What makes a bird unique? As we began our bird unit we challenged the students to answer this question. As a whole group, the friends brainstormed a detailed list with great examples, but they kept finding exceptions. A bird has pretty colors, but so does a fish or insect. A bird has a beak/bill, but so does a duck billed platypus. A bird lays eggs, but so do fish, amphibians and reptiles. A bird has wings, but insects and some mammals do too. Finally, we decided that birds are the only animal to have feathers, and that all birds have them! A bird’s feathers protect its skin from injury and weather. They provided a light, broad, lifting surface that enables them to fly, steer and brake. They add support, warmth and comfort in a nest and are used for display in attracting mates. As we delved into the world of birds, the students were amazed at the many different, exotic and interesting facts. They learned the anatomy of a bird’s body and the important role each part plays, the influence of habitat, the nesting practices and necessity of migration. We were also lucky to enjoy two visits for the National Aviary and observe two nests of Peregrine Falcons and Eagles located in Pittsburgh on a daily basis thanks to web-cameras.
With the inclement weather upon us during this winter season, friends in the kindergarten classroom came up with the best way to learn about birds you may only find outside of Pittsburgh—creating our very own bird aviary and habitats. To warm things up, we started with the birds-of-paradise, believed to be among the most beautiful creatures on earth. With the help of The Cornell Lab of Ornithology, scientists have succeeded in capturing images of all 39 species of these rare and magnificent birds. Known best for their colorful plumage (feathers) and unique courtship displays, birds-of-paradise are native to the New Guinea and satellite islands. As we learned about each bird, the friends selected their favorite to draw and paint, eventually adding to our kindergarten rain forest. A favorite amongst the class was the male Superb bird-of-paradise, known to have one of the most bizarre and elaborate mating displays in the avian world. After preparing his “dance floor” (scrubbing away dirt and branches), he attracts females with a loud call, folds his feathers in an upward shape creating an ellipse-shaped feature and begins his rhythmic dancing. We then transformed the classroom into our very own aviary using exotic and interesting birds. After several weeks of meticulous paper mache building, painting and decorating, friends proudly shared their birds and facts with classmates.
ABC CHALLENGES CONTINUED

The kindergartners have eagerly continued with their classroom challenges, often asking for “more of a challenge!” This month we focused primarily on letter recognition. During the first challenge, students were asked to place ABC containers in alphabetical order, then match tennis balls (with the lower case letter written on it) to the initial uppercase letter. For example, they matched the d tennis ball with the letter D container. This activity was an independent task that each child had the opportunity to complete. During the second challenge, students worked as a group, searching through magazines, finding photographs and print, matching the letter to the challenge alphabet board. Each day, students had to find matches for five new letters of the alphabet. Students are eagerly awaiting our upcoming challenges after spring break, focusing on beginning letter sounds and rhyming words.

WORD FAMILIES RHYMING

This month we introduced the children to two new families: the AT family and the EN family as we continued our development, becoming emerging readers and writers. We used a variety of ways to practice these families with the children. We began with the Smartboard to introduce the family to the children. Once the children understood the pattern, we practiced the families in lots of hands on ways. The children played games like Roll the Word or Word Family Bingo to reinforce their learning. Using word related searches, building, sorting, and graphing as daily activities, we were able to scaffold the students’ learning in a familiar and comfortable manner. Well-timed instruction with word families can help children solidify understandings, eliminate confusions, and move to new understandings in the most efficient
The Science/Discovery Area has continued to be a busy place in the kindergarten classroom! We have explored several experiments involving bird adaptations including habitats, nest building, and the function and importance of different feathers and beaks.

**Feathers**

I wonder...how does a feather help protect a bird from the elements of nature?

I think...the children worked with Mrs. Armbruster to make some predictions about what will happen to a feather when it gets wet. Some friends predicted: “The water will fall off the feather, keeping it dry.” “The feather will absorb the water when it rains.” As a whole group, students also explored how feathers help a bird stay warm by placing ice cubes on top of a single feather. Most friends predicted that feathers must act like a blanket for birds. One friend suggested, “Feathers must keep birds warm because a penguin is a bird and he stays warm in the snow.”

I learned...feathers help protect birds from getting drenched in the rain. Instead of soaking through them, water slides right off. Birds are able to keep their feathers waterproof by putting a layer of oil on them. They get the oil from a place near their tail called the preen gland. Feathers also insulate a bird using various layers of feathers, including soft, fluffy feathers called down.

**Beaks**

I wonder...why birds have different shaped and sized beaks?

I think...the children made predictions about why a bird’s beak looks the way it does. The children began by looking at various photographs of beaks and predicting what type of food each bird ate and their process of obtaining and eating food. They predicted if the bird was a meat eater (birds of prey, also known as raptors, that hunt and feed on other animals) or a seed/insect eater.

I learned...birds eat many different types of food. It may depend upon their environment and what’s available for them to eat, along with their body/beak structure. Scientist rely on a bird’s beak (or bill) to help identify and categorize them. Beak types range from those that crack, shred, chisel, probe, strain, spear and several other unique designs. Here are some common bill shapes and the food that they are especially adapted to eat. Seed eaters like cardinals have short, thick conical bills for cracking seeds. Birds of prey like hawks and owl have sharp, curved bills for tearing meat. Woodpeckers have bills that are long and chisel-like for boring into wood to eat insects. Hummingbird bills are long and slender for probing flowers for nectar.
WHAT'S AN OWL PELLET??

When learning about any subject, one of the best ways to build understanding is through hands-on exploration. The kindergarten friends were very eager to explore what they called “One of our best science experiments this year”-dissecting owl pellets. Owls, like many other birds, eat their food whole. Since birds do not have teeth, they can't chew their food. Therefore, they use their strong and sharp beaks to rip their prey apart and then swallow large chunks whole. The owl slowly digests its meal by separating the softer materials (meat) from the harder materials (bones). It then regurgitates the harder materials along with indigestible items such as feathers and fur in the form of a pellet. The children enjoyed the process of dissecting the pellets, using a chart to sort and identify their findings.

SUBTRACTION

As students mastered the basic concept of addition, we began to gradually introduce subtraction. We learned the process of finding the difference between two numbers, inspired by our current unit. Students began by using plastic frogs and a log to create a number story. “One day, there were 10 frogs sitting on a log. A bird swooped in and ate 5 frogs. How many frogs were left on the log?” Students practiced subtraction with the help of a teacher, then worked with a partner, with one student creating the story problem, while the other solved. As students gained a better understanding of the meaning of subtraction (“to take away”), off the log. As we move on to our next unit, we will continue exploring all that subtraction has to offer and begin to explore both addition and subtraction using larger numbers.
BIRD BONANZA FAMILY FESTIVAL

Thank you to all the families who came to our Bird Bonanza Family Festival on Thursday, March 6th! We really enjoy seeing all our friends and families again. We hope everyone had a great time exploring our paper mache kindergarten aviary, dissecting owl pellets, learning about a Macaw, making necklaces and more. We could tell all the children couldn't wait to share what they have been learning about birds, including all about their habitats, adaptations and interesting facts.

Clark and his family read facts about his bird, the Treecreeper.

Rohan and her mother explore the water birds at the Kindergarten Aviary.

Boden proudly shares his Emperor Penguin with his mom and sister.

Kindergarten families enjoy watching the bird facts video.

Emma, her mother and Benjamin look at the tropical birds.

Lexi, her mother and Alice look at the Baltimore Oriole.

David, Dany and their mom watch the kindergarten bird movie on the smartboard.

Rohan and her mother explore the water birds at the Kindergarten Aviary.