International Women's Day

March, 2024


CHANGE THE WORLD

Ada King, countess of Lovelace, was an English mathematician. She wrote programs that could be performed by an early form of computer. Thus, she is often referred to as the first computer programmer.

Lamarr was an Austian film star in Hollywood. She also coinvented a telecommunications device during World War II. Lamarr and the composer George Antheil devised an electronic device that minimized the jamming of radio signals. Though it was never used in wartime, this device is a component of present-day satellite and cellular-phone technology.

Grace Hopper was an American mathematician, computer scientist, and high-ranking officer in the U.S. Navy. She helped create the first commercial electronic computer.


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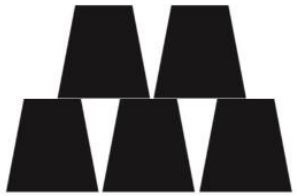


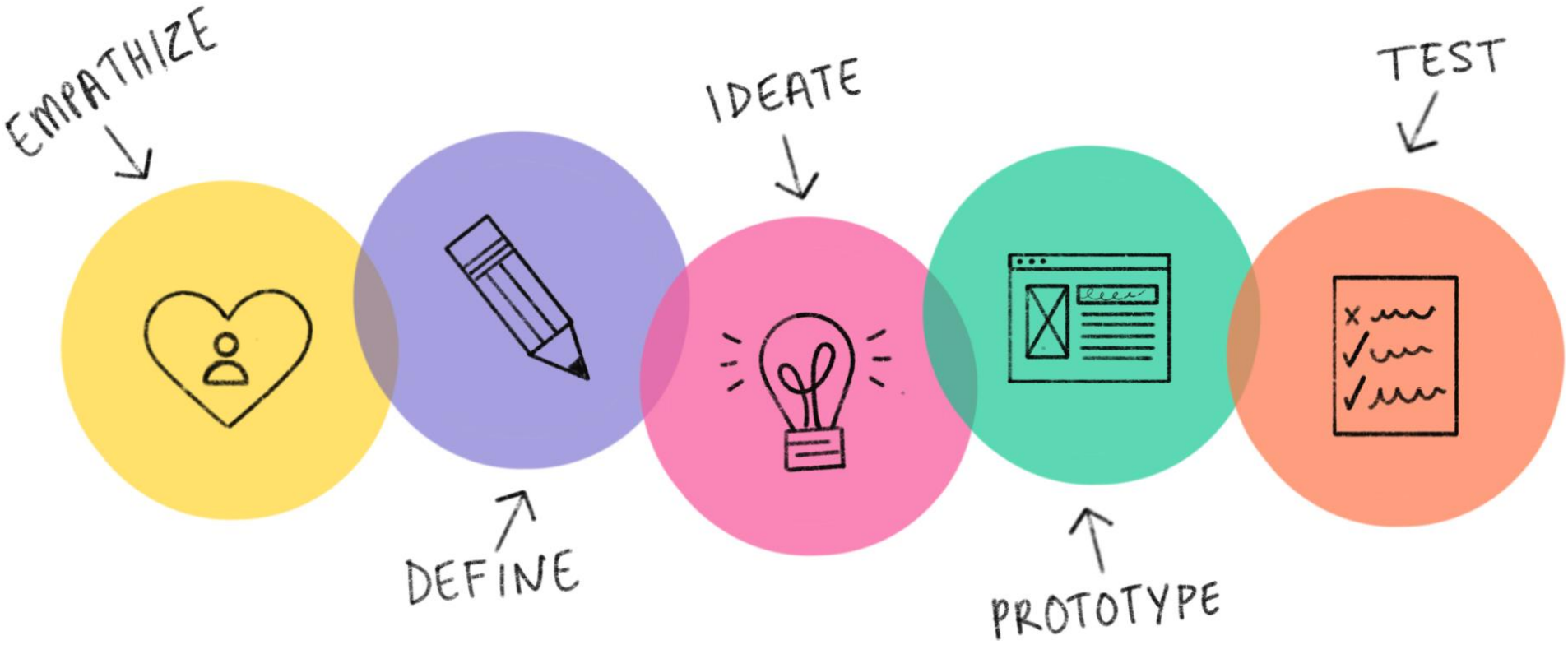
Pick Up Cup

Put Down Cup

Step Forward

Step Backward

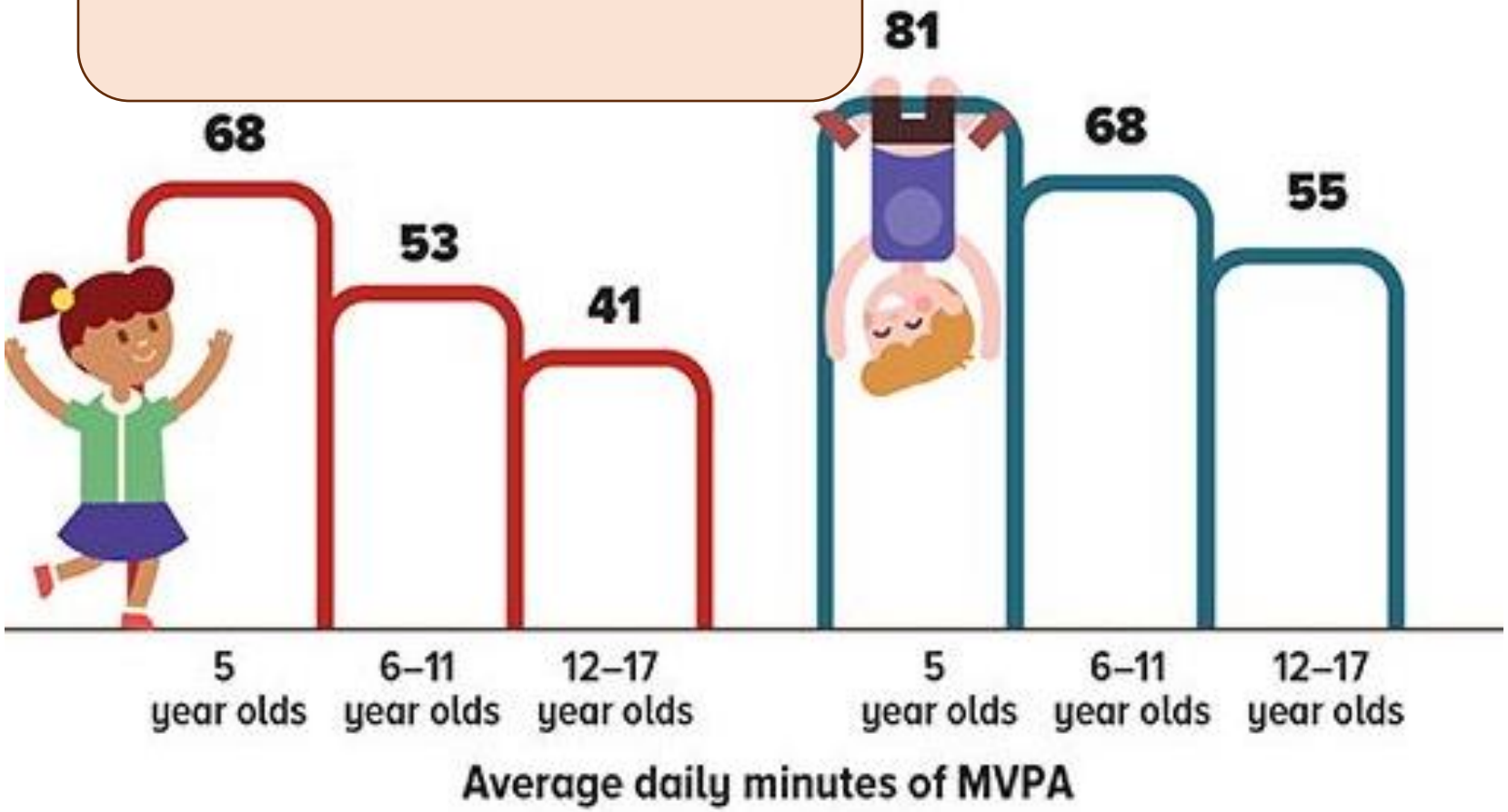
Design Thinking



You can create ANYTHING you want!

fair chance learning

What do you notice?
What do you wonder?



