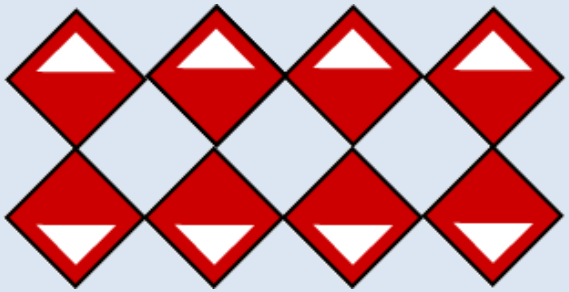
MODULE 1: INVESTIGATION 1

Moving, Turning and Stamping

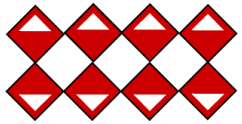


ACTIVITY 1.1.1

Drag and Stamp

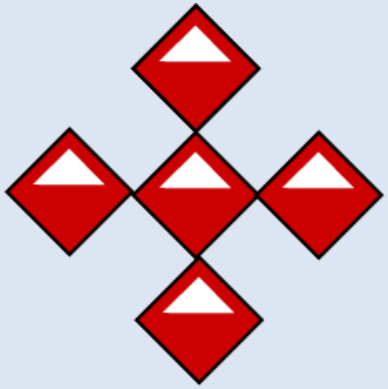
Module 1: Investigation 1

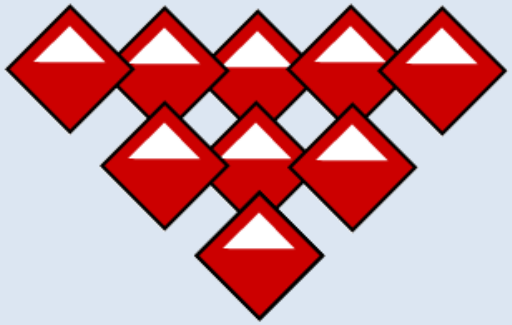
Activity 1.1.1 – Drag and Stamp



Open project **10-Tile Stamp**.

- Stamp a symmetrical pattern by dragging the Tile sprite and clicking on the **stamp** block.

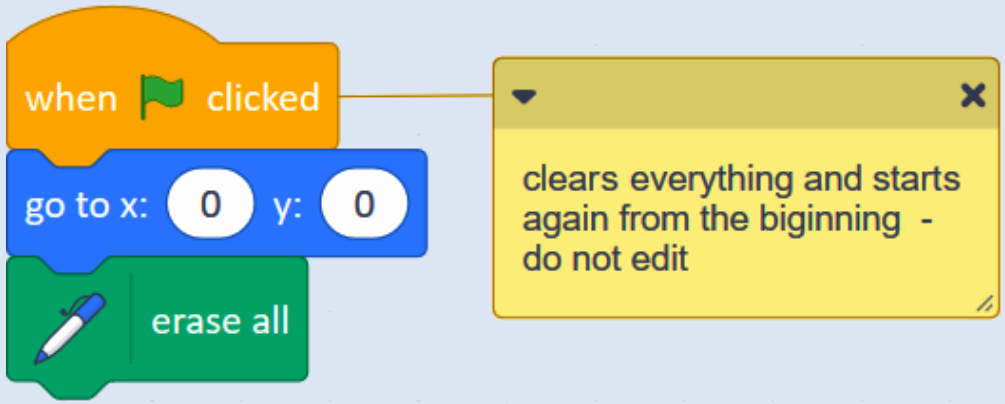




Module 1: Investigation 1

Activity 1.1.1 – Drag and Stamp

- Click on the green flag to run the **setup script** and reset the stage and the Tile sprite. Be sure you understand what it says.



- Learn how to save your pattern as a picture.

Discussion Questions

- How many stamps have you used?
- What colour is the **stamp** block? Where can we find it?
- Did you have any problems with stamping?
- Have you clicked on the green flag? What happens? Why does this happen?
- What does **go to x: 0 y: 0** mean?
- What is the difference between **saving the pattern** as a picture and **saving the project**?

