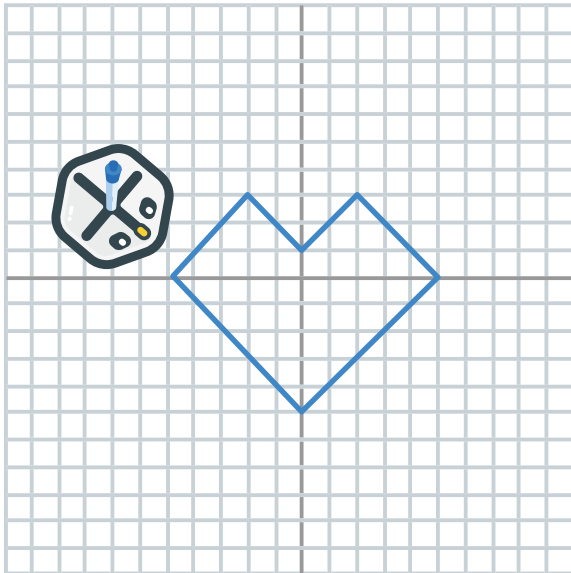


Coordinate Surprise

Use Root's Level 2 Navigate Block to create art while learning about coordinate systems.



Heart Drawing Coordinates

1. (0, -25)
2. Marker Down
3. (25, 0)
4. (10, 15)
5. (0, 5)
6. (-10, 15)
7. (-25, 0)
8. (0, -25)
9. Marker Up

Teacher Prep

- On your own grid paper, draw out a simple line-based design to share with your students. In the example above, we drew a heart with 6 vertices.
- List out the coordinates in your design and distribute the lists to your students.

With the Class

- Each team should have a coordinate list, a Root, a centimeter grid, and a marker.
- Challenge students to use the Navigate To Blocks to code Root to drive to the specified coordinates in the correct order with its marker down, revealing the secret design.
- Once students have revealed the pre-made design, challenge them to create their own secret coordinate designs to hand off to other students.



Code Level(s):

2-3

Subject(s):

Math
Computer Science

Time:

15 mins.

Grade Level(s):

5-6

Students:

Groups of
1-4

Supplies:

- Root Robot
- Device with iRobot Coding App
- Root-Compatible Marker
- Root Coding Grid Paper

Educational Standards:

CCSS.MATH.CONTENT.

- 5.G.A.1
- 6.G.A.3

Going Further

- For increased difficulty, challenge students to include instructions for Root to raise or lower its marker, creating gaps inbetween lines for more intricate designs.
- Have students try to write their name with Root using the coordinate grid!

