

ENCODED 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 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.



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!

Where can we find these special codes?

Everywhere you go, you are surrounded by these special little codes! They're on your cereal 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?

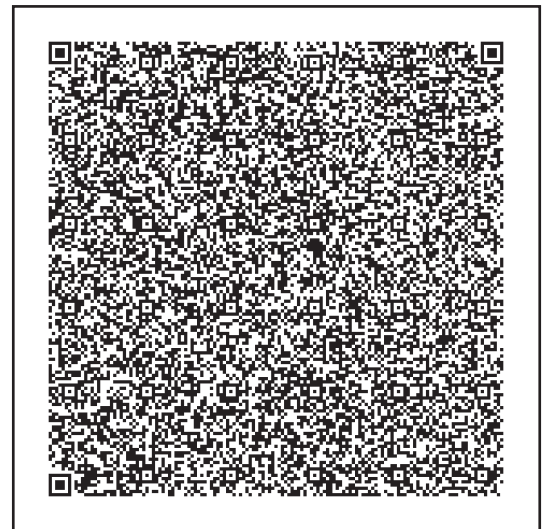
In what ways are they different?



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!