



BLOOMING FLOWER

Courtesy of: Engineers Nova Scotia

In this design challenge, you are going to make a flower that opens using a reel mechanism. A reel is a mechanism that uses a rotating cylinder to wind up or release something. You've probably used a reel before – fishing rods often have a reel to release and pull in fish, and garden hoses can be kept tidy by winding them up on a reel. Even yoyos are reels! Think about how you can use this as a way to open and close your flower and attract pollinators.

To watch a cool video showing how this works:

<https://www.curiositymachine.org/challenges/68/build/>

Click on the 'Guide'. If needed, use the Login: EngineersCanada Password: girlguides

Materials you will need:

- Paper
- String
- Straws (small)
- Straws (large)
- Scissors

Instructions

Through this activity the Brownies will learn about pulleys and simple machines. Have the girls think up some simple machines or provide examples.

1. Distribute a sheet of paper to each girl. Have them fold it into quarters and cut out a flower petal with a long stem. Demonstrate this for them and then have them use the scissors they brought to do the cutting.
2. Cut equal lengths of string (you may want to precut these before the girls arrive), one for each petal.
3. Tape the string to the center of the petal near the top.
4. Cut the small straws into smaller sections.
5. Tape each of the petals to a small straw section on the same side as the string.
6. Slide the string into the small straw.
7. Tape the small straws to a larger straw.
8. Using a piece of smaller straw, tape the ends of the strings to this piece.
9. Wrap the string around the straw and demonstrate the flower blossoming.
10. If extra time, allow them to decorate their flowers with markers and stickers.