Discussion Questions continued

- When the sprite is moved what happens to the x,y coordinates?
- What makes your pattern symmetrical?
- How many lines of symmetry does your pattern have?

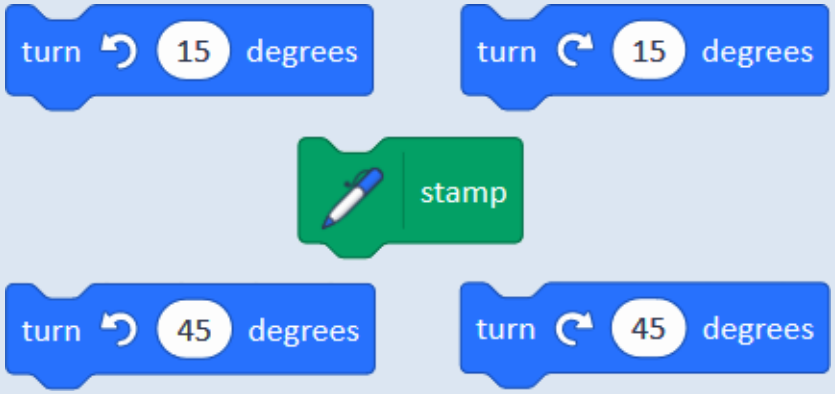
ACTIVITY 1.1.2

Drag, Turn and Stamp

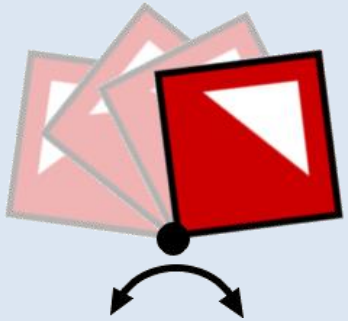
Module 1: Investigation 1

Activity 1.1.2 – Drag, Turn and Stamp

Open project **11-Tile Turn**.

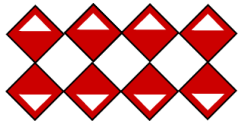


- Explore how the Tile sprite reacts to clicking the **turn** blocks.



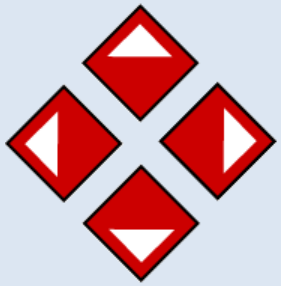
Module 1: Investigation 1

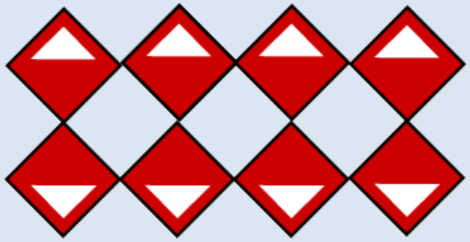
Activity 1.1.2 – Drag, Turn and Stamp

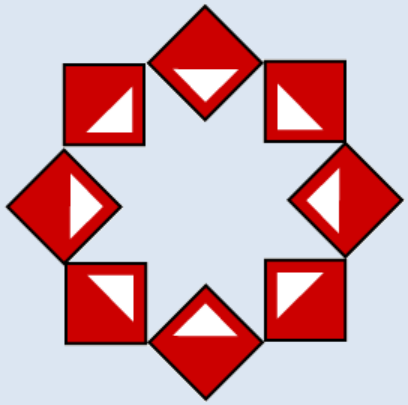


- Look at the *setup* script and explain what has changed.

- Drag the Tile sprite, click on the **turn** and **stamp** blocks to create a pattern.



