



Learning about

LEAVES

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This is a middle level worksheet and is suitable for children from class 4 – class 7

Activity 1

Have you looked at a leaf closely?

- a) Pick up a leaf you find fallen on the ground and sketch it – notice the holes made by caterpillars, the texture of the leaf, the cracks, the dew drops, the lines on it and the different shades of colour. Sketch all that you see on the leaf here.



- b) Write a few sentences to describe the leaf – how it feels, looks, smells, sounds when you rub it, using interesting and appropriate words so that a person who has not seen the leaf can make a picture of it in his/her mind listening to your description. Think of words as shown in the sample below to describe your leaf.

Feels – rough, smooth, velvety

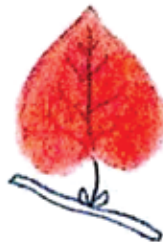
Looks – Shiny, brown, big, dry, heart shaped

Smells – muddy, damp, fresh

Sounds – crackle, 'tsch, tsch' (listen to the sound as you rub it and write down as you hear it)

Activity 2

A leaf has many small parts. Choose the name of the part that is highlighted by reading the short description given.





Blade or Lamina: the flat, expanded part of the leaf.
 Petiole: part that attaches the blade to the stem.
 Stipule: tiny leaflets at the base of the petiole.
 Margin: outside edge or rim of the leaf.
 Apex: the tip or point of the leaf.
 Base: the lower rim of the leaf that connects to the petiole.
 Veins: thin tubes that support the blade and carry food and water.

Activity 3

Do all leaves look the same?

Gather a collection of different leaves in a basket. Bring them to a place where you can spread them out and take a close look at them. Study the leaves and think of your own ways to sort the leaves into groups. Place them in separate groups on the ground. Once you have done this, write a note and place it below each group to say why you have put the leaves together.

For example – These leaves are all long and thin. This group of leaves is all big and dry. I put these together because they all look wavy.



Activity 4

Cut a leaf shape of your choice from a thick sheet of paper and write an acrostic poem on it using the word 'Leaves'. Make a collage of all the poems in class.

For example:

- L – Light green fresh leaves
- E – Enormous trees
- A – Abundant shade
- V – Vanish in winter
- E – Exciting shapes, sizes, and colours
- S – Sanctuary

Activity 5

a) As mentioned earlier, margin is the outer edge of a leaf. Leaves have different margins. Here are a few margins –



Entire

Toothed

Lobed

Wavy

Entire: having a smooth edge.

Toothed: having a saw – like margin with small tooth. They could be sharp or rounded at the tips.

Lobed: having slight dents that can be rounded or pointed.

Wavy: wavy, curling from the front to the back of the leaf.

Walk to a place where you find trees or plants and observe the leaves and their margins. Collect a few leaves having different margins. Sort and place the leaves under the headings given below. You may also find margins that are not given here. Make new group headings of your own!

Entire	Toothed	Lobed	Wavy	New group

b) Leaf blades have different shapes. Blade is the entire flat part of the leaf. On your walk, spot leaves that match these shapes.



Circular



Triangular



Elliptical



Ovate



Spatulate



Linear

Activity 6

Gather the leaves and press them (arrange leaves between newspaper sheets and place under heavy books).

Arrange the pressed leaves on a long sheet of paper in a line. Mix poster paint with water and spread the paint on the bristles of an old toothbrush. Hold the toothbrush with the bristles facing down over the paper and rub the bristles with your index finger (ensure that the leaves placed don't move). This will splatter paint on the paper; continue until the paper is covered with paint spots. Carefully remove the leaves once the paint is dry. You will find beautiful leaf patterns.

