Educational extensions for the October 2012 issue of Ranger Rick magazine

**SPOOKY ANIMALS**

In this Halloween issue of *Ranger Rick*, you’ll find bats, spiders, and owls—all animals that fit the mood of this holiday. What characteristics make them seem “spooky”? Which animals are associated with other holidays? Why? Engage students in a discussion around these questions. Ask them to consider which aspects reflect the animals’ true nature and which are based on myths.

**WHISTLES AS NAMES**

In “*The Buzz*” (pages 12-13), you learn that dolphins use whistles to identify themselves to other dolphins. Ask each student to come up with his or her own signature whistle. Then have students introduce themselves to the group using their whistles. Together, review the whistles a few times and practice making each one. Then see who can remember everyone’s new “names.” Would you be able to communicate as dolphins do?

**COLOR EXPERIMENT**

An experiment reported in “*The Buzz*” (pages 12-13) found that zebras’ black-and-white stripes attracted fewer flies than the solid colors of horses. Colors and patterns can affect many things, such as the amount of sunlight absorbed, visibility or camouflage, and responses from people or animals. Have students work in groups to design their own experiments to test the effects of color or pattern on phenomena that interest them.

**SOLVING TRAFFIC TROUBLE**

“*Ranger Rick’s Adventures: Turtle Tunnel*” (pages 14-17) shows how the Lake Jackson Ecopassage solves a major problem for wildlife needing to cross a busy Florida highway. Where are the biggest conflicts between wildlife and vehicles in your community? As a class, investigate this question using maps, interviews, and firsthand observation. Once students have identified the problem areas, invite them to devise potential solutions and present them to the class or, better yet, to city officials.

**WHO’S WHO OF BEARS**

“Meet the Sloth Bears” (pages 18-23) explains that sloth bears are different from other bears in several key ways. Make a large wall chart with categories for various bear characteristics, such as where in the world they live; their habitat, diet, and physical traits; and how they take care of their young. Have each student research a different bear species (black, grizzly, polar, spectacled, panda, etc.). Ask them to fill in the chart with their bear’s information. Then use the chart to discuss the similarities and differences that students discover.

**SEED DISPERAL INVESTIGATION**

Read about the ways that seeds travel to new places in “*Seeds Get Around*” (pages 24-25). Then take students outside to look for various types of seeds. Have them collect samples and use what they find to create a field guide or mini-museum that illustrates and explains the different seed dispersal strategies.

**ARMORED ANIMALS PUT ON A SHOW**

This month’s “Just for Fun” games (pages 36-39) feature armored animals. Many animals use armor for defense. Provide craft supplies for students to make puppets of a variety of armored animals. Then invite students to write and perform a fun skit that depicts how each animal employs its armor to protect itself from danger.
“Looking at Eyes” (pages 6-11) shows you some animals with eyes that are similar to yours and some with eyes that are very different. What would your life be like if you saw it through other eyes? What if you had:

• The eyes of a giant clam, which sense only the difference between light and dark?
• The eyes of a frog, which would look around from the tip-top of your head?
• The eyes of a chameleon, which can see in two directions at once?
• The eyes of an owl or tarsier, which can see well at night in very dim light?

Choose one of the examples above or another kind of animal’s eyes that you know about. If you had that animal’s eyes for one whole day, what would you see and do? Below, write a story about your adventures.

My Day with the Eyes of a ________________________________

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Pteranodons reigned in the skies at the same time that dinosaurs ruled the land. They were big. They were bad (if you were a fish, that is). And they were super cool. Here are some fascinating facts about them.

1. **They Weren’t Birds or Dinosaurs.**
   So what exactly was a pteranodon (tuh-RAN-uh-dahn)? They looked kind of like prehistoric birds, but they were actually reptiles. Many people think of them as dinosaurs. But dinosaurs and pteranodons made up separate groups of prehistoric reptiles.

2. **Dinosaurs Were Their Neighbors.**
   Pteranodons lived about 85 million years ago, at the same time that dinosaurs lived. Pteranodon fossils have been found in the central part of North America. Back then, that area was mostly covered by a shallow sea.

3. **They Liked Seafood.**
   Some fossils show remains of pteranodons’ last meals: fish scales and bones. Scientists believe the winged reptiles cruised over the waves, plunging their heads in and grabbing fish with their beak-like jaws (below). Pteranodons didn’t have teeth, so they probably just swallowed their catches whole.

4. **They Were No Pipsqueaks!**
   These ancient flyers were pretty big—standing about as tall as an adult person. Most also had wing-spans of as much as 20 feet—about the same as the wingspans of some small airplanes!

5. **They Were Fantastic Flyers.**
   Pteranodons belonged to a group of animals that were the first vertebrates (animals with backbones) to fly. Scientists think pteranodons may have been able to fly for long distances, at speeds of 25 to 40 miles per hour. The reptiles didn’t have feathers, but some may have had a hair-like covering.

6. **They Had “Wing Fingers.”**
   A pteranodon had three short fingers at the end of each arm, with an extra-long fourth finger that supported the top of each wing. Scientists believe pteranodon wings were made of a special kind of skin.

8. **The shells of pteranodons’ eggs were probably:**
   a) Hard, like birds’ eggs
   b) Soft and leathery, like the eggs of reptiles today

9. **Why is it harder to find pteranodon fossils than dinosaur fossils?**

10. **What else would you like to know about pteranodons?**

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