



SWAP AND FIND: SCIENTIFIC ILLUSTRATIONS

Description:

In this activity, students make detailed illustrations of a natural object, such as a leaf or a fruit. Then they swap illustrations and try to use the details in the illustration to find one another's objects.

Connections to Content Standards:

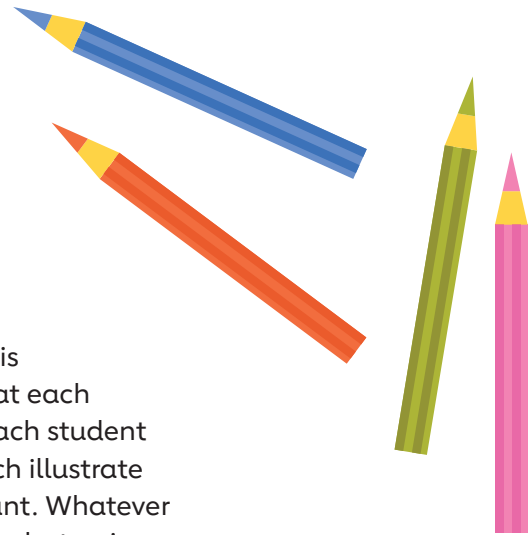
NGSS Crosscutting Concept: Structure and Function

Materials:

- 1 piece of paper, garden journal, or science notebook for each student
- Colored pencils
- *Optional:* A clipboard for each student

Preparation:

- Find an object for students to illustrate. For this activity, it is important to have an object that there are many of, so that each student will get their own. For example, you might have each student draw a different leaf from the same tree, or they could each illustrate their own tangerine, or their own flower from the same plant. Whatever you choose, make sure that each individual object is somewhat unique.



Activity:

1. **Discuss Scientific Illustration:** *Today, we are going to create scientific illustrations of objects from the garden, and we are going to try to notice as many details as we can. Ask students to share in pairs, and then out to the class: Why is detailed observation important in science? Accept all answers, highlighting that observation leads to wonder and discovery.*
2. **Explain the Illustration Activity:** *Today, each of you will pick one leaf from this tree (or whatever you've decided to use). Try to pick a leaf with some unique features. Your task is to illustrate it, including so much detail that another student will be able to look at your illustration, look through all the leaves, and find your unique leaf.*



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- 3. Demonstrate:** Hold up a large leaf, and begin to illustrate it, without including details. Then ask: *What can I include to make this more detailed, so that another student could identify my unique leaf?* Accept all answers, which might include things like holes or marks on the leaf; measurements; labels on interesting features; etc.
- 4. Illustrate, Swap and Find:** Give students time to pick their leaves and illustrate them, including as many details as they can. Have them write their names clearly on their illustrations. Then collect all of the leaves in a basket and stir them around. Ask students to place their illustrations down on a table and weigh them down, if you're outdoors. Then give each student a leaf and challenge them to find the illustration of that leaf. When they think they have a match, have them ask the student whose name is on that illustration to see if they got it right.
- 5. Wrap Up:** Ask students to hold their leaves up next to their illustrations. Have them share out: *What unique features helped you identify your unique leaf? Accept all answers. How did you behave like a scientist in this activity?* Accept all answers, which might include noticing details, labeling objects, making measurements, comparing different things, etc.

