

# When Science Attacks

Spring 2019

Welcome and thank you for choosing the Kansas City Zoo education department for your children's learning. The Kansas City Zoo's mission is to connect people to each other and the natural world to promote understanding, appreciation, and conservation. When Science Attacks, our homeschool program, achieves this through hands-on academic experiences.

Classes are designed to be age appropriate and are supervised by Zoo teaching staff at all times. Activities may include, but are not limited to: games, crafts, on grounds tours, zoo shows, zoo rides, playgrounds, science experiments, reading and writing, demonstrations, and group discussions.

This welcome packet outlines what your young scientist(s) can expect and what the teacher will expect from your child and provides a list of dates and themes for each class. Please review this packet with your children before the first day of class.

If you have questions at any time, feel free to contact me. Again, welcome to When Science Attacks.

## **Aubrye Keeling**

School Programs Supervisor

[aubryekeeling@fotzkc.org](mailto:aubryekeeling@fotzkc.org)

816.595.1766



**WHEN SCIENCE ATTACKS**

A KCZoo Homeschool Experience

## Spring 2019 Details

Wednesday Classes: 2 time options

10:30 am – 12:00 pm

1:30 pm – 3:00 pm

Thursday Class: 1 time option

10:30 am – 12:00 pm

Fees: \$9/class, semester rate for all 8 classes: \$61.20 (15% discount)

## Class Schedule

*Designed for K-2<sup>nd</sup> grade students:*

Date	Topic
JAN 9 or 10	Migration Learn why some animals migrate, hibernate, or stay in one place.
JAN 23 or 24	Ecosystems/Biomes Discover the difference between ecosystems, biomes, and habitats and how they all provide the basic needs that all animals share.
FEB 6 or 7	Rainforests Explore the wide variety of animals that thrive in rainforests and discover how tropical rainforests impact both animals and people.
FEB 20 or 21	Grasslands Learn about the wide range of animals that thrive in grasslands and compare grasslands of Africa, North America, and South America.
MARCH 6 or 7	Mountains Discover characteristics that help animals thrive in the mountains and learn how people interact with mountain environments.
MARCH 19 or 20	Oceans Dive into about the wide variety of animals that live in the world's oceans and discover practical ways that you can help the ocean.
APRIL 3 or 4	Forests Explore the wide variety of animals that call the forest their home and discuss how animals and people share resources of the forest.
APRIL 17 or 18	Deserts Discover characteristics that help animals thrive in desert environments and learn why deserts are so important.

***Designed for 3<sup>rd</sup>-5<sup>th</sup> grade students:***

Date	Topic
JAN 9 or 10	<p><b>Be A Naturalist</b></p> <p>Students will use their powers of observation to become a naturalist, and expert in the natural history of living things.</p>
JAN 23 or 24	<p><b>Ecosystems &amp; Biomes</b></p> <p>Students will learn about the living and non-living things that animals need to survive in their habitat. They will discover the diversity of animals within each ecosystem.</p>
FEB 6 or 7	<p><b>Deep Oceans</b></p> <p>Students will explore a unique example of an ecosystem and consider how the organisms in the deep ocean interact with and impact each other.</p>
FEB 20 or 21	<p><b>Migration</b></p> <p>Students will use their naturalist skills to explore the reasons that animals migrate, how migration patterns impact other plants and animals, and vice versa.</p>
MARCH 6 or 7	<p><b>Science Field Methods</b></p> <p>Students will learn about the various tools that scientists use to study the environment. We will consider why it is important to have environmental studies done before a natural disaster occurs.</p>
MARCH 19 or 20	<p><b>Studying Water</b></p> <p>Using field methods, students will learn how water quality impacts living things and how scientists determine whether water is safe.</p>
APRIL 3 or 4	<p><b>Biome Building</b></p> <p>Students will review their notes from the previous study and decide what the eco system is for each biome and what animals might live in each. Students will consider how humans impact each area.</p>
APRIL 17 or 18	<p><b>Flexibility to Change</b></p> <p>Students will explore the impact that humans and nature have on ecosystems and biomes. We will explore the ways in which ecosystems are able to change and adapt when the environment changes, and what happens to ecosystems after natural disasters.</p>