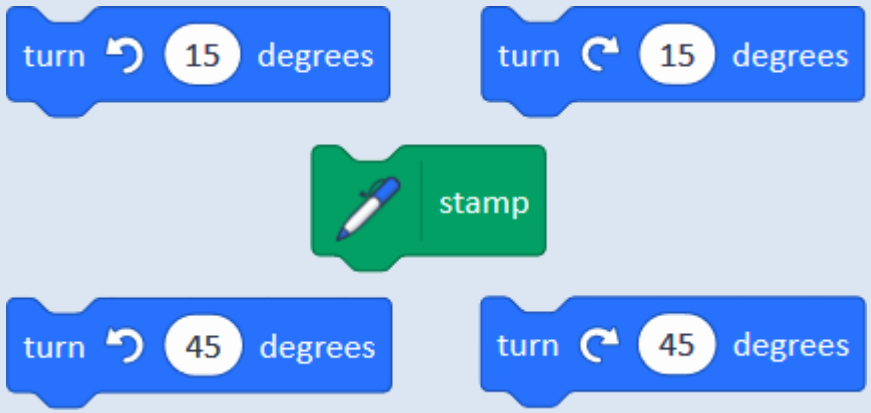




Module 1: Investigation 1

Activity 1.1.2 – Drag, Turn and Stamp

- Drag a new **turn right** and **turn left** block to the scripts area, change the values to **90 degrees** and use all your blocks to create more patterns.



- Change the angles to other values and explore.

Discussion Questions

- Have you used both turning left and right?
- What colour are the turn blocks? Where can we find them?
- What does each block in the setup script do? Why are they needed to reset everything?

- Which types of angles have you used?
- If I click **turn left 15 degrees** three times how many degrees have I turned? What could I click on instead to do the same thing?

ACTIVITY 1.1.3

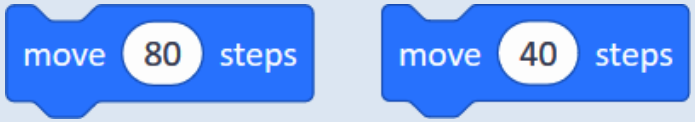
Move, Turn and Stamp

Module 1: Investigation 1

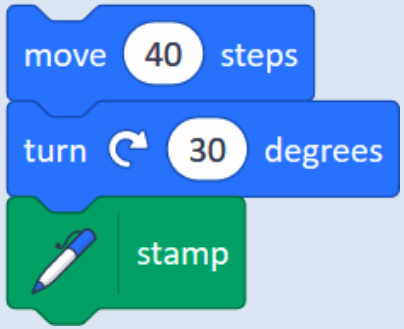
Activity 1.1.3 – Move, Turn and Stamp

Open project **12-Tile Move**.

- Move the Tile sprite along the stage by **clicking the blocks**, no dragging allowed.



- Snap together a **move**, **turn** and **stamp** block and click your script to run it – again and again…

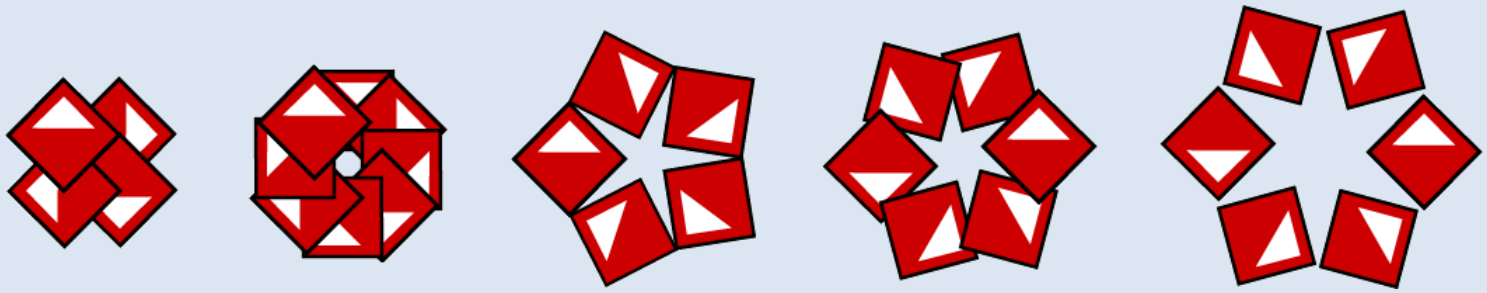


Module 1: Investigation 1

Activity 1.1.3 – Move, Turn and Stamp

- Build a similar simple script by using three more **move**, **turn** and **stamp** blocks.

- Try different numbers of steps in your **move** block. Explore.
- Try different angles in your **turn** block.



