

Name: _____



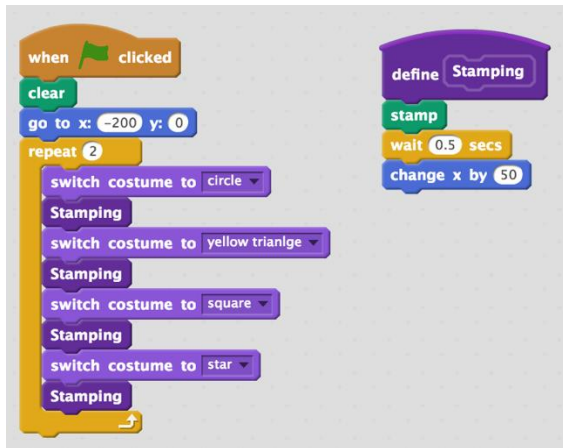
Coding with Scratch – Session 2

Go to the website: scratch.mit.edu. Please log in to the account that we made during the last session so that you can see the code that we created last time.

In this session we are going to further develop our skills in coding with Scratch and take a better look into the ways that we can create patterns and different images on with Scratch.

Activity 1: Drawing a Pattern with Scratch

Go to <https://scratch.mit.edu/projects/237259422/> and click “**See Inside**”. Once you are inside where you are able to edit, create the following code. You should have the pattern shown below when you are done:



In the **Stamping** block, what do you think will happen if you take out the “**Wait 0.5 secs**” block?

My guess: _____

What happened when it was removed:

Activity 2: Make these Patterns

Using the pictures below, modify your code from Activity 1 to create the following patterns.

Pattern 1:

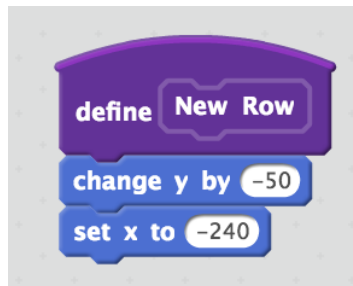


Pattern 2: Create a pattern that goes

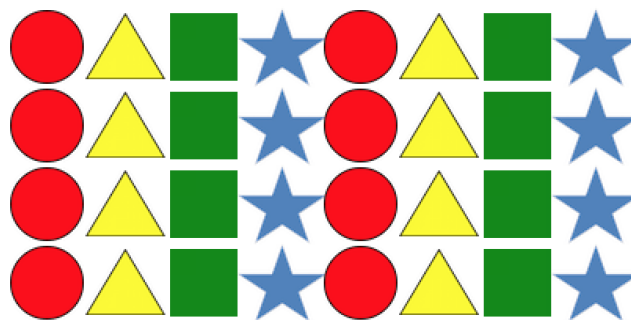
SQUARE, CIRCLE, TRIANGLE, TRIANGLE, CIRCLE, SQUARE

Activity 3: Grid Patterning

You are able to make a pattern that is more than just a straight line. You will see that the following Block is also in the code:



With this Block it is changing the starting the position of the Sprite by returning it to the initial starting point and then moving it down to restart the code. Using the code that we have worked with in Activities 1 and 2 make the following pattern:

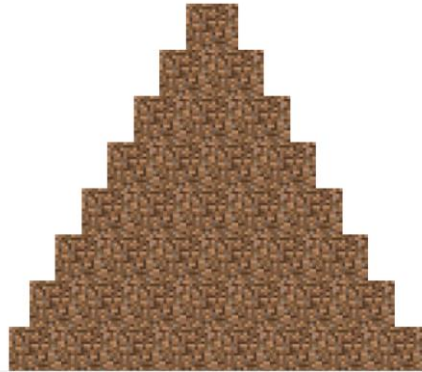


HINT: To complete this pattern you are going to have to use 2 loops (i.e. you are going to have a loop within a loop)!

Activity 4: Make Your Own Design

Have you ever stopped to think about how the world around you is full of patterns? For example, many different things that you see and use everyday are made up of simple shapes such as circle, squares, rectangles, triangles, etc. With this idea in mind we can see how these shapes can be related to patterning.

For example, let's think about a pyramid that is made of smaller squares. How can we use patterning to draw the following shape in Scratch?



Try to think about how you can code this in Scratch using the “**Stamping**” and “**New Row**” blocks that we have been using today. If you are having a hard time with this code go to the following link which starts you off on how you could approach this question: <https://scratch.mit.edu/projects/237260207/>

Activity 5: Build Your Own Design

Try to create your own shape, drawing, or building! If you wish to use the Minecraft Sprite like in the pyramid on page 2 follow this link: <https://scratch.mit.edu/projects/237273357/>. However, if you want to use one of the pre-made Sprites on Scratch to make your Sprite feel free to do so!

Question:

If each square in the pyramid below has a perimeter of 2cm by 2cm:

- A. What is the area of one of the blocks?
- B. What is the area of the entire pyramid?
- C. What is the perimeter of the pyramid?

