WEEKDAY WONDERS

Content developed by the Tennessee Aquarium Education Department

TENNESSEE AQUARIUM

Weird and Wacky Nature: Day 5

This week, your young scientist will explore the stranger side of animal behaviors. Your scientist will learn about some of the weird and wacky ways that animals defend themselves, consume their food, and care for their young. They will also explore how animals' senses of taste and sight can be different from humans in their own wonderfully weird way.

These curated activities are listed in a suggested sequence but may be done in the order that works best for you and your young scientists. Learn more about this series in the Introduction to Weekday Wonders.

Question of the Day

What are some of the weird and wacky ways that animals use their eyes to see?

Daily Nature Journal

Spending some time outside completing their daily nature journal is a great way for young scientists to use their own eyes to learn more about the amazing adaptations for vision in the natural world around us. Need guidance to help them? Use the Guide to Nature Journaling to support them in nature journaling each day.

Seeing Through Each Others' Eyes

For this activity, you will need to gather 2 toilet paper tubes or paper towel tubes cut to four inches and tape.

Tell your young scientist that he or she is going to explore how some other animals see. Have your scientist hold the two tubes up to his/her eyes facing straight forward. While keeping the ends by the eyes still, your scientist should slowly move the other ends of the tubes around in different directions. Encourage him/her to look only through the tubes for best effect.

Tell your scientist that this is how chameleons or seahorses move their eyes in order to have the widest range of view possible. This helps them both to avoid predators and to find prey of their own.

Now tape the tubes together, far enough apart so that your young scientist can look straight through them. Ask your young scientist to again hold the tubes up to his or her eyes and look around at the surroundings. Your scientist will find that s/he will need to move his or her whole head to see different areas.

Tell your scientist that this is how owls look at the world around them. They have no muscles to move their eyes as we do and so must always turn their heads to change their field of view. Ask your scientist to practice moving his or her eyes up and down and side to side without moving his or her head. This shows how the muscles around our eyes work. Tell your scientist that s/he is doing something that owls cannot do!

Hunt with the Owls

Place household items or toys around the house or yard. Tell your scientist that in this activity he or she will be an owl. First, your scientist should decide on a nest that will serve as the owl's home.

Next, tell your owl that you have hidden "prey" around the house or yard and that s/he will need to find it. Remind your scientist about how owls see. Have your young scientist "fly" around the space hunting the prey while looking only through the tubes taped together from the previous activity.

Believe Your Eyes

Gather the materials your young scientist will need for this activity.

- Light source, such as a candle, flashlight, or small lantern
- Several crayons, markers, or colored pencils
- Paper

Take your scientist to a dark place, such as outside at night or in a windowless room indoors during the day. Tell your scientist that after learning about owl and chameleon eyes, this activity will help him or her learn more about how human eyes work.

Ask your young scientist to choose a writing implement to write its color on the piece of paper. Now ask your young scientist to draw a simple house.

Have your young scientist cover one eye and keep it covered. Turn on your light source to illuminate the area while you tell a story or lead the singing of a song that lasts at least two minutes.

Now ask your young scientist to uncover the first eye and use it to look around while covering the second eye. What differences does your scientist see how well s/he can see? Encourage your scientist to switch back and forth between eyes to discover similarities and differences.

Finally, ask your scientist to turn over the piece of paper and draw the house again. Take the paper back to a lighted area. Ask your scientist if he or she got the color of the writing implement correct. Then have your scientist compare the two pictures of the houses to see whether s/he was able to draw more accurately during one of the tries.

Know the Dark

Remind your scientist that in yesterday's Weekday Wonders activity, "Taste the Rainbow," s/he discovered how smell affects taste. In this activity, he or she will see that the reverse is also true. Consider doing this activity after dark. If that is too late, find something to use to blindfold your scientist.

Have your scientist find a comfortable place to sit outside or by an open window. Ask him or her to draw what s/he sees. Even looking into a dark area, your scientist should be able to see some things as the eyes adjust to the darkness. If you are doing this activity during the day, blindfold him or her at this point.

Tell your scientist that one way to smell something more strongly is to breathe in through the mouth and nose at the same time. Have your scientist open his or her mouth slightly and pull air across the tongue and in through the nose.

Your scientist will likely be able to detect more things outside with this combination of not being able to see and smelling using the mouth and nose. Ask your scientist to add new items to his or her drawing as s/he detects them.