### *Designed for 6<sup>th</sup>-8<sup>th</sup> grade students:*

Date	Topic
JAN 9 or 10	<b>Migration</b> Students will learn why animals migrate and will explore the factors that affect migratory water bird populations.
JAN 23 or 24	<b>Tracks</b> Students will identify common animal tracks and learn how tracks are used in various wildlife settings and careers.
FEB 6 or 7	<b>Famous Zoologists</b> Students will research famous zoologists and will be able to explain how zoologists help wildlife.
FEB 20 or 21	<b>Field Methods</b> Students will learn about various field methods used when working with wildlife.
MARCH 6 or 7	<b>Exhibit Design part 1</b> Students will be able to compare past and current zoo exhibits and will learn how animals' basic needs influence their exhibit design.
MARCH 19 or 20	<b>Exhibit Design part 2</b> Students will research an animal's basic needs in order to design and create an exhibit.
APRIL 3 or 4	<b>Zoonoses part 1</b> Students will learn about basic zoonotic diseases and how these diseases can affect them.
APRIL 17 or 18	<b>Zoonoses part 2</b> Students will learn about current zoonotic disease research and how this research affects zoo practices.



**WHEN SCIENCE ATTACKS**  
 A KCZoo Homeschool Experience

## Reservation Policies

### ***General Reservation Policies:***

Full payment is due at the time of registration.

This program is open to Friends of the Zoo (FOTZ) members only. To become a member visit [www.kansascityzoo.org](http://www.kansascityzoo.org) and select Membership.

### ***Weather Cancellation Policy:***

Classes will be cancelled if the school districts nearest the Zoo are closed due to weather. We will notify parents via e-mail of the cancellation by 8:00 am if this is the case. There will be no refunds or makeup classes offered, but our instructors will follow up with an email to all families containing the curriculum for the missed class so that parents can complete the lesson at home, and families will be able to pick up any necessary craft materials from the Zoo when we are open at any point during the semester. If weather is questionable yet classes are still being held, families may choose to either attend or request an emailed copy of their curriculum depending on what they deem the best decision for their own situation.

### ***Cancellation/Refunds:***

- The Zoo reserves the right to cancel classes if registration is below required minimum.
- No refunds for cancellations made *less than* 14 days prior to program start date.
- Cancellations made *more than* 14 days prior to the program will receive a 75% refund.
- Cancellations may be done via phone 816-595-1765 or email [edushared@fotzkc.org](mailto:edushared@fotzkc.org)
- No refunds for unused classes or withdrawal from the program.
- No refunds if a child's behavior requires he/she be sent home or dismissed from the program.

### ***Date Change Policy:***

Staffing and resources are scheduled for the number of pre-registered students for each class day and time. Occasionally parents may need to switch a day or time. Please contact Aubrye Keeling (816.595.1766 or [aubryekeeling@fotzkc.org](mailto:aubryekeeling@fotzkc.org)) to inquire about any date or time change.

## General Information

### ***Program Location:***

When Science Attacks is located in the Zoo Learning Center (ZLC) located just to the right of the Zoo entrance. Education reservations are located inside the ZLC office and the classes take place in the classrooms. Grade level signs will be posted to designate the assigned classroom.

### ***Daily Participant Sign-in/Sign-out:***

An adult is required to drop off & pick up program participants from their assigned classroom. Parent or guardian will initial on the student roster. Please arrive a few minutes prior to class start time for sign in.

### ***Daily Participant Sign-in/Sign-out, cont'd:***

Departure—parent or guardian will initial on the student roster. Note—no child will be released until they have been signed out on the roster. Please arrive on time for pickup. A late fee of \$5 will be assessed for pickups that are greater than 15 minutes past the end time of the class. If early pick-up is needed, please notify education reservations staff in our education offices (816.595.1761)

### ***Dress:***

Students should dress for the weather. Classes often go outside onto the Zoo grounds so comfortable walking shoes (please no open-toed shoes) and layers (jackets, long sleeve shirts, rain coats/ponchos) appropriate to the temperature and precipitation outside are a must. Additionally, experiments and crafts in the classroom may involve paints and other messy materials.

### ***Emergencies:***

If there is an emergency and you need to remove your student early, please call the following numbers until you reach Zoo staff:

816.595.1766 – Homeschool Programs Supervisor

816.595.1765 – Education Reservations

816.595.1234 – Zoo Switchboard

### ***What to Bring:***

Water bottles, sunscreen, hats, and bug spray are all encouraged. Program staff is not permitted to assist children with the application of any product, and participants are responsible for any items they bring to class. Staff are not allowed to administer any type of medication to children.

Money, jewelry, electronics (unless requested for use in the lesson), toys, outside food, fireworks (\*\*), lighters, weapons (\*\*), drugs (\*\*), alcohol (\*\*), cigarettes (\*\*), personal sports equipment, or other inappropriate items are not allowed. These items will be confiscated and parent/guardian will be notified by the program supervisor. If the confiscated item (designated with an (\*\*)) violates the Zoo's policies the student will be sent home immediately and removed from the program.

