

## \*Activity 1: How does a printer work?

You probably have a printer at your house and are very familiar with it. A printer uses a liquid **ink**, like your colored markers or a pen, and it pushes that ink into the paper to create an image or words. The paper **absorbs** the ink into its fibers to hold onto the image. For this activity, first ask an adult if it's ok. Next, you'll need to gather the following items:

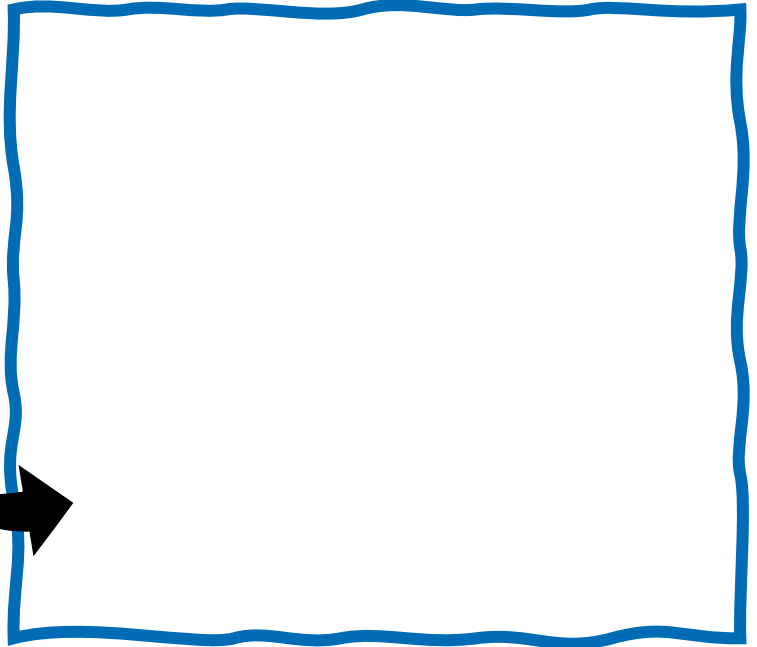


- 1) A leaf or a flower from outside
- 2) Some newspaper to keep your area clean
- 3) An acrylic paint
- 4) A small paintbrush



### When you're ready:

- 1) Lay the leaf or flower down over some newspaper
- 2) Use the paintbrush to apply the paint to your leaf or flower
- 3) Place the leaf or flower with the painted side down in the square to the right
- 4) Press firmly for 5 seconds and then gently pull the leaf or flower up



You should have a very cool image of the leaf in the color of paint you selected. This is called a **monochromatic** image, meaning it only has one color in it. You can try again on some blank papers using different colors in different places of your leaf or flower to get some really cool patterns and images.

## \*Activity 2: How does a photocopier work?

For places that have to do a lot of printing, like businesses and schools, they need something that can produce a lot of copies very quickly. They use a device called a photocopier to make their images. A photocopier uses static electricity to stick small molecules called **toner** to the paper. For this activity, you'll need the following items:



- 1) A paper plate
- 2) A balloon
- 3) Sugar



### When you're ready:

- 1) Put a small amount of sugar on the plate
- 2) Rub the inflated balloon on a cloth or shirt
- 3) Hold the balloon over the sugar

You should see the sugar grains jump from the plate up to the balloon and stick. This is the same thing that happens to toner in a copy machine only it sticks to the paper in a specific pattern to create an image. Unlike ink, the toner is bonded or **fused** onto the paper, rather than absorbed into it, allowing for clear images to be made quickly because the toner doesn't bleed or smear as it is being absorbed into the paper.