



Information Transfer Activity for Kids

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).