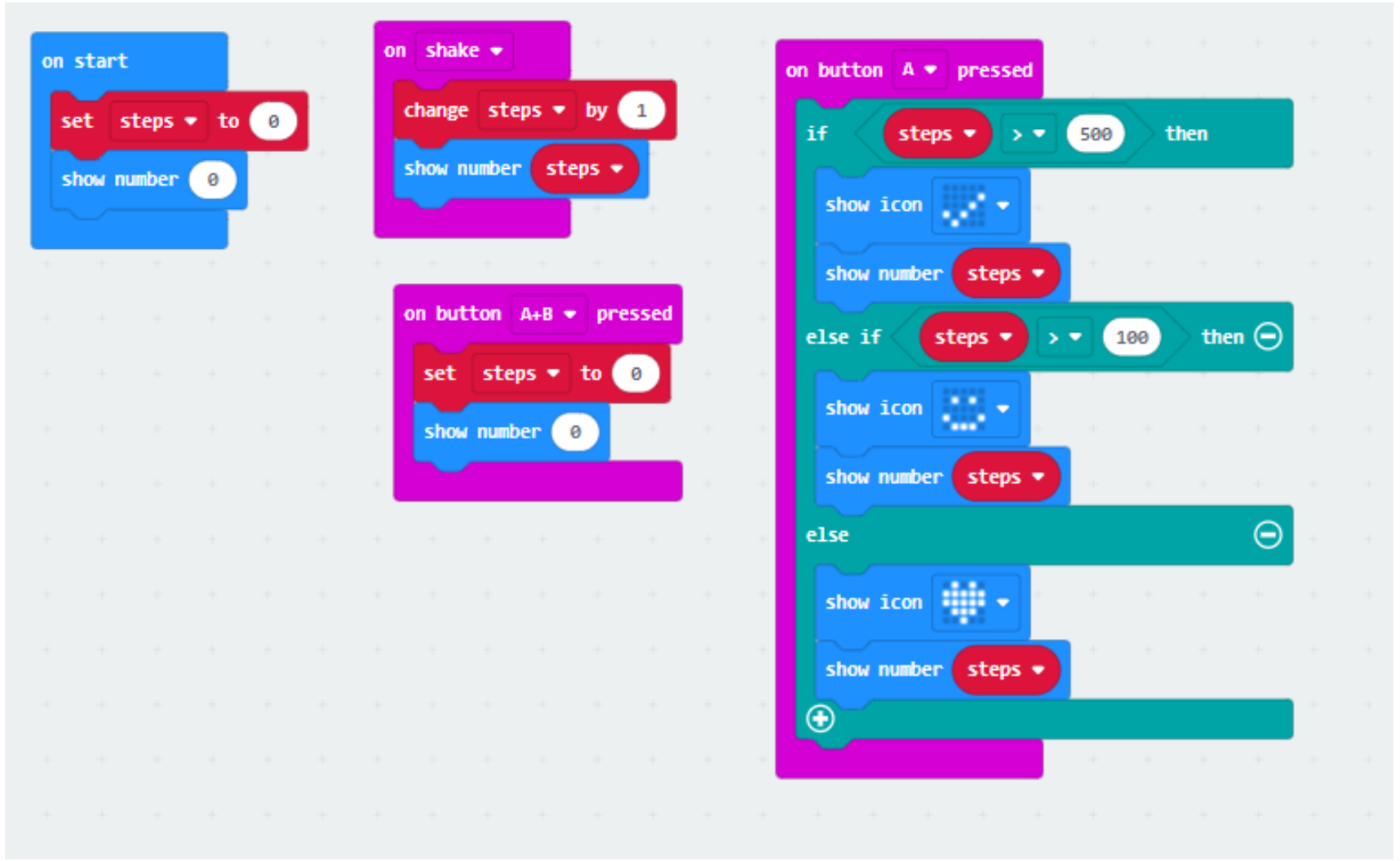
Moderate to Vigorous Physical Activity

Task: Using a Micro:bit and materials provided create a step counter

The design must:

- Have some way of securely attaching to clothing or the user's body (e.g. ankle or wrist)
- Be comfortable to wear and lightweight
- Be pleasing to the eye (people will want to wear it!)