Module 1: Investigation 1

Activity 1.1.3 – Move, Turn and Stamp

Discussion Questions

- What happened if you clicked the script multiple times? Did you manage to get the Tile sprite back to where it started?
- Did you have any problems with your script? How did you solve these? What is this process called?
- What happened to the pattern when you used the **move 40 steps** block instead of **move 80 steps**?
- What types of transformation have you used?

ACTIVITY 1.1.4: UNPLUGGED

Simple Scripts

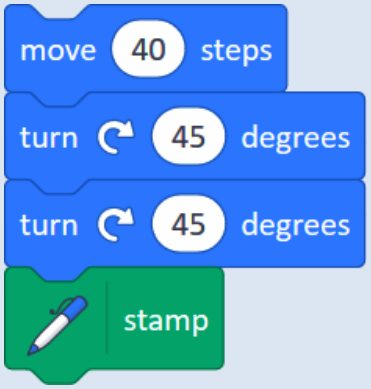
Module 1: Investigation 1

Activity 1.1.4 – Unplugged: Simple Scripts

- For each original script (1) on your worksheet find a simpler one with the same outcome. Then discuss.

1

2



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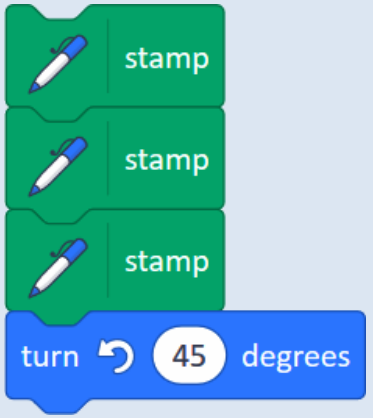

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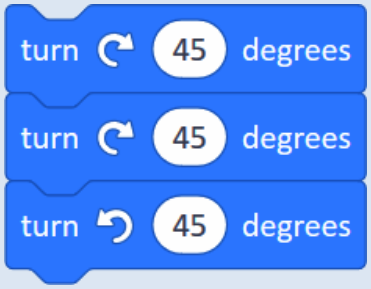

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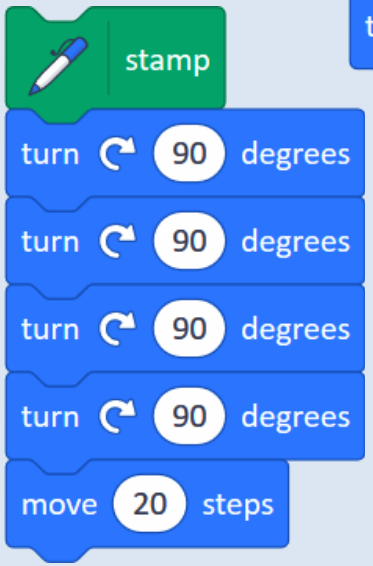
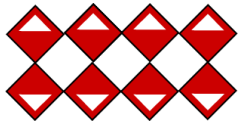


MODULE 1: INVESTIGATION 1



My Investigation 1 check list:

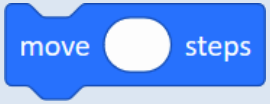
- ☐ I created a symmetrical pattern by stamping the Tile sprite .
- ☐ In my patterns I turned the sprite by using the **turn** block.
- ☐ In my patterns I moved the sprite by using the **move** block.
- ☐ I changed the values in my blocks.
- ☐ I snapped the blocks together and ran my script repeatedly.
- ☐ I saved the picture of my pattern in a file.
- ☐ I recognised when a script could be simplified.

MODULE 1: Key Vocabulary

- **sprite** — an object we control by our blocks and scripts e.g. a Tile
- **stage** — the area where you can see the sprites.
- **block** — a command which tells the sprite what to do
  it can be **run** by clicking on it
- 

  — a block which tells the sprit to print its image on the stage
- **hat block** — like 

  It is always placed at the top of a script
- 

  — a command which makes the sprite change its **direction**
- 

  — a command which makes the sprite change its **position**
- **script** — a sequence of blocks snapped together, a program
  it can be **run** by clicking on any part of the script
- **debugging** — the process of fixing or improving a program (i.e. scripts)