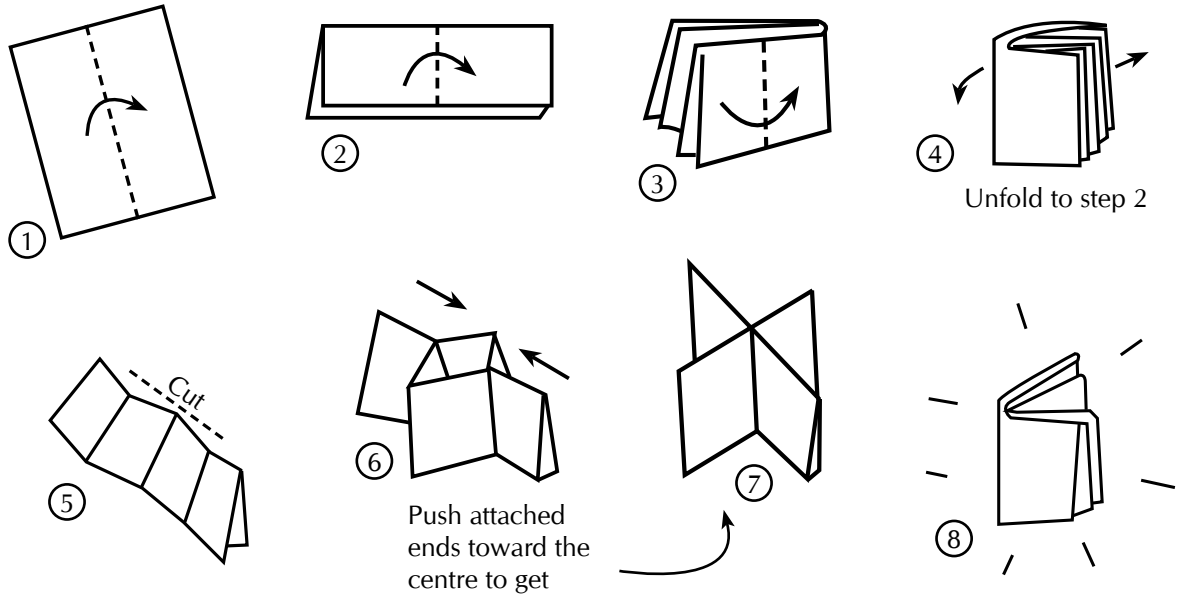
Activity 7

Collect a variety of leaves. Paint the underside of a leaf using a paint brush. Make sure that the veins of the leaf are painted too. Place this leaf on a paper (painted side facing the paper) that you would like to make the leaf prints on. Cover with a newspaper sheet and press carefully so that the pressed leaf leaves a print. Do the same with other leaves.

Activity 8

Make a booklet. On each page draw a specific leaf margin or blade shape and label it.

Here is how you can make a booklet using a single page –



Activity 9

You may have many questions about leaves and trees. Write them on a large sheet of paper (For example – why do trees have leaves? Why do trees lose their leaves? Why do leaves become dry when they fall? Choose a question, think about it carefully and discuss with a friend. Come up with an explanation of your own. You don't have to know the real facts!

Activity 10

Take a magnifying glass, a journal (sketch book) and a pencil with you on a walk to look at life on the leaves. Spend some time watching a particular tree. Use the magnifying glass to look at the leaves on the tree. What do you see on the leaves? Be careful not to scare away the tiny creatures you may find!

Make a quick sketch of the leaf and what you see on it. Write notes beside each picture you sketch. Your notes may include the date, time, weather (sunny/cloudy/slight drizzle), approximate length of the leaf, description of the place where the plant is located (surrounded by tall grass and many thick trees), the action you notice on the leaf, description of the leaves and how you felt too.

If you have noticed tiny creatures on the leaves, find out if they are regular visitors the tree. Come back to the tree on another day and observe the leaves again. Sketch and make notes. See example given below:



29 March 2016, 5pm

Sunny day

Hot and dry

Saw an ant nest about 10 to 12 inches long on the neem tree that stands tall near the almond tree. In the nest were busy orange coloured ants walking in and out of a hole. The leaves that make the nest seem pasted with something white. Curious about how the nest looks inside.

Activity 11

Experiment [Source – *The Young Scientist Investigates Trees*, Oxford University Press]

You need

1. Tree leaves of different kinds
2. A few pots or jars
3. Soil
4. Labels

Fill the pots with a little soil. Place a different leaf in each pot. Cover the pot with more soil so that the leaves are buried well. Label the pots with the names of the tree leaves in them. Place the pots on a warm windowsill and keep the soil moist. Every two weeks, check the leaves to see how much has decayed. Then bury them again.

Which leaves decay faster or slower than others? What happens if you put a few pots outside? Compare them with the leaves kept indoors.

Activity 12

Ask your friend to collect a few leaves and give them to you. Do you remember where you may have seen these leaves fallen on the ground? Try to match the leaves to their trees.

Activity 13

Experiment [Source: <http://www.kcedventures.com/blog/how-do-leaves-breathe-a-simple-science-experiment-for-kids>]

Can you see plants giving out oxygen?
Do this experiment and reflect on what you see.

1. Fill a glass bowl with lukewarm water.
2. Place a large fresh leaf inside the bowl and put a stone over it so that it is fully submerged in water.
3. Place this bowl in a sunny spot. You could place it indoors too if there is enough sunlight.
4. Let it remain for a few hours.
5. Take a look at it after a few hours.

What do you see around the leaf and along the edges of the bowl?

Does it hint at plants giving out oxygen? How?

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