## Behavior Policy

To ensure a fun, productive, and safe environment, education staff has established the following guidelines. Please review the following expectations with your child prior to class. Note: No refunds will be given for dismissals due to a child's behavior.

- Stay with, listen to, and respect instructors.
- Respect classmates, other staff, and zoo visitors.
- Keep your hands to yourself.
- Don't run. Stay on designated paths only.
- Leave native animals, flowers, and plants for others to enjoy.
- Respect the animals-- do not yell at, attempt to touch, tease, feed, or disrupt normal animal behavior.
- A child's inappropriate behavior that continues to infringe upon others' experiences or any animal's safety may warrant dismissal. *The Kansas City Zoo reserves the right to dismiss a student from the program.* Inappropriate behavior will result in one of the following steps (steps may be skipped depending on the seriousness of the behavior):
  - 1) First verbal warning.
  - 2) Sit out next activity.
  - 3) Homeschool supervisor calls parent contact.\*\*
  - 4) Homeschool supervisor calls parent/guardian and student must leave zoo premises.\*\*

*\*\*Consequences 3 and 4 will be documented in writing. This document will be available upon request.*

## Goals, Outcomes & Activities

### Goals & Outcomes:

*"The mission of the Kansas City Zoo Education Department is to positively change behavior by instilling in all people the desire and knowledge to respect and conserve wildlife and nature."*

With this in mind, programs at the Kansas City Zoo strive to...

1. Introduce students to the animal kingdom and nature, in general
2. Promote scientific discovery
3. Explore the natural history of animals
4. Stress the importance of ecosystems and habitats
5. Introduce students to animal-based career fields
6. Help students take an active role in the stewardship of our environment
7. Provide opportunities that stimulate social growth and self-esteem

## ***Class Activities:***

Age-appropriate lessons are designed to expose students to animals and nature while practicing important scientific skills and practices. Activities may include:

### **Animal Encounter (5+ years)**

Animal ambassadors visit the class for an up-close personal experience. Animals may or may not be “touch animals”.

### **Behind the Scenes Tours (7+ years)**

Students may visit non-public areas of several designated animal exhibits. Education staff will accompany students and animal department staff will lead the tours.

### **Barn Cleaning (11+ years)**

Students work alongside keepers and education staff cleaning animal areas and stalls. Physical activity includes sweeping, shoveling, lifting objects 20 lbs. or less, and hosing floors.

### **Landscaping Projects (11+ years)**

Students work alongside the zoo’s horticulture department and education staff to plant flowers, spread mulch, and/or remove brush. Physical activity may include, but is not limited to, planting, weeding, clipping, raking, and mulching. No power tools will be involved but students may be asked to use sheers, clippers/loppers, spades, shovels, wheel barrows, rakes, etc.

### **Dissection (11+ years)**

Students may explore the world of animals through anatomy/science biology lessons. Dissections of specimens may include the use of scalpels, tweezers, pins, etc. Activity will be conducted and supervised by education staff.



**WHEN SCIENCE ATTACKS**  
A KCZoo Homeschool Experience



## Frequently Asked Questions

### *What is a typical class like?*

Students might:

- Tour animal exhibits throughout the zoo
- Discuss complex zoological issues
- Engage with experiments, demonstrations, stories
- Experience education animals up-close-and-personal through animal encounters
- Create arts and crafts projects
- Learn about animals hands-on, through the use of biofacts (bones, pelts, feathers, etc.) and other interactives
- Visit shows and rides (excluding Sky Safari)
- Play environmental education games and activities

### *Who are the instructors?*

Classes are taught by our education instructors who are degreed professionals with extensive knowledge in science, conversation and animals. We also utilize Kansas City Zoo adult volunteers to assist with classes. Both instructors and volunteers have passed a background check and drug test.

### *What is the student/instructor ratio?*

Classes may have up to 25 students enrolled. Class sizes beyond that will be split into multiple classes and have different teachers. Please ensure that your student's medical forms are accurate during your registration including any special behavioral or learning needs.

### *Can parents or siblings stay in the classroom with students?*

While certainly not required, parents are allowed in the classroom and may either sit quietly around the perimeter of the room, or participate with their student if they feel that additional assistance is necessary for their student to achieve success. Space is limited so no siblings please.

### *Not staying in the classroom but remaining on Zoo grounds?*

Feel free to hang out in our climate-controlled lobby and public space in the Deramus Building (across from education). Or feel free to enter the Zoo and visit our animals.