



Coordinating Art + Sound



Beginner



1 hr 30 min

Use your computer's microphone to draw sound and understand coordinates!

OBJECTIVES



Learners will use Kano Code to draw sound from their microphone.



Learners will understand what it means to move along the x-axis

STANDARDS



NGSS: 5.G.A.2



Common Core: CCSS.MATH.CONTENT.5.G.A.1

MATERIALS NEEDED

[Link to Kano Code Draw Sound](#)

Introduction

🕒 10 mins

Linking

When students walk in show them the video from NPR on [“What Does Sound Look Like?”](#)

Engage

Pretty cool right? Today we are going to create our own visualizer to see sound and draw it on coordinate plane. We will use Kano Code and the microphone on our computers to help us visualize what is around us all the time!

Collect Kanos

🕒 5 mins

Retrieve Computers, Turn On, Log In..

Exploration Activities

Challenge 0: The x -axis in a coordinate plane: Review as Needed

🕒 30 mins

In math we have something known as a coordinate plane. In a coordinate plane we use coordinates that tell us a specific location on the plane using the x and y axis. For example, if we draw a coordinate plane we can identify where the point (1, 3) is since we specifically see where the x and y s. Can we plot the points (4, 2) , (0, 0), (1, 2) on the coordinate plane on the board?

Challenge 1: Draw with Sound!

🕒 30 mins

Now that we understand the x and y axis we can draw with sound! Make sure your Kano Computer is turned on and go to Kano Code. In Kano Code you should see a section under Code with sound you should see a link to [“Draw Sound.”](#) Click on it and begin the walk through.

Challenge 2: Remix Draw with Sound

🕒 30 mins

Now that you have done the walk through, can you remix the visual? What will happen when you change the shape and colors? What about if you add other buttons or music in the background? Take some time and figure it out!

Save your work and share to Kano World!

Closing

🕒 15 mins

Evaluation

What was your favourite part that you remixed? Make sure you share your remix via Kano World and in the description write what you changed!.

Closing

The cool thing about technology is that it can help us see unseen things. It can make tangible what seemed invisible! Tonight, brainstorm 5 things that you can't see and write down how you think technology can help you see those 5 things.

Kano Clean-up

Power down and put away Kanos

🕒 5 mins



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Coordinates

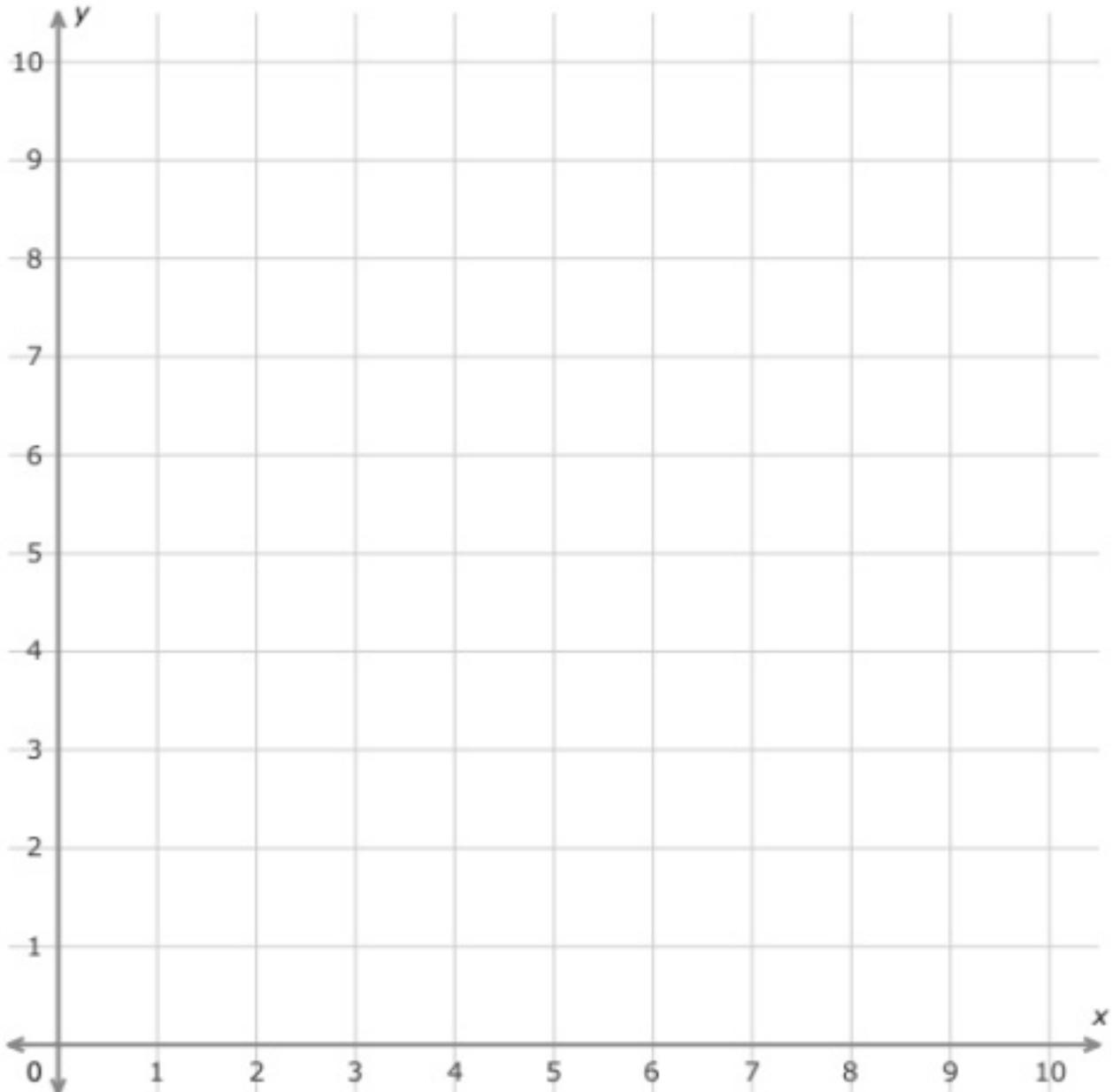
Name: _____

Date: _____

Explorer/Programmer Questions

Directions: Below you have a coordinate plane. Can you find all the coordinates? Once you have found all the coordinates, can you connect them to reveal the image?

