This resource was created in collaboration with a teacher professional development workshop designed for K-12 art and biology educators. It provides educators with art-integrated activities that can be used to teach K-12 students about nature inspired art.
Art & Biology

Nature inspires art, and biology often provides the shapes, forms, contours, colors and concepts that can inspire children to create their own representation of life.

Observational Drawings

An Observational Drawing is when you observe something and respond to it with a visual representation or personal observation. It is a way to communicate concepts and details in an engaging way that helps other observers understand. Observational drawing encourages students to develop new ways of seeing and new awareness. It strengthens perception and close looking skills.

Tips for Doing Observational Drawings with Students

• Begin with a “Close Looking” warm up activity
• Encourage students to constantly look at what they are drawing
• Practice Perspective to see how objects appear
• Focus on Proportion before adding details
• Use loose light outlines for shapes and contours
• Explore a variety of marks including hatching, dashes and dots
• Encourage students to make it meaningful by adding their own special detail
Goal
The goal of this lesson is for students to learn close looking skills while exploring observational nature drawings and prints. Through hands-on activities and experimentation, students will explore different ways to visualize and interpret what they see.

Ohio Learning Standards Addressed

K-8 Standards:

K.LS.1 Living things have specific characteristics and traits.

1.LS.2 Living things have basic needs, which are met by obtaining materials from the physical environment.

3.LS.3 Plants and animals have life cycles that are part of their adaptations for survival in their natural environments.

6.LS.4 Living systems at all levels of organization demonstrate the complementary nature of structure and function.

High School Standards:

B.E.2 Examine neighboring populations of similar species. Propose one or more analyses to determine if they are a distinct species.

B.D1.1 Investigate species diversity for local population, which could include school grounds or local wildlife areas, by comparing the number of different species to the abundance of each species.

B.D1.2 Select a species that has recently been removed from the endangered species list. Evaluate the current management plan and how this action will impact the species and the environment.

B.D1.3 Draw and label a biogeochemical cycle and identify the factors that are influenced by climate change.
Classroom Activities for Close Looking and Exploring Nature

Supplies:

- Every day object
- Speaking Visual Activity Card set
- Sketchbook or Drawing Paper
- Drawing Pencils/Eraser
- Styrafoam Sheets/Printing Paper
- Carving tool
- Printmaking Ink
- Brayer/tray

Activity 1: 20 Ways to Look Activity

This is a close looking activity where you will need to choose an every day object for contemplation. This could be just about anything some suggestions include: a paperclip, a plastic water bottle, an item of clothing, or a Coke can.

Step 1
Tell the group you are now going to consider a great work of design, a ______. Ask them to spend 2-3 minutes looking at the object carefully.

Step 2
After close looking, lead the group in a discussion of the shape, size, color and any decoration on the object. Try to limit this conversation to the formal qualities of the object rather than its contextual or practical properties.

Step 3
Ask each participant to take one of the question cards from the Speaking Visual Activity Card Set and ask them to take a minute to consider the question before responding.

Step 4
What new information have you learned about this object that was revealed by close examination of its visual properties? How has your interpretation of this object changed? How might you apply this exercise to your work or in your daily life?

Based on ideas from: “Teaching Yourself to Teach with Objects” by John Hennigar Shuh, Journal of Education, Volume 7 (4) p. 15
**Activity 2: Observational Drawings in Nature**

Encourage students to pick a spot that is comfortable and interesting to them where there are a variety of natural objects like leaves and flowers.

**Step 1**
Demonstrate how to look at an object from nature and ask students to start their observational sketch by lightly drawing the basic shape. Contour means to draw the outline of the object to capture the key elements of shape, size, and proportion. It helps to simply focus on the beginning steps of observational drawing, looking at the edges of the shape and outline of the object.

**Step 2**
Ask students to decide on a perspective at which they will look at their object and stick with that viewpoint. Encourage students to try not to move positions until they complete their drawing. Tell students rather than erasing their drawing, leave it and begin again. Trial and error is an important part of sketching. The process of practicing and continuing to draw is how an artist becomes better. At the end of each drawing session, ask students to look at all of their drawings and take note of what worked out well and what didn’t.

**Added Challenge**
For older students, creating a biological illustration is a good way to extend the observational drawing. Biological illustration is the use of technical illustration to visually communicate the structure and specific details of biological subjects of study. This can be used to demonstrate anatomy, explain biological functions or interactions, direct surgical procedures, and distinguish species. It is an accurate detailed drawing that informs and communicates.
Activity 3: Nature Printmaking

Once students have completed their observational drawings, make the experience more meaningful by creating a print of their drawing.

**Step 1**
Have students place their drawings on top of styrafoam printmaking board and trace. This will leave an indentation in the styrafoam and they can continue to carve it out more with a carving tool if needed.

**Step 2**
Provide a variety of different print colors and demonstrate to students how to use an ink brayer and printing ink to roll across the styrafoam. Encourage them to experiment with colors and placement of their print.

**Step 3**
Once the styrafoam is covered with ink students can place it on their printing paper and put their hands over the top and apply pressure. The styrafoam can be rinsed off and used again.
Additional Resources
https://academic.oup.com/bioscience/article/68/12/933/5146289
Definitions

**Rhythm Art**
A principle of design that suggests movement or action. Rhythm is usually achieved through repetition of lines, shapes, colors, and more. It creates a visual tempo in artworks and provides a path for the viewer’s eye to follow.

**Rhythm Music**
The combinations of long and short, even or uneven sounds that convey a sense of movement in time. Rhythm refers to the length of time between each major “beat”, or accent, such as in a piece of music. It is the sequence of sounds and silences which make up the rhythm.

**Alternating Rhythm**
Artwork that contains a repetition of two or more components that are used interchangeably. Some alternating rhythm examples include alternating light and dark colors or placing various shapes and/or colors in a repeating pattern. In music, rhythm is created by alternating sound and non-sound over time.

**Random Rhythm**
Artwork that contains repeating elements without a specified order or arrangement. Some random rhythm examples include splatters of paint or shells on a beach. In music, random rhythm is created when groupings of similar patterns or elements that repeat with no regularity create a random rhythm.

**Flowing Rhythm**
Artwork that contains curved or circular elements that give the art movement. Some flowing rhythm examples include flowers, clouds, or waves. In music, a flowing rhythm shows the repeated elements following bends, curves, and undulations.

**Regular Rhythm**
Artwork that contains repeating elements with a specified order or arrangement that can be measured. Some regular rhythm examples include evenly spaced windows or tiles. Any rhythm created from beats within the pattern described by a time signature (e.g. 4/4 “common time,” 3/4 “waltz,” or 2/4 cut time”) is a regular rhythm.

**Progressive Rhythm**
Artwork that contains repeating elements in a pattern that change either in size or color as they repeat. Some progressive rhythm examples include spirals and building blocks arranged from smallest to largest. Visual rhythm is created by repeated positive shapes separated by negative spaces. The repeated shapes are similar to the beats in music.