WEEKDAY WONDERS

Content developed by the Tennessee Aquarium Education Department

TENNESSEE AQUARIUM

Changing Ecosystems: Day 2

Weekday Wonders helps young scientists explore changes in ecosystems this week. They begin by thinking about what changes in their neighborhood. The scientists will dig deeper into how the places that animals live change, focusing on both land and water. Then they will consider how often ecosystems change, finishing the week learning about why diverse ecosystems are healthier ecosystems.

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

How do the places where animals live change?

Making Predictions

Scientists often make predictions about what they think they will observe when they investigate something. Before going outside for the daily nature journal, ask your young scientist to make a prediction of what he or she will observe. In particular, what living things does your scientist think will be outside? Ask him or her to draw a picture to show their ideas.

Daily Nature Journal

Once your scientist has made predictions about the life outside, have him or her go outside to complete a daily nature journal entry. You can use the Guide to Nature Journaling if your scientist needs a reminder on how to complete nature journal entries.

Also, have your scientist add to his or her Week-long Drawing that he or she started in yesterday's Weekday Wonders.

Signs of Life

Help your scientist place a hula hoop or long string in a circle in one spot outside close to your home. Have your scientist spend some time observing that spot and recording the kind of plants within the circle. Ask them to make observations about the colors, length of grass, and the amount of each kind of plant. Then have your scientist record any animals they see or think might live within or travel through the circle.

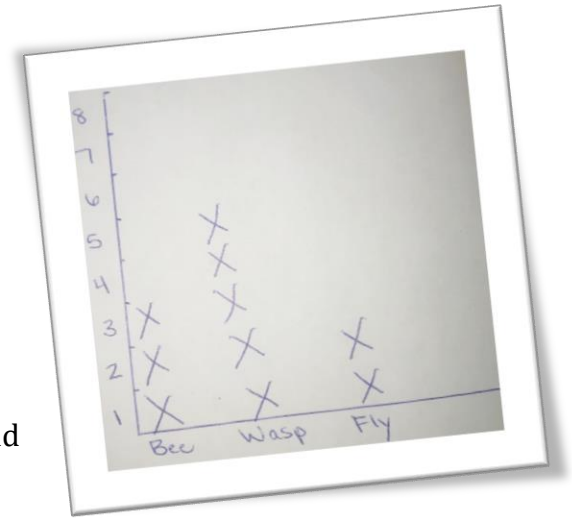
Leave the hula hoop or circle there and remind your scientist to return a few hours later. Ask them to record their ideas about the following questions.

- What has changed? What has stayed the same?
- What would happen if you mowed over that spot shortening the grass?
- If your scientist returned in a week, what would be the same and what would be different? In a month? In a different season?

Insect Investigation

Have your scientists find two different kinds of plants outside. They should draw a picture of each one and label it if you or your scientists know the name.

Have your scientists observe each plant for 3 to 5 minutes. During that time, your scientist should pay attention to the insects that visit the plant. Younger scientists can keep a tally of the total number of insects. Older scientists can extend this by creating a histogram of the insects. To do this, they should draw axes and write evenly spaced numbers in order along the vertical axis. On the horizontal axis, they should write the name of any insect as they see it and put one X above it. Each time they see that type of insect, they should add another X to the stack. If they see a different kind of insect, they should add a new label and start a new stack of Xs. (See example at right.)



Have your scientists make several visits to the plants at different times of the day. Each time, they should observe and record the insects in the same way. After they have observed the plants a few times, they should review the data and share it with you. Have them think about the following questions.

- Are there the same kinds of insects at different times of the day?
- What do the insects do when they visit the plant?
- Does what the insects are doing change based on the time of day?

Seasonal Shuffle

Prepare for the game by collecting items to represent insects, such as macaroni, pieces of paper, wads of newspaper or junk mail, nuts, seeds, or beans, a container to collect the insects your Brown Bat "catches," and a timer (optional). Scatter the insects around the area where you will play the Seasonal Shuffle.

Tell your scientist that he or she is going to be a Brown Bat. Explain that in the winter, Brown Bats hibernate. In the summer, Brown Bats are very active, flying about, and catching many insects.

You or another young scientist should call out either "summer" or "winter." During summer, the Brown Bats should fly about collecting insects one at a time. Each time they catch an insect, your bat must place it in the container before they continue collecting. When the round leader calls "winter" all bats must instantly freeze in place until the leader calls summer again. At that point, bats can start flying around to catch insects again. Once the round is over, scatter the "insects" again. Play at least two or three rounds.

Add an additional challenge by setting an amount time for each season on a timer and seeing how many insects the bat collect during that time. Have them try to increase the number each round.