



PORTSMOUTH
ART & CULTURAL
CENTER

POP-UPS: Engineering Paper 101

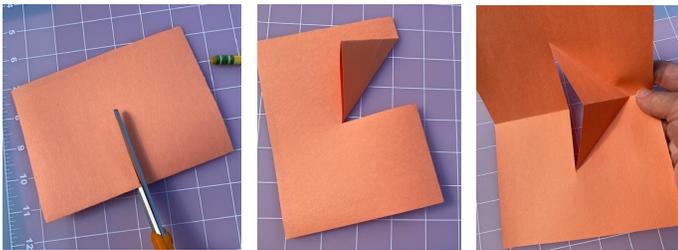
For ages 12 & up or younger with adult supervision

To make pop-ups, it is important to consider the paper, its weight and quality. Card stock is best, but you can experiment with lighter weight paper to get started. The paper should be foldable, but stiff enough to hold a crease while holding its own weight. Card stock can be purchased at art or craft stores.

Tools: pencils, ruler, cutting mat, scalpel knife and blades, craft knife, indenting tool, scissors and eraser.

Adding color: colored pencils, pastels, marker pens, watercolor, gouache or poster paints.

Folding an accurate crease by hand is difficult when using heavier weight papers. An indenting tool can be used to compress the sheet along the fold line to help make a clean hard edge. An empty ball-point pen or protractor tip can be used. Most of all experiment and have fun with each creation.



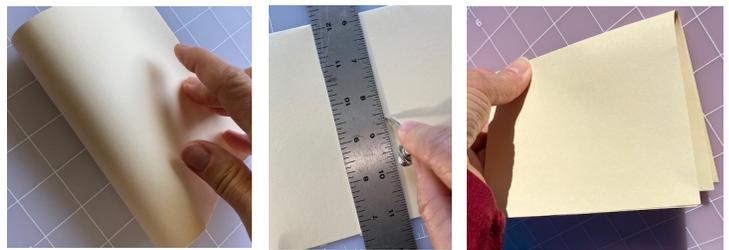
Single Slit cut:

1. Fold sheet of paper in half; measure along the folded edge (the gutter crease) and mark the halfway point. Using a pencil draw a line from the folded edge into the middle of the paper. Cut along this line.
2. Lift the cut corner and carefully fold from the cut toward the outside edge to create a triangle, and press firmly. Unfold the triangle and open folds completely.
3. This is an important step: Lift up the triangle while also folding the paper closed again. Note there will be one mountain crease and a valley crease.
4. Close the pop-up and press it flat, enforcing the creases. Once you understand this concept we are ready to proceed.

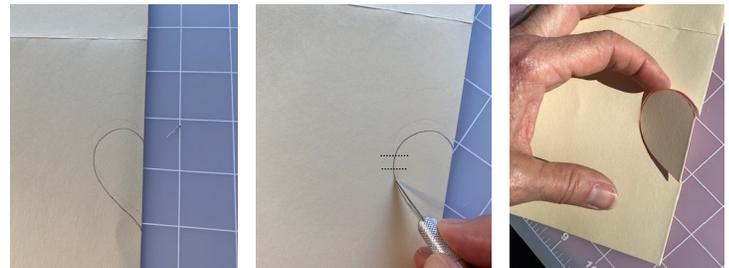
Here is another design that builds upon the gutter crease.

Single Heart:

1. Fold a sheet of paper in half and press the gutter crease firmly. For images of directions 1 & 2, see photos at top right.
2. Measure the half-way mark. Use indenting tool to make a sharp crease, and fold in half again.



3. Now unfold the paper and fold the paper lengthwise. Draw a heart shape at the gutter crease, making sure that your heart is below the half-way fold. See below.
4. Use the X-acto to cut through both layers of paper, leaving a small uncut part that connects the heart shape to your paper. This will be the hinge fold.



5. Unfold the paper and refold along the center horizontal line leaving the heart at the front.
6. To form the pop-up, lift the heart up to create a mountain fold at the center crease. Close the card and press to reinforce folds. Create variations on this theme by adding more generations of hearts. Reverse folds with each generation.

