

Flower Walk

Petal Power

Walk through your neighborhood, nearby parks and/or trails looking for flowers. Practice counting skills by counting petals while examining the many different flowers in bloom. Identify the different number patterns found in nature.

Activity Challenge

What number patterns can be found on flowers? How consistent are the patterns on a single plant and on plants in the same family?

Preparation

1. Review the materials list and gather the necessary items.
2. Decide where you can go to find flowers.
3. Create a data table, like the one following the **Science behind the Activity** section, to record your observations for each flower.

To Do

Adult supervision may be required for young children.

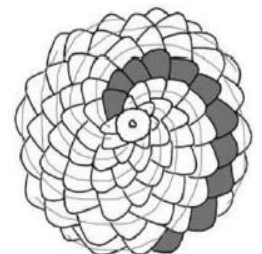
1. Walk around looking for flowers in your neighborhood, nearby parks and/or trails.
Note: Individual petals on some types of flowers may be hard to identify and count— you should skip those flowers.
2. Count the number of petals on each individual flower found. If a plant has clusters of flowers, just count the petals on one flower in each cluster. If a plant has many flowers on it, count and record the number of petals on just 2 or 3 flowers on the plant.
3. Record your observations on the table you made.

Observations

- Does each flower on the same plant have the same number of petals? Is this what you expected?
- Is the number of petals an even or odd number?
- **After counting 4 flowers**, each on a different plant, do you see any patterns that you can use to predict the number of petals on the next flower you count?
- How many flowers, that you counted, have an even number of petals? How many have an odd number of petals? Is the number of petals a **Fibonacci number** (as described in the science section, below)?

Extensions

Find 2 to 3 large pinecones, each from a different type of tree, and look at them from the end where they were attached to the tree stem. Notice that the scales, (which may look like bumps) form a spiral pattern. Count the number of spirals (as shown by the thin light gray lines in the drawing). The cone pictured has 8 spirals (a **Fibonacci number**). Write down the number of spirals for each cone.



Materials Needed

- Paper
- Pen or pencil

Grade Range

K-2
3-5

Topics/Skills

Patterns; Odd and Even Numbers; Life Science

Learning Standards

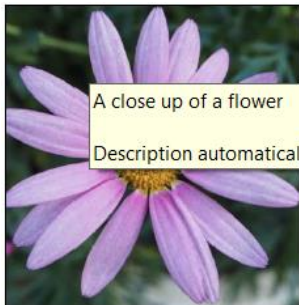
CCSS: [Operations and Algebraic Thinking](#)

Duration

15 – 30 minutes

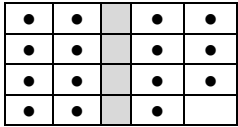
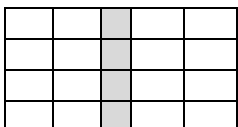
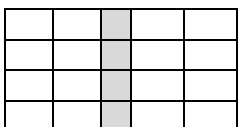
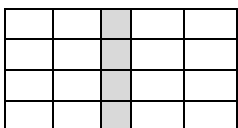
Prep Time

5 minutes



The Science Behind the Activity

There are many characteristics that are used to group (**classify**) plants. One characteristic is the number of petals on the plant’s flowers. An **even** number of objects can be place side by side in pairs, like pairs of shoes. An **odd** number of objects can also be placed side by side into pairs, but there will always be one object leftover, the “odd” shoe. Some scientists have noticed that a sequence of numbers, called a **Fibonacci** series, is often found in nature. In a Fibonacci series, each number is the sum of the 2 previous numbers. The series begins with the numbers: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55. . . Two out of three Fibonacci numbers are odd. The number of petals on many flowers, but not all, is a Fibonacci number. The different parts of some plants, like scales on certain pinecones, when counted, may also be a Fibonacci number. Scientists have several theories that may explain why this is so.

Draw a Picture of the Flower	Write the Number of Petals		Draw Number Dots to Represent Counted Number of Petals	Even or Odd? / Fibonacci Number?
	15			(Odd) / No
				
				
	Predicted Petals	Counted Petals		
	Predicted Petals	Counted Petals	