

Helping Kids Learn – Post #2 4/2/20

STEM: Science – Life Sciences

Many of us and our kids are stuck indoors, literally. Today’s post suggests a life science experience you can do from your window. This can be adapted for pre-school through adult. See [Lift the Level](#) below.


Be an Ornithologist – Bird-Watching from Your Window

Yogi Berra said, “You can see a lot just by looking.” That’s certainly true with birds. And, lucky for us, birds are everywhere around our homes. You don’t have to feed them to watch them, but if you have some grain that you can spare, it will attract some. Note, though, they aren’t attracted to raw rice so keep it for yourselves to eat.

Watching nature hones your observation skills. It’s how a lot of great people from Teddy Roosevelt to Harriet Tubman to John James Audubon to E. B. White got so good at what they did. You will need a sheet of paper and a pencil. A notebook is even better because it keeps papers organized. Always, always write the date. It’s a good research habit. Start out without binoculars even if you have them.

Look around your house for a window where you can sit and see birds. People often loathe pigeons and they can be dirty and annoying (rats with wings?) but they’re fascinating to watch. So, all birds are welcome for this experience.

As you watch the birds, look at their colors (most birds are a blend of colors) and the shape of their bodies: do their feathers stick up on their heads (topknot) or lay flat? Are they round-ish or streamlined? Are their beaks pointy or stubby, slim or thick? Notice how they move on the ground and in the air. How do they hunt for food – do they seem to **look** for it, **smell** or **listen** for it or “**taste test**”? Make notes with one-word “titles” to help you remember what you’re seeing.

<p>Birds 4/2/20</p> <p>Feather colors – red, brown, black Another one is reddish brown all over</p> <p>Eyes –black</p> <p>Feet – reddish to brown, pointy toes, one in the back, three in the front like it could grab stuff</p> <p>Beak – red, thick, heavy-looking</p> <p>Didn’t see it fly; hops on ground and pecks at seeds</p> <p>Identification – (spoiler alert) Male Cardinal (reddish brown one is the female; they’re almost always together – one observing, the other foraging)</p>	
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← Title and date

← Description with “title” for each category

← Some descriptions are precise, others more general

✓ A bird guide or key will help with identification. If you don’t have a book, go to <https://www.audubon.org/bird-guide>. There’s also a mobile app where you can enter characteristics.

Lift the Level You can make this lesson deeper and/or suitable for older students by any of the following:

1. Observing at more than one time of day will broaden your knowledge. The same species – “Birds of a feather” – really do tend to “flock together” and feed at certain times of the day.
2. Compare and contrast: it’s not just for essays! After you have notes on several types of birds, look up the genus and species (<https://www.audubon.org/bird-guide> is one source). Make a chart to compare similarities and differences. This is one way taxonomists decide what belongs with what. And while you’re at it, look up *taxonomy*.
3. Scientists and mathematicians look for patterns. Try to find patterns in birds’ looks and behavior. There is a link, for example, between the type of beak and what they eat.
4. Draw. It doesn’t matter if you’re “good at art” or not. Start by sketching while looking at the bird, not at your paper. A cell phone or camera picture of the birds can help you greatly. Once you have the bird on paper so it looks something like the real thing, draw *context*: where is it (concrete, grass; on the ground, in a tree, on a roof; etc.), what are the weather conditions, what food is it eating, and so forth.
5. Listen. The more senses you can use, the better your observations will be. Many people who observe birds regularly use sound first, that is they hear the bird’s call before they see it. Record the bird’s call if you can or write down syllables for what you hear. For example, from a crow you may hear *ca-ca-ca* or *kaw-kaw-kaw*. Many birds have different calls for different reasons: marking their territory, advertising for a mate, greeting the dawn, and so on. Try to identify birds by their call and what they appear to be doing.

STEM Online

Birding websites and videocams are a great way to expand this experience or watch birds if viewing from a window is impractical. Also, you can observe species that are hard to see up close in nature. **Please note:** The videocams are live and in nature, which can be graphic. Several have the capacity to “rewind” so adults might want to preview before showing their children.

Duke Farms (Somerset NJ) Bald Eagle Nest – currently, there are two chicks <https://bit.ly/2QHdwK8>

More bald eagle nest sites <http://www.iws.org/livecams.html> Menu of nestcams in the box on the left

Book about the Duke Farms eagles courtesy of Jim Wright, Bergen Record columnist, at <https://bit.ly/2WFAwwl>

Barred Owl nest box in Indiana through the Cornell Ornithology Department <https://bit.ly/33GQybi> The site has other nest cams, also: <https://www.allaboutbirds.org/cams/>

New York City Falcon <https://www.mentalfloss.com/article/621988/new-york-city-falcon-cam-reveals-nest-four-eggs> Short text with the live nestcam at the bottom of the landing page; eggs should hatch late April or early May. Great chance to observe a falcon up close.

You can find additional webcams and nestcams by entering “live nest cams” in a search engine such as DuckDuckGo or Chrome.

NJ Student Learning Standards

1-LS3 Heredity: Inheritance and Variation of Traits, 2-LS4 Biological Evolution: Unity and Diversity, 3-LS3 Heredity: Inheritance and Variation of Traits, MS-LS4 and HS-LS4 Biological Evolution: Unity and Diversity