

Sports Vision

Activity	Time	Description
Activity 1	20 minutes	Youth will identify their dominant eye and dominant hand.
Activity 2	40 minutes	Youth will plot ordered pairs on a coordinate grid to illustrate the results of a depth perception coin drop activity. Youth will learn about the role of depth perception in sports. Youth will reflect on the role of struggle as they improve at something over time.



Sports Vision

“You can’t always control the circumstances – only how you react to those circumstances; you can always control your attitude and your effort.”

- Jennie Finch



What does this quote mean to you?
What message is Jennie Finch trying to send?

Activity 1: Eye Dominance and Hand Dominance

- Do you have a dominant hand? Think about which hand you use to write, to throw a ball, or to brush your teeth.
- Do you use this hand for all activities, or do you use different hands for different activities?

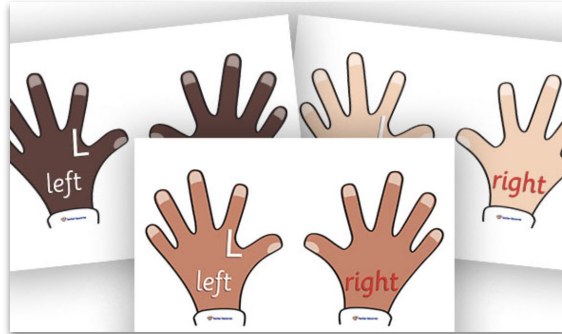


Whole Group Activity: Hand Dominance

How many people in our group are **LEFT** hand dominant (left-handed)?

Raise your **LEFT** hand!

What fraction of people are **LEFT** hand dominant?



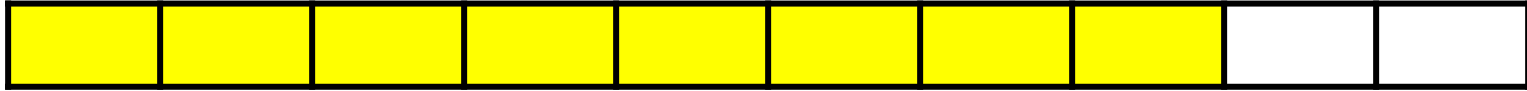
How many people in our group are **RIGHT** hand dominant (right-handed)?

Raise your **RIGHT** hand!

What fraction of people are **RIGHT** hand dominant?

Demonstrate: Fractions for Hand Dominance

- 8 out of 10 kids are right hand dominant = $8/10$ or 0.8 or 80%



- 2 out of 10 kids are left hand dominant = $2/10$ or 0.2 or 20%



$$\begin{array}{r} \text{numerator} \\ \text{(number of parts we have)} \quad 8 \\ \hline 10 \quad \text{denominator} \\ \text{(total parts in whole)} \end{array}$$

Whole Group Activity: Eye Dominance

[How to Determine Your Dominant Eye with Our Dominant Eye Test](#)

- Make small opening with your hands and hold arms stretched out
- Focus on distant object in the room
- Slowly move hands towards your face
- The eye that aligns with the object is your dominant eye!



Whole Group Activity: Eye Dominance

How many people in our group are **LEFT** eye dominant?

What fraction of people are **LEFT** eye dominant?

Are these results surprising?

How many people in our group are **RIGHT** eye dominant?

What fraction of people are **RIGHT** eye dominant?



Demonstrate: Fractions for Eye Dominance

- 4 out of 10 kids are right eye dominant = $4/10$ or 0.4 or 40%



- 6 out of 10 kids are left eye dominant = $6/10$ or 0.6 or 60%



$$\begin{array}{ccc} \text{numerator} & & \\ \text{(number of parts we have)} & 6 & \\ & \hline & 10 & \text{denominator} \\ & & \text{(total parts in whole)} \end{array}$$

Optional Videos

[Sports Science MLB
Reaction Time Video](#)



[Baseball player discovers
which of their eyes is most
dominant when hitting](#)





- What patterns did you notice with hand and eye dominance? Did anything surprise you?
- How does your dominant hand or dominant eye impact how you play baseball?

Activity 2: Depth Perception and Hitting a Baseball

- What is depth perception?
- When do we use depth perception in baseball?
- What might happen if we did not have depth perception?



80.0%
ACCURACY

DEPTH PERCEPTION

Helps locate objects in space to judge their distance, speed, and direction

Vizual Edge

Videos about depth perception:

- How does good depth perception help batters hit the ball?
- Do you think covering one eye impacts your depth perception?

