets.speakcdn.com/assets/2332/indigosnakecaremanual_2011r.pdf



TIGER

National Zoo Animal Info Sheet: Tiger

<https://nationalzoo.si.edu/animals/tiger>

AZA Animal Care Manual: Tiger

https://assets.speakcdn.com/assets/2332/tiger_care_manual_2016.pdf



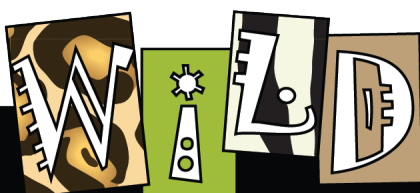
STRIPED SKUNK

National Zoo Animal Info Sheet: Striped Skunk

<https://nationalzoo.si.edu/animals/striped-skunk>

AZA Animal Care Manual: Striped Skunk

<https://assets.speakcdn.com/assets/2332/mustelidcaremanual2010r.pdf>



*AZA stands for the Association of Zoos and Aquariums, by which the Smithsonian's National Zoo and Conservation Biology Institute is accredited.

THE

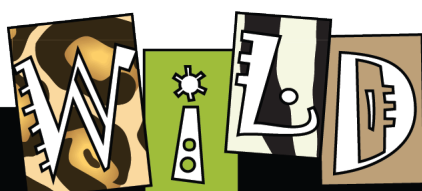
SIDE OF STEAM



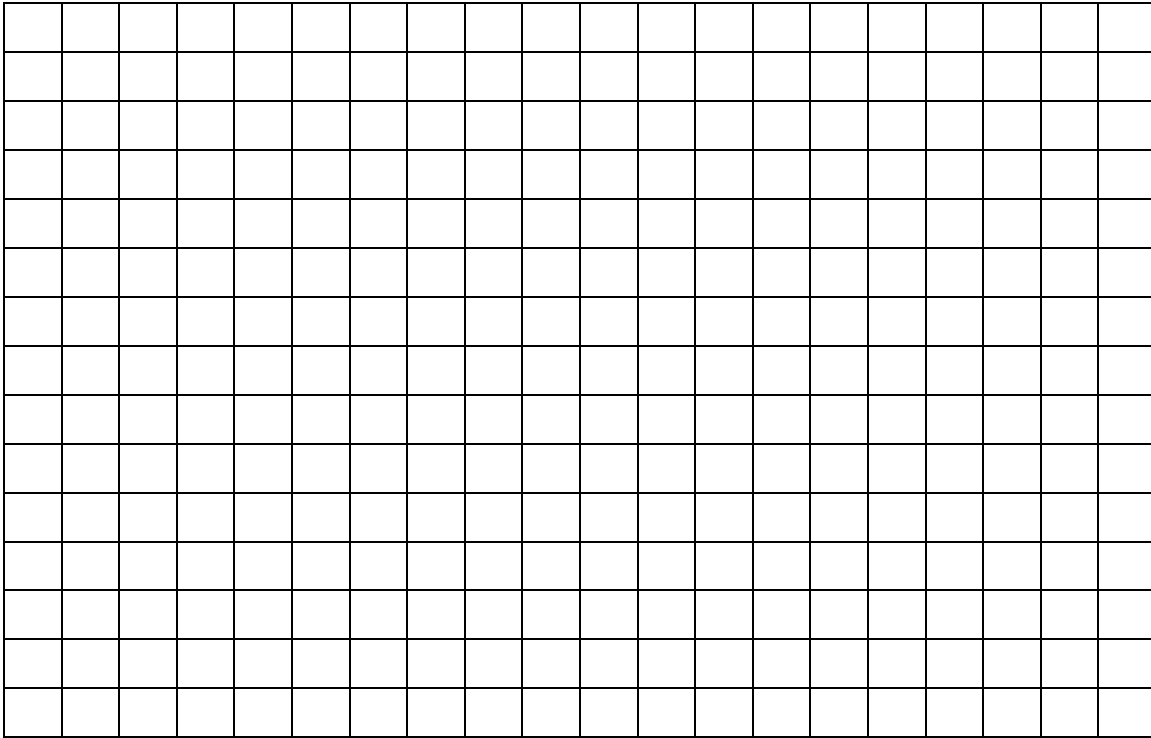
Smithsonian
National Zoological Park
Conservation Biology Institute

2. Next, we need to consider the animal's natural habitat, space needs, and adaptations to make sure our zoo habitat includes everything they need. Using the resources provided in step 1, fill out the following table with each animal's habitat requirements:
- Native habitat.** Where is the species found in the wild? What does that tell you about the zoo habitat they need?
 - Temperature requirement.** What is a comfortable range for the species? How does the snake's temperature requirement differ from that of the skunk? Why?
 - Space requirement.** Does the animal need a small or large habitat? What about the shape of the habitat?
 - Arboreal, terrestrial, aquatic, other.** If an animal is arboreal, meaning they spend time up in the trees, how does that change their space or habitat needs?
 - Containment needs.** How will you make sure your animal has a comfortable habitat but doesn't get out? If the animal is large and potentially dangerous, how does that change the containment needs?
 - Exhibit elements.** What will you include in the habitat to meet the animal's needs? Start thinking about what fun new elements you might introduce, too.

Animal	Native Habitat	Temperature Requirement	Space Requirement	Arboreal/ Terrestrial/ Aquatic/Other	Containment Needs	Exhibit Elements
Example: Jaguar	<i>Tropical Forest</i>	<i>50°F-100°F (shade & misters in the summer, heat in the winter)</i>	<i>Outdoor: 983.8ft² Indoor: 20ft x 15ft x 8ft</i>	<i>Terrestrial & Arboreal</i>	<i>Highest level of containment; enclosed top</i>	<i>Trees, hanging logs, concrete cave, hot rock, straw bed, pool, vines</i>
Eastern Indigo Snake						
Tiger						
Striped Skunk						



3. Now, sketch your exhibit! Pick the eastern indigo snake, tiger, or striped skunk, and use the space below to draw a diagram of a zoo habitat for your animal.
 - a. Check all the habitat requirements from step 2. Did you include all the elements the animal needs? Does it need pools, rocks, trees, a den, or other elements to mimic their natural habitat? *For example, jaguars are arboreal, so they need trees to climb. They also live in warm tropical forests so they might need a hot rock to stay warm in colder months.*
 - b. Explain why you chose to include different habitat features.



ACTIVITY 3 (optional): Create a 3D diorama of your exhibit.

1. Using recycled materials from around your home (for example: boxes, bags, toilet paper tubes, newspaper) bring your animal exhibit to life by building a diorama!
2. After building your animal exhibit, consider the following:
 - a. Where would Zoo guests stand to view the animal?
 - b. What text or pictures would you include on a sign for zoo guests to learn about this animal?
 - c. How would zookeepers safely take care of the animal in its habitat?



"Bobcat diorama" by Benimoto is licensed under CC BY 2.0

