ALL ABOUT ANIMALS

LIFE SCIENCE, NON-FICTION READING & WRITING

The Kindergarten-First Grade class is fascinated with the world around them, showing a deep interest and curiosity about living things and their lives. Since March, using non-fiction texts and through engaging rich hands-on explorations, students learned all about animals and their habitats as well as how to research and document their findings in a non-fiction book format.

Students head outside for a Living & Non-Living Scavenger Hunt.

Students began their study by first brainstorming characteristics of living and non-living things. Students defined a living thing as something that needs food and air to grow and move. In small groups, they headed outdoors on a scavenger hunt to identify living and non-living things around the school. They shared their findings when they returned to the classroom.

Next, the students learned how animals are classified into groups such as mammals, reptiles, amphibians and fish. The class decided to visit the Queens Zoo to learn more about animals. Before the trip, they discussed what types of animals they would see there and which ones we would like to visit. After their visit, students selected an animal to study in greater depth. The animals chosen ranged from a rabbit to a —brown bear.

Ethan asks the librarian a question when on a trip to the local Bay Terrace Library to check out non-fiction books about their animal.

Once they selected an animal to research further, they studied their animal's physical characteristics by identifying, describing, and their body coverings, sensory organs, appendages, etc. They discovered the relationship between the physical traits, their functions, and their survival. For example, a penguin catches its prey with its sharp beak. Students learned about their animal's life cycle and life span noting what the animal is called as a baby and how long they typically live.

Next, students researched their animal's habitat. They focused on the habitat's weather and physical features. The class discussed how animals can physically adapt to their environment. They conducted small group experiments to develop their understanding and knowledge of animals' adaptations for the Science Showcase. An adaptation is a special skill which helps an animal to survive and do everything it needs to do. Adaptations can be physical changes to the animal's body.

One group of students investigated how a polar bear's blubber keeps him warm during the cold winter by first recording the temperature of their hand in ice water inside a glove with no "blubber". Then, they placed shortening into a glove to act as blubber and record the temperature inside the blubber glove. They determined which glove is warmer. They recorded their hypotheses and conclusions on a data chart.

Students pay close attention to creating a strong skeleton for their animal.

The other group conducted an experiment that demonstrated how the weight of a penguin's bones helps it sink in the water to catch its food. Most birds have light hollow bones that allow them to fly. Penguins have heavy filled bones which allow them to both swim and catch fish. First, students placed a hollow penguin bone (aka empty tin foil tubes) in water and observed that it floats. Next, they filled the penguin bones with just enough pebbles to make it sink. Then, using a balance scale, they measured the weight of the pebbles needed to make it sink. Students decided how many pennies equal the weight of pebbles needed and recorded their findings.

Yishai creates a strong armature.

In the Art Studio, students looked at the book, Abecedario, an alphabet book in English and Spanish featuring Mexican folk art animal sculptures by the people of Oaxaca. The colorful sculptures inspired us to sketch our animals and think about the shape, color and texture of them. Once we figured out the shapes we needed to make, we were ready to build the structure of our sculptures. Morah Sarah explained how the structure, or armature, of a sculpture is like the skeleton. It is like the strong bones that hold us up. If a papier-mâché sculpture didn't have an armature, it would flop into a puddle. We used masking tape, bottles, cups, and paper to make our armatures, making sure that it was strong and sturdy so that when it got wet it would still stay standing. The next step was to add the papier-mâché, strips of newspaper and paper towel dipped in glue and wrapped around our sculptures. Once dry, it hardens and our sculptures can stand on their own! Then, we used paint and yarn to put the finishing touches on our own papier-mâché zoo.

They visited Alley Pond Environmental Center. They investigated the question, "Are all animal babies born and raised the same way?" They focused on the developmental differences and similarities amongst mammals and birds. They were full of great questions and demonstrated a high level of understanding.

Once their animal research was complete, students used their findings to write their "All About…" non-fiction book. By reading and studying non-fiction for their research, students developed an understanding of various forms, features, and purposes of this genre. Students' "All About…" books contain non-fiction text features including a Cover/title page, Table of Contents, Headings, Diagrams with labels, Illustrations and Photos with captions, About the Author, an Index and a Glossary.

While on a class trip to Alley Pond Enviromental Center, students learned about a variety of animals.

Students are Learning

NYS.SCI.LE.3.1a:
Identify, describe, and compare the physical structures of animals (e.g., body coverings, sensory organs, appendages, beaks).

NYS.SCI.LE.1.1a; NYS.SCI.LE.3.1a:
Identify, in animals, the relationship between the physical structures and the functions of those structures (e.g., obtaining food and water, protection, movement, support).

NYS.SCI.LE.SCI.3.1a:
Compare and contrast the physical characteristics in animals.

NYS.SCI.LE.3.1a, c:
Describe how physical traits help a species to survive (e.g., giraffe's neck, turtle's shell).

NYS.SCI.LE.2.2a, b:
Observe how animals grow and change in predictable ways: i.e. Animals closely resemble their parents and other individuals in their species.

NYS.SCI.LE.4.1a,e,f,g:
Describe animal life cycles and life spans (e.g., baby/adult, puppy to dog).

CC.ELA.R.IT.KID.1:
Ask and answer questions about key details in a text.

CC.ELA.R.IT.KID.2:
Identify the main topic and retell key details of a text.

CC.ELA.R.IT.CS.4:
Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.

CC.ELA.IT.CS.5:
Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text.

CC.ELA.R.IT.IKI.7:
Use the illustrations and details in a text to describe its key ideas.

CC.ELA.W.RBPK.7:
Participate in shared research and writing projects (e.g., explore a number of "how-to" books on a given topic and use them to write a sequence of instructions).

NYS.NA-VA.K-4.1:
Understanding and Applying Media, Techniques, and Processes.

NYS.TECH.2:
Information technology is used to retrieve, process, and communicate information and as a tool to enhance learning.