Code

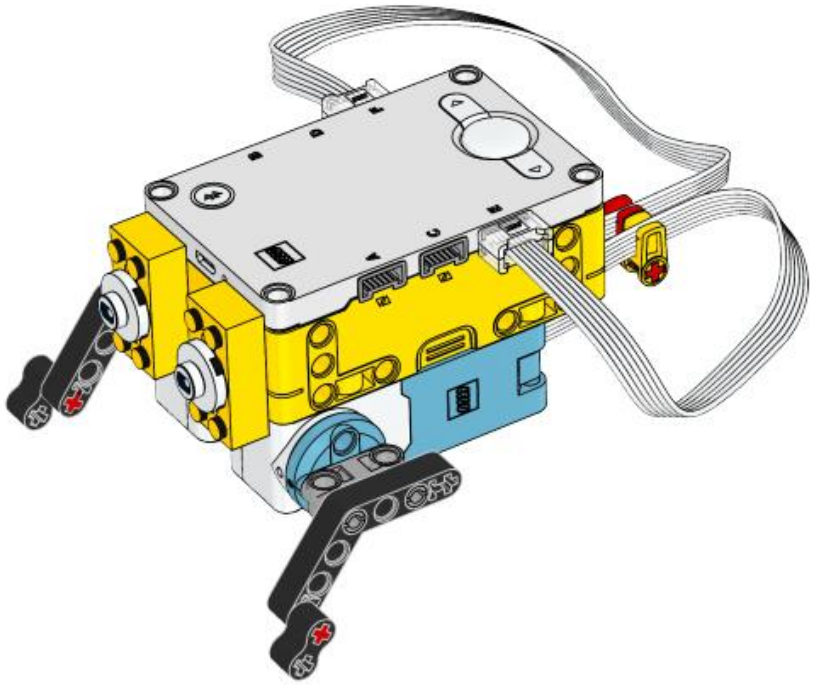

on start
set steps to 0
show number 0
on shake
change steps by 1
show number steps
on button A+B pressed
set steps to 0
show number 0
on button A pressed
if steps > 500 then
show icon
show number steps
else if steps > 100 then
show icon
show number steps
else
show icon
show number steps

Test

Reflect

- How did we use [coding concept] in our project?
- What is one thing you liked about this lesson? Why?
- What is one thing that challenged you in this lesson? Why?
- What is one thing you learned? How will you use this knowledge in the future?

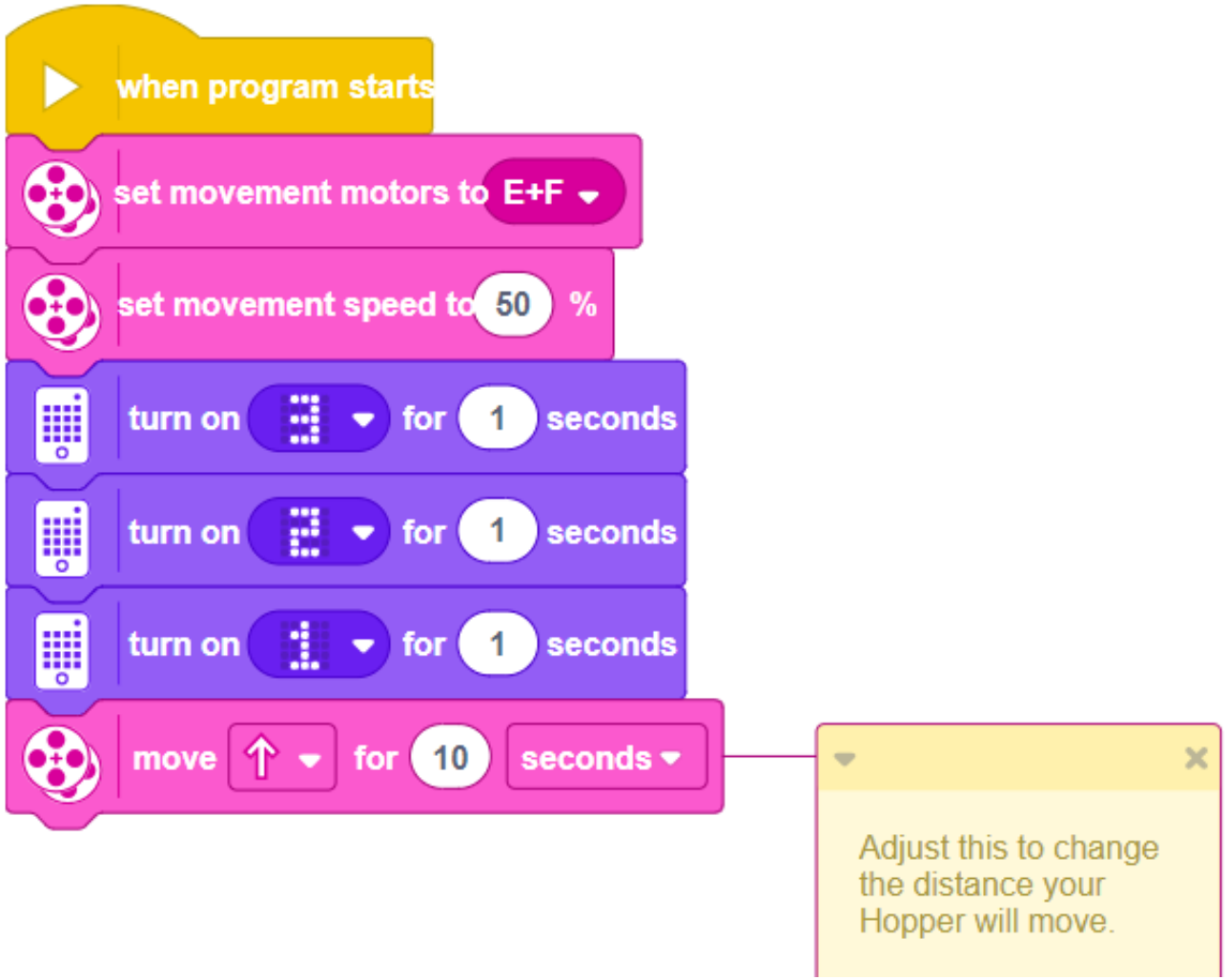
Let's Build the Prototype:



