

Grade 6 Curriculum Link Ideas

Subject	Unit	Season	Activity	Description
Science	Trees and Forest	All	Adopt a Plant	Each student adopts a woody stemmed plant to observe throughout the year.
		Fall Winter	Winter Twig Activity	Student use twigs in the winter to see the significant differences among species even when there are no leaves.
		Spring, summer, fall	Whole tree Clue	Examining the different parts of a tree.
		Summer, fall	Leaf Clue	Examining the different parts of a leaf.
	Evidence and Investigation	Spring, fall, summer	Leaf Chromatography	Testing different leaves, especially during fall, to see the different pigments of color.
		Winter	Investigating tracks	Looking at different signs of animals based on the tracks they leave.
		All	Dichotomous Chart	Have students in groups of 2-3 create a dichotomous chart for several Coniferous and Deciduous species in the naturalization area.
		All	Crime Scene Report	Students piece together a crime based on evidence.
Math	Measurement	All	Tree Champions	Finding the biggest tree, based on multiple factors
		All	Estimating tree height	Using different techniques to estimate the height of a tree.
	Angles	All	Angle Scavenger Hunt	Searching the natural environment to find different angles.
Art		All	Forest Diorama	Make different types of forests: Boreal, alpine, rainforest, etc.
		All	Silhouettes	Using different techniques, notice the different outline shapes of trees.

Winter Plant Identification

Name _____ Date _____

1. Find a woody plant in the natural garden. Look for a live twig (has buds on it). Draw what you see in the box below

2. Next look at all the buds on the twig. Determine if the plant has opposite or alternate leaves and branching. Write your finding below:

3. Next draw the terminal bud in detail in the box below. Note colour and be sure to not if you can see bud scales in the bud. Measure the size of the bud, length and width (mm) and add the measurements to your drawing.

4. What colour(s) is the bark? Is there a different color near the end of the twigs, if so, what colour?

5. Look for any other features of your plant left that could help identify it such as old leaves, seed heads or pods, spots on the branches, bloom on the bark, etc. Draw or write your findings below:

Leaf Chromatography

Purpose: To demonstrate the separation of pigments in leaves through the process of chromatography

Materials: Coffee filters
Pencil
Small jar or cup
Tape
Leaves
Acetone

Description: Plant pigments play an important role in capturing light for the photosynthetic process. Each of these pigments is responsible for the colors we see in leaves because they reflect light at that wavelength.

Example:

Chlorophyll reflects green light
Anthocyanins reflect red light
Carotenoids reflect yellow light

Directions:

This activity should be done outside, or in a very well ventilated area.

Choose leaves carefully. Soft leaves are good. Avoid hard waxy leaves common on ornamental shrubs. Leaves that show red and yellows or ones that change colors in the

Discussion

As the acetone moves up the paper, the pigment dissolves into it. Because of the different characteristics of the pigments in the leaf, some pigments move faster than others.

During the spring and summer, the red and yellow pigments are masked or hidden by large amounts of chlorophyll in the leaf. This is not unlike making a batch of chocolate chip cookies. If we added ten pounds of flour, five chocolate chips, and a pinch of sugar, what would we taste? Flour. Similarly, we only see the chlorophyll because there is such a large amount. So why are the other leaves red? Because they have already changed for the season. In fall, chlorophyll breaks down and reveal the wide range of colors produced by these other pigments. This occurs because during the fall, the tree is forming a plug at the base of the stem, which cuts off the water to the leaf. Because there isn't any water, the leaf stops making food, chlorophyll breaks down, and we start to see the other colors.

Investigating Tracks

Name _____

1. Find a track of an animal that visited your school recently. Draw what you see in the box below.

2. Measure the track. Length _____ Width _____ Add those measurements to the picture above.

3. What animal do you think made these tracks?

4. How old do you think this track is? When did the animal leave the track? Use your best estimate.

5. Is there a trail of these tracks? If not go find one. Draw the pattern you see in the box below

6. Measure the distance between the tracks. Add those measurements to your picture above.

7. How do you think the animal was moving? Was it walking, hopping, running, etc.

8. Find an example of a trace. It could be from the animal you already are tracking. What type of trace is it? _____

Draw what you found in the box below.

Crime Scene Report

Detective _____ Date _____

1. Draw the crime scene in the box below. Label the evidence observed (footprints, blood, body parts, etc.) Don't touch anything.

Next answer the following questions based on your observations.

2. Who do you think is the victim here?

3. What evidence do you have that supports this conclusion?

4. List all your suspects. What evidence do you have that supports their guilt?

5. Write what you think the sequence of events is. What happened?

Name _____

Tree Circumference Estimation

There are 10 trees with numbers on them. Find a tree. Look down the list for its number. First estimate how big around the tree is in centimetres when measured at chest height. Write your guess in the estimated circumference column. Then use the measuring tape to measure the exact circumference. Write that in the actual circumference column. Then calculate the difference.

Tree Number	Estimated Circumference	Actual Circumference	Difference
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Created by Melissa Sikes, Calgary Zoo, 2004

Angle Scavenger Hunt

Name: _____ Date _____
You will need this sheet, a pencil with an eraser, a protractor, and a measuring tape.
Find the following and fill out the table:

1. Find a triangle.	a) Describe or draw where it is: b) Measure its three angles _____, _____, _____ c) What is the sum of its three angles? _____
2. Find a right angle (90°).	a) Describe or draw where it is:
3. Find two parallel lines.	a) Describe or draw where it is:
4. Find two perpendicular lines.	a) Describe or draw where it is:
5. Find a square.	a) Describe or draw where it is:

Math Scavenger Hunt

Name: _____

Date _____

You will need this sheet, a pencil with an eraser, a protractor, and a measuring tape.
Find the following and fill out the table:

1. Find an obtuse angle.	a) Describe or draw where it is:
2. Find an acute angle.	a) Describe or draw where it is:
3. Find a right angle.	a) Describe or draw where it is:
4. Find a reflex angle.	a) Describe or draw where it is:
5. Find a triangle.	a) Describe or draw where it is: b) Measure its three angles _____, _____, _____ c) What is the sum of its three angles? _____
6. Find an isosceles triangle.	a) Describe or draw where it is: