

School Programs

Curriculum Descriptions



Oakland Zoo Education Department supports the Next Generation Science (NGSS) & Common Core Standards and Practices in our school programs. Our programs are designed to complement and supplement your classes Science curriculum.

Kindergarten - "Happy, Healthy, & Alive!" - Animal Care & Needs (K-LS1.C)

Let's see - you've got your water, you've got your food, you've got your air, a little space – all the requirements for survival. But is that enough? Did you know that, just like us humans, playing and having something fun or interesting to do can be just as important to an animal's health as getting food and water? Through observations students will discover what animals need to survive and that some animals need more to lead an enriching life!

1st Grade - "Ooh, That Smells So Good On My Tongue!" - Animal Senses & Body Parts (1-LS1.A, 1-LS1.D)

Can you hear with your feet? Do you smell with your mouth? Might sound strange to us, but for different animals, using your body parts in different ways is key to survival. Together we'll use some of our senses to see how animals use their bodies and various senses to survive in the wild.

2nd or 3rd Grade - "Habitat is Where the Home Is" - Animal Adaptations & Habitats (2-LS4.D; 3-LS2.C, 3-LS4.C, 3-LS4.D)

Why are polar bears white? Why does a camel have a hump? What would happen if the bear moved to the desert and the camel transferred to the tundra? Join us as we explore the world of animal adaptations and how each habitat affects the animals that live there – and vice versa!

3rd Grade - "Born to Be Wild" - Animal Families & Offspring (3-LS1.B)

So there you were, a helpless little baby in a big, weird world. Did you bundle up when you were cold? Did you make a bottle when you were hungry? Did you do it all by yourself or did you need someone's help? Learn to recognize patterns in nature that tell us if an animal will be born hapless and helpless, ready to roll, or somewhere in between.

4th Grade - "Chew On This" - Animal Skulls & Structures (4-LS1.A)

You can tell a lot about an animal by looking at its face. You can find out even more by looking at their teeth, but it's probably not recommended to get that close. Instead, use skulls and animal observations as tools for understanding the function and connection of structures that are key for an animal's survival.

4th Grade - "Poop – the Best Gift Ever!" - Animal Digestion & Scat (4-LS1.A)

Some call it waste, some call it poop, but no matter the name, "its" importance to the ecosystem is undeniable. Become a Scatologist and discover the many ways we can learn about animals from their waste, and how animal digestion and the resulting feces keep the world's food web alive and healthy.

5th Grade - "Nature's Balancing Act" - Animal Food Webs & Ecosystems (5-LS2.A)

Herbivores eat plants, the carnivores eat them, and the decomposers always win in the end. All organisms "work" together to provide a healthy ecosystem – that's interdependence! So what happens when one is taken out of the equation? What happens when one is added to the balance? Students will discover the importance and fragility of ecosystems by thinking critically and reimagining the world with the loss of important keystone species and the addition of invasives.

School Programs

Curriculum Descriptions



Topic by Grade Level Matrix							
Grade Level	Animal Care & Needs	Animal Senses & Body Parts	Animal Families & Offspring	Animal Adaptations & Habitats	Animal Skulls & Structures	Animal Digestion & Scat	Animal Food Webs & Ecosystems
Kindergarten	•						
1 st Grade		•		•			
2 nd Grade				•			
3 rd Grade			•	•			
4 th Grade				•	•	•	
5 th Grade						•	•

• = Topic meets some requirements for grade • = Topic recommended and meets requirements for grade

NGSS Disciplinary Core Ideas Supported by Topic

Animal Care & Needs

K-LS1.C

Animal Senses & Body Parts

1-LS1.A, 1-LS1.D

Animal Families & Offspring

3-LS1.B

Animal Adaptations & Habitats

1-LS1.A; 2-LS4.D; 3-LS2.C, 3-LS4.C, 3-LS4.D; 4-LS1.A

Animal Skulls & Structures

4-LS1.A

Animal Digestion & Scat

4-LS1.A; 5-LS2.B

Animal Food Webs & Ecosystems

5-LS2.A

Oakland Zoo recognizes the importance of the 3 Dimensions of the Next Generation Science Standards. We also strive to include California's Environmental Principles and Concepts in conjunction with the Next Generation Science Standards. While we work to touch on all components, the items in bold are the strongest in our programs.

Cross Cutting Concepts and Science & Engineering Practices

Crosscutting Concepts in NGSS:

- 1. Patterns**
- 2. Cause and effect: Mechanism and explanation**
- Scale, proportion, and quantity
- 4. Systems and system models**
- Energy and matter: Flows, cycles, and conservation
- 6. Structures and function**
- Stability and change

Science & Engineering Practices in NGSS:

- 1. Asking questions (for science)** and defining problems (for engineering)
- 2. Developing and using models**
- 3. Planning and carrying out investigations**
- 4. Analyzing and interpreting data**
- Using mathematics and computational thinking
- 6. Constructing explanations (for science)** and designing solutions (for engineering)
- 7. Engaging in argument from evidence**
- 8. Obtaining, evaluating, and communicating information**