

# For Creative Minds

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This For Creative Minds educational section contains activities to engage children in learning while making it fun at the same time. The activities build on the underlying subjects introduced in the story. While older children may be able to do these activities on their own, we encourage adults to work with the young children in their lives. Even if the adults have long forgotten or never learned this information, they can still work through the activities and be experts in their children's eyes! Exposure to these concepts at a young age helps to build a strong foundation for easier comprehension later in life. This section may be photocopied or printed from our website by the owner of this book for educational, non-commercial uses. Cross-curricular teaching activities for use at home or in the classroom, interactive quizzes, and more are available online. Go to [www.ArbordalePublishing.com](http://www.ArbordalePublishing.com) and click on the book's cover to explore all the links.

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## Animal Vision Fun Facts

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Most animals, including people, have five senses. Can you name them? Seeing is one of the most important senses for many animals.

- The largest eyeball on the planet is 11 inches wide—about the size of a dinner plate. It belongs to the giant squid.
- An owl cannot move its eyes. It must move its head to see in different directions.
- Frogs' eyes bulge so they can stay underwater and still be able to see, with their eyes poking above the surface.
- Frogs use their eyes to help them swallow food! When they pull their eyes down into the roof of their mouth, their eyes help push the food down their throats.
- The eyes of bats and moles are hard to see because they are so very tiny.
- It's almost impossible to sneeze without closing your eyes.
- Your eyes blink over 27,000 times in one day.
- Dolphins sleep with one eye open.
- Worms don't have eyes.
- Some fish that live in deep, dark waters of underground caves do not have eyes either.



## Glossary



**Binocular vision:** The prefix “bi” means two, as in the two wheels of a bicycle. Ocular refers to eyes or vision. Binocular means two eyes that work together. These two eyes are usually located in the front of an animal’s head. Binocular vision helps animals to judge distances, helping them to track prey. Most predators have binocular vision.



**Compound eyes:** Insects have eyes that “bug” out, letting them see in all directions at once. These eyes usually have between 3,000 and 9,000 optical units, called ommatidia. Because each eye is made up of many different units, they are called compound eyes. Some insects, like the dragonfly, can have as many as 25,000 units in each eye! The more units the insect has, the better the insect can see. These units are so small that we can only see them under a microscope.



**Nictitating membrane:** Most animals have upper and lower eyelids that move up and down. Some animals have a third, see-through eyelid to protect their eyes. This third eyelid, called a nictitating membrane, moves across each eye. Many animals that swim or fly use these eyelids to protect their eyes. This eagle has its third eyelid drawn across its eye. The small insert shows what its eye would look like if the third eyelid was curled up in the corner of its eye, not being used.

**Spectacles:** Snakes and some lizards don’t have eyelids at all. They have see-through scales called spectacles that cover their eyes. Because the scales are part of their skin, as they shed their skin to grow (molt), the new skin has new see-through scales to protect their eyes.



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## Match the Eye to the Animal

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Answers: 1-deer fly, 2-American toad, 3-red fox, 4-common loon, 5-human



white-footed mouse



opossum



ruffed grouse



snapping turtle



moose

Answers: 6-opossum, 7-moose, 8-white-footed mouse, 9-ruffed grouse, 10-snapping turtle