



# Minds in Motion

Unbe-LEAF-able prints!

## Activity Rundown:

Get ready to head outside, we're going leaf hunting! In this activity, you're going to be gathering leaves from the park, your backyard, or even from around your house in order to make beautiful leaf prints. By making colourful imprints of the leaves you find and labelling their different parts and functions. You'll be a blossoming botanist in no time!

## You will need:

- ☐ Assorted crayons or pencil crayons
- ☐ Pen, marker, or pencil for writing
- ☐ Paper (Any colour will do, but we recommend white printer paper)
- ☐ Any leaves you can find!

## Let's do it!

1. Gather the needed materials. Pick out a few different colours of crayon you want to use.
2. Get ready to go outside and find some cool leaves. We recommend finding at least three different kinds of assorted sizes.

\*Too cold to go outside? See if you have any houseplants that have lost a leaf or two recently. If not, see if you can use the leaves off of any vegetables or fruits you may have in your kitchen.

\*\*Make sure you **NEVER eat or taste** any of your scientific samples! Remember to wash your hands after working with the leaves.



# Minds in Motion

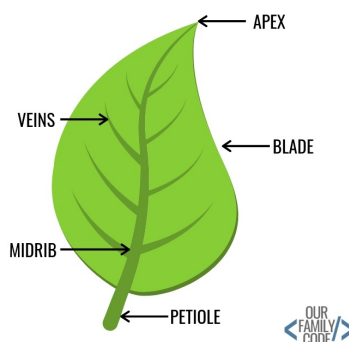
3. Once you have your leaves collected, lay them on a smooth piece of paper *vein side up*. You'll want the "bumpier" side of the leaf facing up towards the ceiling.



*Vein side up is shown on the left-hand side of this picture.*

4. Position the leaf in whichever direction you wish and then place another piece of paper on top, creating a paper-leaf-paper sandwich.
5. Take your chosen colour of crayon and carefully begin rubbing it back and forth across your leaf. The imprint of the leaf should begin to show on your top piece of paper.  
\*If the leaf is moving around too much, try taking a small piece of tape and taping the stem (petiole) into place.
6. Now it's time to use a marker and label the five main components of the leaf. Take a look at the diagram shown below for an example of what yours may look like.

## Parts of a Leaf



*Remember to read what each component does in the "Background" section of this worksheet!*

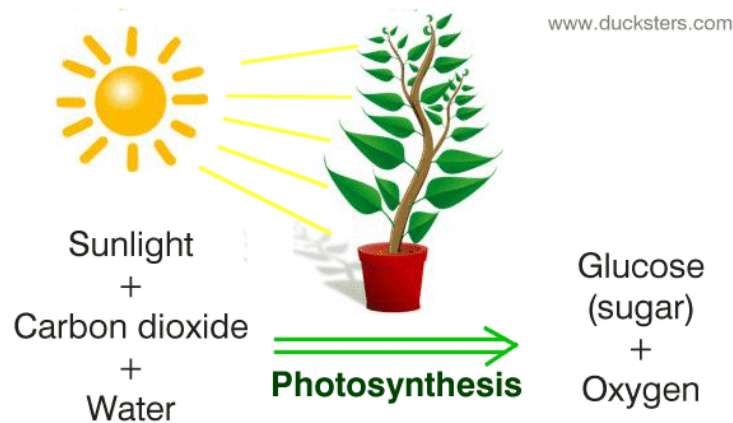


# Minds in Motion

## Background:

A botanist is a scientist who studies all different types of plant life.

Just like us, plants need food and air in order to grow up strong and healthy! Instead of eating three balanced meals throughout the day, their leaves provide the food and air necessary for them to survive. Through photosynthesis, leaves turn sunlight into food. Through pores, or stomata, leaves “breathe” in carbon dioxide and “breathe” out oxygen. Leaves also release excess water, much like we sweat.



Some of the leaves you find on the ground may not be green! This is because during the colder months, plants typically don't get the amount of sunlight they need. In a bid to save energy, they release their leaves! The leaves change colour due to the fact that they aren't being made to photosynthesize during this time, and they lose their green pigment called *chlorophyll*.

## Five main components of leaves:

- The blade: Flat part of the leaf where photosynthesis occurs. They are also one of the main tools that help scientists identify leaves!
- The midrib: The thick “spine” that runs from the tip of the leaf all the way down to its base. Much like human spines, the midrib provides structural support to the leaf and also acts as a transport line for water and nutrients.
- The veins: These can be found shooting off of the midrib. Think of them like roads attached to a highway, with the midrib acting as the main roadway. The veins help to transport the plant's water and needed nutrients.
- The petiole: This sturdy part of the leaf connects it to the rest of the plant, allowing for the transport of nutrients and water from the leaf to the rest of the plant. It is



# Minds in Motion



also quite flexible and allows the leaf to stay attached to its plant during windy weather.

- The apex: This can be found at the very tip of the leaf, opposite to the petiole. Again, scientists use this part of the leaf to identify plants!

## Up for a challenge?

Once you're done labelling the five different components of your leaves, follow this link:

[https://kids.kiddle.co/images/5/57/Leaf\\_morphology\\_no\\_title.svg](https://kids.kiddle.co/images/5/57/Leaf_morphology_no_title.svg)

and try to identify the *morphology* (shape) of your samples!

Interested in what plants are in your neighbourhood? Try to identify what plants your leaves came from by using these (and other) resources:

1. Guide to Common Native Trees and Shrubs of Alberta.  
<https://open.alberta.ca/publications/1711129>
2. Common coulee plants of Southern Alberta.  
<https://opus.uleth.ca/handle/10133/3376>

Did you know that Alberta actually has a provincial plant? The wild rose has been our official plant since 1930! Hop on Google and find the other 12 official flowers of other Canadian provinces and territories.





# Minds in Motion

**Reach out!**

We would love to hear from you about all the amazing STEM projects you are doing at home! Show us your finished products on any of the following social media platforms by tagging us or by using the following hashtags. We hope these projects have brought some excitement to your day during these difficult times.

Let us know how we did! Please click below to fill out a short survey on how well we did and what you would like to see more of in the future. Thank you!

<https://bit.ly/MindsSurvey2020>

Twitter: **@MyMindsInMotion**

Facebook: **@mindsinmotion2014 & @ucactiveliving**

Instagram: **@ucalgaryactive**

Please use the following hashtags!

**#ucalgarycamps #ucalgarytogether**