

# ENGINEERING A BLOOMING FLOWER!

## CRAFTING INSTRUCTIONS AND TIPS:

AUGUST 2025

Created by Thomas Lamb – WMG Outreach Intern

### ✂ Step 1: Create the Stem Sleeve

Using scissors, cut a 2 cm x 8 cm rectangle from your chosen coloured card. This piece will act as the mobile fixing that slides along the flower stem.

### 🎯 Step 2: Form the Cylindrical Sleeve

Wrap the card rectangle tightly around the paper straw to form a cylinder. Seal the edge with a small dot of glue. Once dry, the sleeve should slide smoothly up and down the straw.

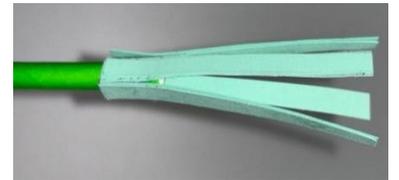
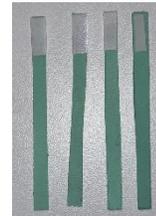


### 🔗 Step 3: Prepare the Hinges

Cut eight strips of card, each measuring 0.5 cm x 8 cm. Glue them in pairs to create four double thickness strips. For a tidier finish, you may prefer to use double-sided tape. These reinforced strips will act as the hinges connecting the petals to the flower stem.

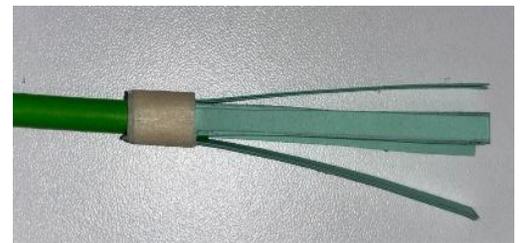
### 🌀 Step 4: Attach the Hinges

Apply double-sided tape to one end of each of the four hinge strips. Carefully peel off the tape backing and attach the strips evenly around the top of the paper straw. Imagine placing them at the North, South, East, and West positions. Ensure all the hinges are fixed at the same height. The adhesive will act as the pivot point, allowing the petals to move smoothly.



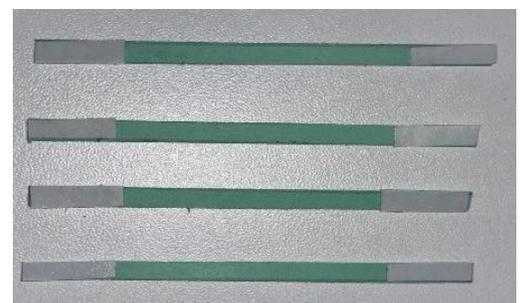
### 🔧 Step 5: Reinforce the Hinges

Wrap a strip of masking tape around the straw, directly over the points where the hinges are attached. This will help secure them firmly in place and add extra strength to your mechanism.



### ✂ Step 6: Prepare the Linkages

Repeat **Step 3** to create four more double-thickness strips (0.5 cm x 8 cm). This time, apply double-sided tape to both ends of each strip. These will act as the linkages that connect the moving sleeve to the flower petals.



## WHAT YOU'LL NEED:

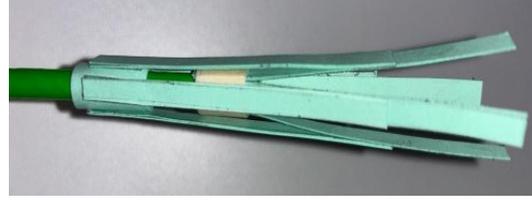
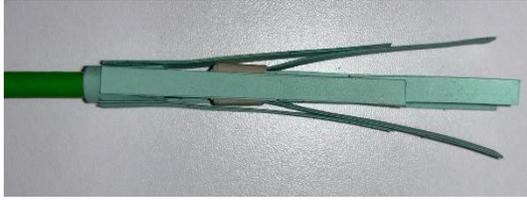
- COLOURED CARD
- PAPER STRAW
- TISSUE/CREPE PAPER
- GLUE
- SCISSORS
- DOUBLE-SIDED TAPE
- MASKING TAPE

### 🎯 Challenge Yourself! 🎯

Try adding more petals to your design! Just remember to cut extra hinge and linkage strips, and space them evenly around the stem for a smooth, symmetrical bloom.

### Step 7: Connect the Linkages

Attach one end of each linkage strip along the length of a hinge strip, and the other end to the mobile cylindrical sleeve. Ensure all linkages are fixed at the same height along the hinge strips to maintain symmetrical and even movement when the mechanism is activated.



#### Tip

For added strength, consider wrapping masking tape around each connection point. This helps to reinforce the joints and ensures your mechanism stays secure during movement.



### Step 8: Create Your Petals

Using tissue or crepe paper, cut out four large petals and four smaller petals. Aim to keep them roughly the same shape and size, but they don't need to be identical! Choose your own shapes and colours to personalise your flower.

For reference, this example uses oval-shaped petals in purple and red. Gently shape each petal with your fingers to create a natural, curved form. The more care you take here, the more realistic your flower will look.



### Step 9: Layer the Petals

Place a strip of double-sided tape down the centre of each large petal and make sure it's small enough to be hidden by the smaller petal that will go on top. Carefully stick one smaller petal onto each larger petal to create layered, dimensional petals.

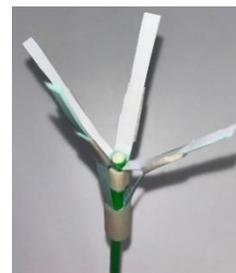
Avoid using glue at this stage, as it may damage the delicate tissue paper and affect the appearance. The tape also helps to reinforce the natural curved shape of each petal.



### Step 10: Attach the Petals

Apply double-sided tape to the inner side of each hinge strip. You may need to trim the tape carefully to fit. Make sure there's no overlap beyond the card edges. Peel off the backing and attach one layered petal to each hinge.

At this point, you should see your flower taking shape, with all petals connected and ready to bloom!



### Step 11: Add the Pollinator Centre

Cut a 2 cm x 10 cm strip of card. Along its width, carefully cut parallel lines. Stop just before the opposite edge so the strip stays intact. This will create a fringed effect. Wrap the strip into a cylinder, and secure it with a dot of glue, just like in **Step 1**. Finally, insert your pollinator into the centre of the flower, aligning it with the opening of the straw. It should sit snugly around or slightly inside the straw's mouth, depending on how tightly it's been rolled. Congratulations, you have finished crafting your own manual, mechanical blooming flower!

