# Information Transfer Activity for Kids

**Watch Video**

## Pixel Drawing DIY

🕐 Duration: **30-60 min**       🎛 Difficulty: **Medium**       $ Cost: **$0**

Use a pattern of 1's and 0's to create a pixelated work of art!

## Material List

1 | Picture you want to pixelate simple images with 1-3 colors work best
1 | Sheet of graph paper
3¡ | Different colored markers
1¡ | Pencil with a good eraser

## Instructions

1 | Place the graph paper and photo next to each other.
2 | Using the photo for reference, write a 1 in any of the squares that will be filled in.
3 | Create a code for the other colors. For example, 1 = Black, 11 = Red, 111= Blue.
4 | Add 1's to your image to show where different colors will go.
5 | Using your color key, fill in the colors to reveal the pixelated image.
**Tip:** | On your first try use a very simple image like a smiley face to get some practice.

## How It Works

When a photo is taken with a camera, the information about the image is stored as a pattern of 1's and 0's. That pattern of numbers tells a digital screen which tiny lights - called pixels - to turn on (1's) and which ones to turn off (0's). The tiny lights make a picture that we can see. In real life it takes thousands or millions of lights turning different colors to make a high-resolution image (that means there are so many little lights that the image looks clear and sharp).