(4, 2) , (4, 1) , (5, 1) , (5, 3) , (5, 5) , (5, 6) , (5, 10) , (2, 6) , (2, 7) , (3, 9) , (7, 9) , (8, 6) , (8, 7)



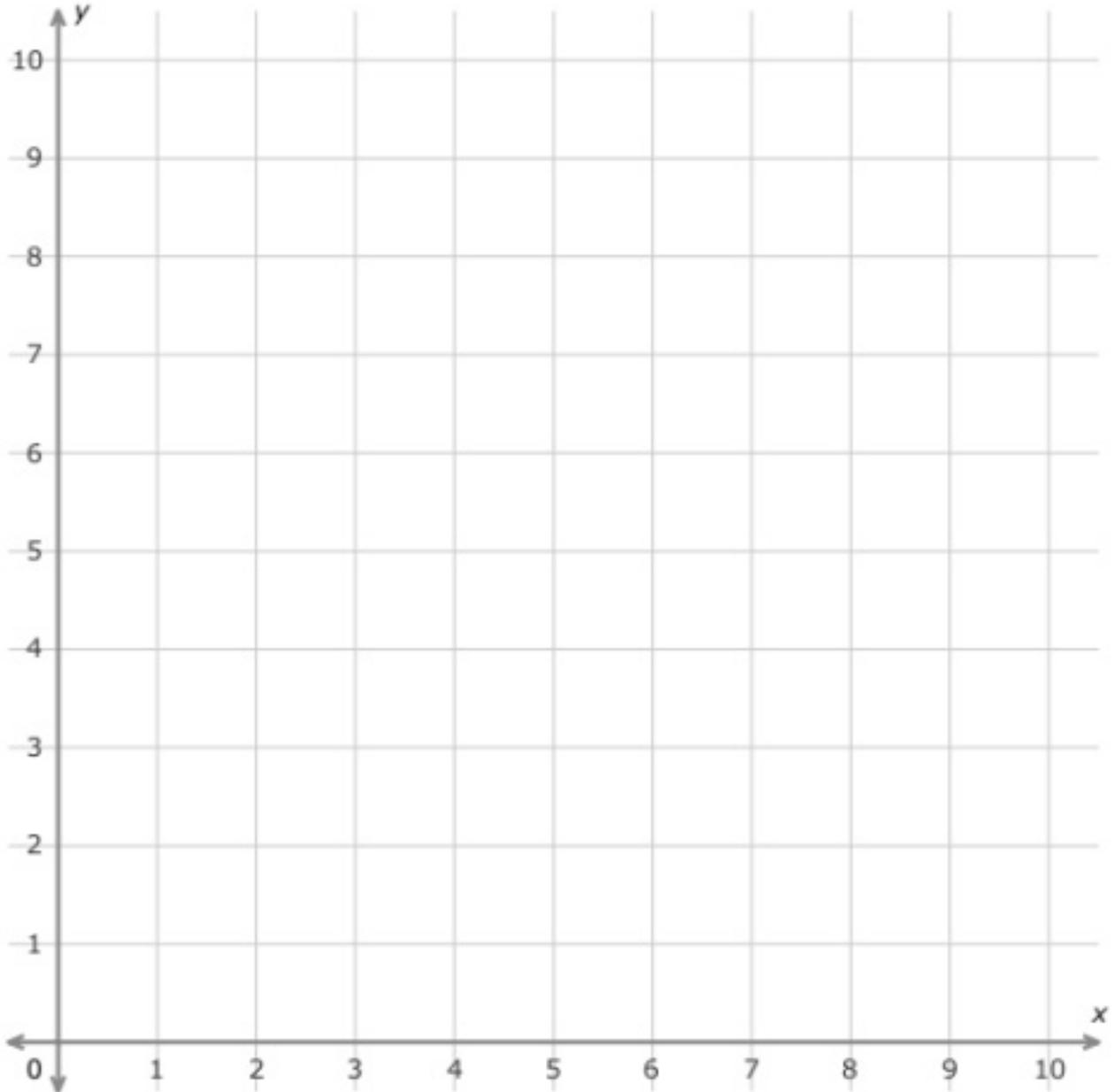


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Coordinates

Creator Question

Directions: Can you create your own image? Decide what coordinates you would need for an image and then pass your worksheet to a partner to see if they can find it!



Name: _____

Date: _____

Explorer/Programmer Questions

Directions: Below you have a coordinate plane. Can you find all the coordinates? Once you have found all the coordinates, can you connect them to reveal the image?

(4, 2) , (4, 1) , (5, 1) , (5, 3) , (5, 5) , (5, 6) , (5, 10) , (2, 6) , (2, 7) , (3, 9) , (7, 9) , (8, 6) , (8, 7)