Who can make the fastest hopper?

Can you improve the movement of the legs?

Let's code our hopper to move:



Pixels (Picture Elements)

All digital images are made of pixels.

Binary Code

With only black and white we can use either 1 or 0 to represent each of these cells.

Let's be more technical though, what do we call each of these squares in an image?

1	1	1	1	1	1	1
1	1	0	1	0	1	1
1	1	0	1	0	1	1
1	1	1	1	1	1	1
1	0	1	1	1	0	1
1	1	0	0	0	1	1
1	1	1	1	1	1	1

Algorithm

Row 1: 11111111

Row 2: 1101011

Row 3: 1101011

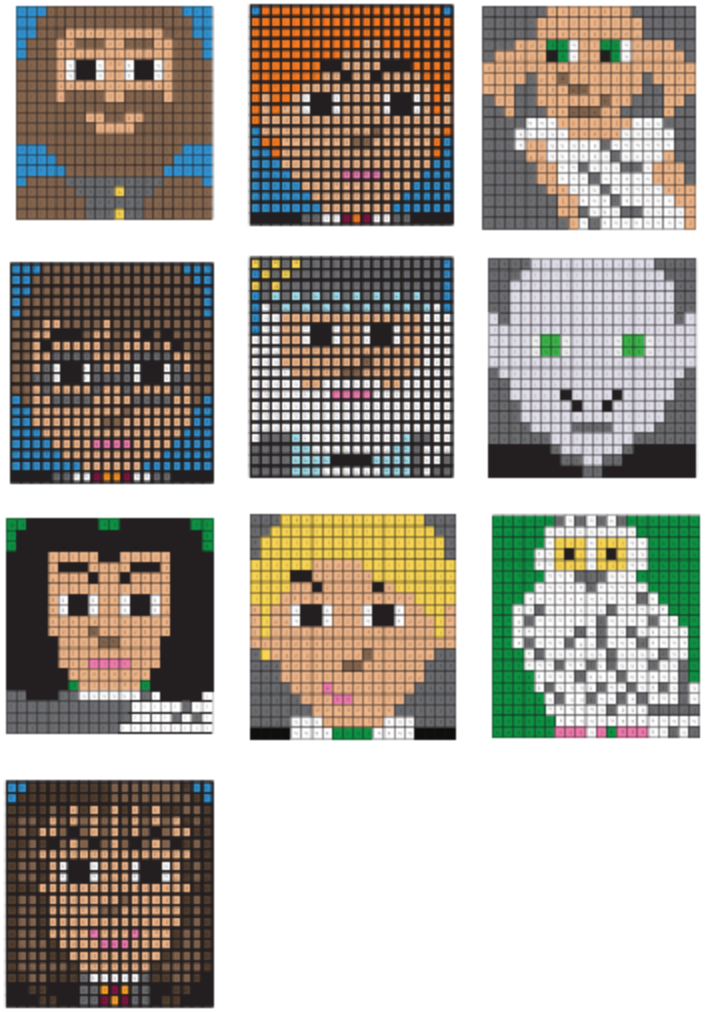
Row 4: 1111111

Row 5: 1011101

Row 6: 1100011

Row 7:1111111

Pixels (Picture Elements)



Harry Potter Color by number (temeculablogs.com)