ACTIVITY #6: 'LEAF' IT BE! MATH IN SCIENCE

NGSS: MS-LS2-1

OBJECTIVE:
Have your students learn and understand how to find the area of an irregular shape. Students may have already learned and understood how to find the area of a regular shape such as a rectangular (maybe a garden bed in your school garden) or the shape of the ECO-Cycle fish tank. Perhaps it is a square bed, but students will learn that all objects can be measured for area.

Some leaves, like the fine pine needle, barely have any surface area. Others, like the very large banana plant leaf, have a very large surface area. The surface area of leaves is directly connected to the amount of sugar and oxygen they produce. One could assume that a single pine needle does not produce as much sugar and oxygen as a banana leaf.

CALCULATE THE AREA OF AN IRREGULAR FIGURE:
1. Trace the figure on graph paper
2. Count the number of whole square units
3. Count the number of partial square units and divide this number by 2
4. Add the two numbers together

● Whole Squares	+	● Partial Squares/2	=	Area
44	+	22/2		= Area
44	+	11	+	55
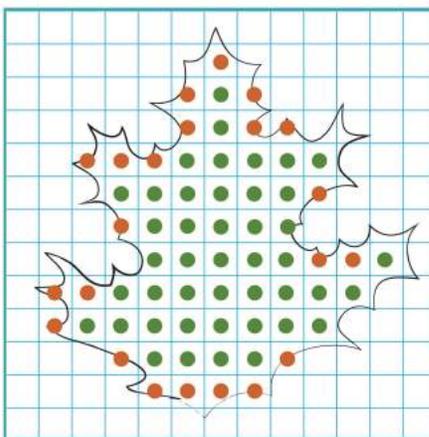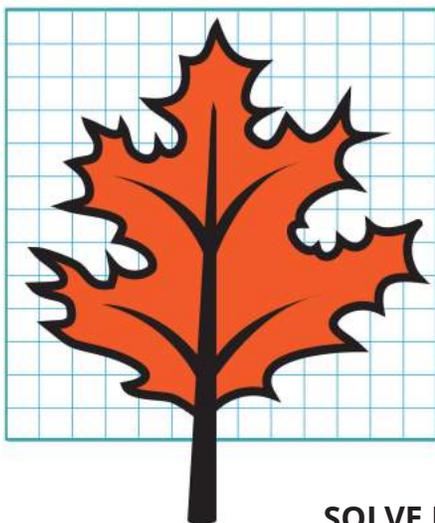
SOLVE IT
1. Find a leaf.
2. Calculate the area of your leaf.
3. Compare the area of your leaf to the area of the leaf above.
4. Which produces more sugar and oxygen?
5. Why are there bigger leaves in rainier/shady places and smaller leaves in hot/dry places?

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