ËÑ©ØÐËÐ Art!

What is this Encoded Art Class all about?

People understand words. Computers understand codes. Today, we're going to explore the world of Bar Codes. Bar Codes are a special symbol that can keep information that is useful to computers. Depending on the type of special symbol, they can contain a lot of data - Up to 4,296 characters of A,B,C's and 1,2,3's.

The most common of these special codes look like this → 

We know what this little code says because it's information is printed below it. It still doesn't tell us much! Just a bunch of little lines, but the computer knows!

and are usually printed in black (foreground) on white (background). These are contrasting colors. They are the most opposite of colors. Printing black on white makes it very easy for the computer or scanner to tell what part of the code has the information it needs.

Where can we find these special codes?

Everywhere you go, you are surrounded by these special little codes! They're on your cereral box and your juice box! They're also in your books! Maybe you have some in your shoes!

- *Take a look around, do you see any near you now?*
- *How many did you find?*
- *How many did the class find?*

Ok, neat! But... How is this Art?

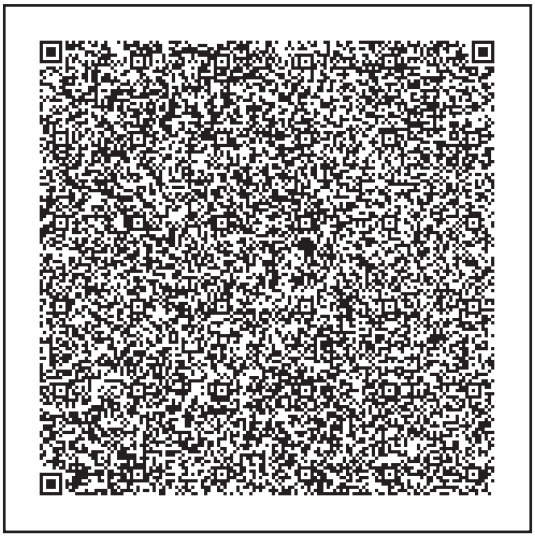
Since computers can read and make sense of these special codes - they also create these special codes. Computers are not very creative though! Plain old black and white is the most common way they make their bar code symbols.

The problem we're going to solve today is to turn a special kind of plain looking barcode into something more colorful and creative! ***AND... because every one of you are smarter than the most powerful computer in the world... it can still be read by a computer!*** The special kind of boring code we're going to be making more artistic is called a *Quick Response Code* or *"QR Code"*. They are one of the smartest types of special codes (but they're not *THAT* smart!)

Below are some examples of some of the different types of QR Codes.
In what ways are they similar?
In what ways are they different?

Up to 30% of a QR Code can be blocked.
Do you recognize the Blue character?

This QR Code is our example for our project. It only contains four words!



This QR Code contains 130 words with 730 letters.
Very important words to share!

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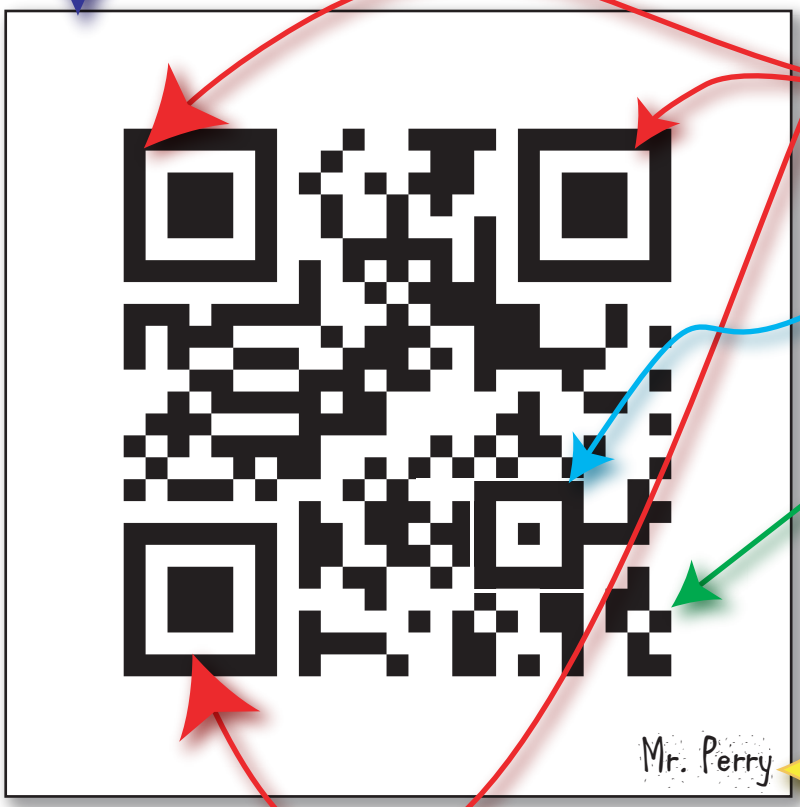
Please sign your name on your project!
We like to know who our awesome artists are!

Materials you can use:
Contrasting construction papers, crayons, markers. (black on yellow, white or orange, blue on white). Scissors, Glue, Rulers, Pencils, Pastel crayons. Simple water colors and brushes.

Step 1:
Create a big square. 12x12 inches will be plenty big, but you could go larger if you have the paper! The background needs to be the lighest color.



Step 2:
Start creating the 3 large square-in-a-square areas. These tell the computer which way is up and they need to be darker in color than the background. Could they be circle in a circle or star?!

Step 3:
Create this little square area. This also helps the computer figure out how to read the code.

Step 4:
Cut out the little squares. You could Mix-N-Match shapes (circles, triangles... or snakes!) They don't have to be all the same, but they do need to be close in size. There are about 30 of these! If using paper, stack, and cut several at a time!

Step 5:
Stick with it! Use the handout provided as a guide to create the rest of the shapes in the code. Lay out your project carefully before you start gluing everything down! And soon... you'll be....

Finished!
So what does this special code say?!

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You can use the image below as a guide for your artwork. Cut it up, paste it down, trace it, etc. Be creative with the shapes and use your imagination! Do you see any animals or letters or symbols? Look at the white areas too!