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## LESSON: LEAF RUBBING

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**Grade Level:** k-1<sup>st</sup>

*K-LS1-1 Use observations to describe patterns of what plants and animals need to survive.*

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### INTRODUCTION:

The Redlands Plant-A-Thon is celebrating the 50<sup>th</sup> anniversary of Earth Day through tree planting and supplemental classroom content. This activity is being provided to increase student awareness of the area around us, teach a sense of responsibility for the environment and encourages development of this knowledge in a free-form, group exercise. The suite of concepts and vocabulary covered will depend on the length of activity facilitated by the participating teacher, but at any length should increase student preparation for program participation. It would also be suitable for post-program facilitation, to reinforce concepts and vocabulary covered during the program for maximum content retention.

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### OBJECTIVE:

The students will explore the different textures found in a natural environment by examining patterns found within a simple leaf or piece of bark. These explorations should lead into a discussion focused on advantages/disadvantages of various leaves and bark relative to the local environment.

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### SUMMARY:

In this activity, students will examine the different shapes and sizes of leaves from different trees in their own environment.

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### MATERIALS:

- A variety of different leaves
- One lunch bag per student
- Pencils or crayons
- Collected items from nature walk

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### BACKGROUND:

As with all living things, trees have a life system. Tissues carry food and water to different parts of the tree. Leaves also play a role in nutrient transport via micropores which allow for exchange of carbon dioxide, water and oxygen and water as well as chlorophyll to absorb sunlight critical to photosynthesis (the process of turning carbon dioxide and water into food for the tree). Leaves are a necessary part of the tree.

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### SKILLS:

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- Imagination
- Collaboration

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### DIRECTIONS:

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1. Have students bring in leaves or a piece of bark from a tree or plant in their home or neighborhood.
2. Students can trade materials so they may have a variety of things to work with.
3. Have students examine the leaf or piece of bark. Point out the veining, size, and shape of a leaf.
4. Have students put the leaf or bark in the bag. Do not fully open the bags.
5. With a pencil or crayon have students rub the color on the outside of the bag with the leaf inside. They should see the leaf image appear on the bag. They can use different colors and different leaves to decorate their bag. A leaf print is much more than just a pretty picture; it's also a peek into the science of trees.
6. Have students examine the imprint on the bags and compare them with the leaves they used. How are they different? How are they the same?
7. Take students outside to collect more leaves, twigs, and small flowers, or have them draw different trees, leaves, and flowers.
8. Students can put their tree treasures in their bags to take home.

**Substitute:** Instead of a lunch bag, you may use lightweight copy paper for leaf rubbing.

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### EXTENSION:

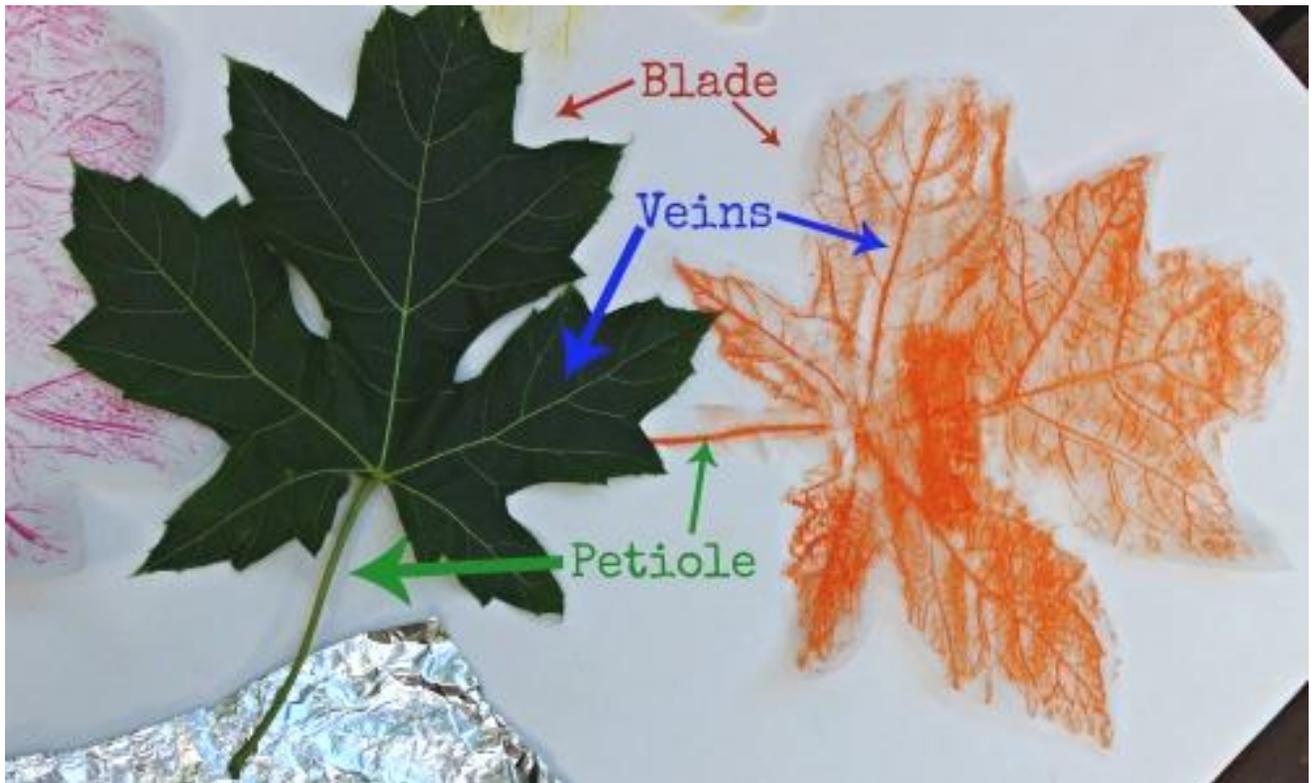
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- A. Ask students to identify the different parts of a tree.
- B. Explain to students what the role of a leaf is (Air & water filter, food for some animals).
- C. Ask students how they think a tree would look without leaves?

[www.forestfoundation.org/family-activities-in-nature](http://www.forestfoundation.org/family-activities-in-nature)

Project Learning Tree [www.plt.org/connecting-kids-to-nature-family-activities](http://www.plt.org/connecting-kids-to-nature-family-activities)

*See example below:*



The broad flat part of the leaf is called its blade. The lines that run through the blade are the leaf's veins. Veins carry food and water to the tree. The stalk of the leaf is called a petiole.

<http://www.kcedventures.com/blog/art-and-science-of-leaf-rubbings-nature-activity>