[The importance of depth perception in hitting a baseball](#)



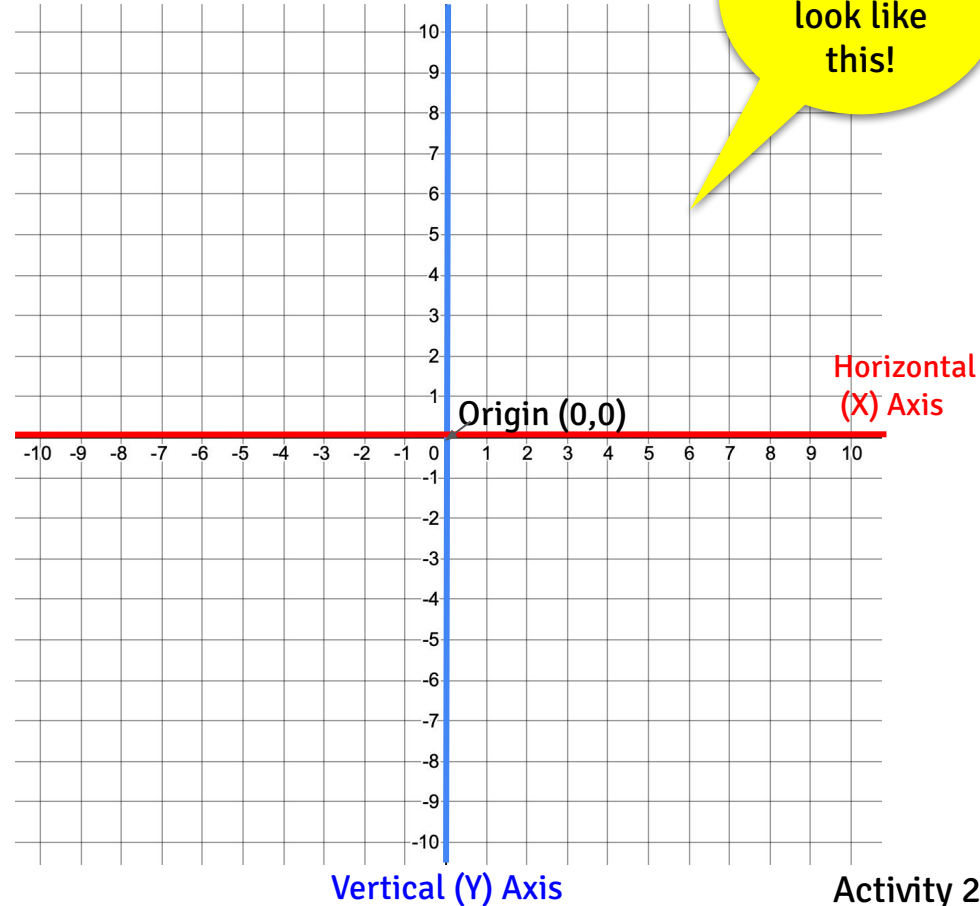
[Sports and Depth Perception](#) (stop at 0:59)



Team Activity: Setting Up Your Team Grid

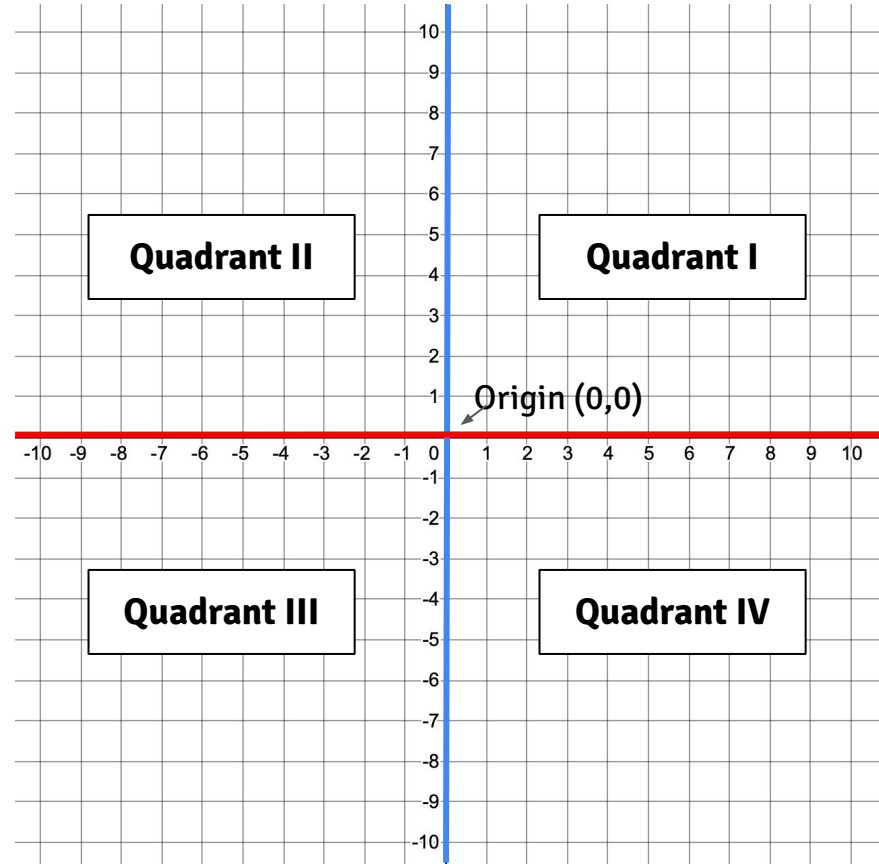
Directions for setting up your team's coordinate grid.

- Draw a vertical axis (blue line) and a horizontal axis (red line) on your team's graph paper.
- Number each of the two axes from -10 to +10.
- Place the graph paper on the table
- Place an empty cup on the graph paper at the origin (0, 0).
- The goal of this activity is to drop a coin into the empty cup!



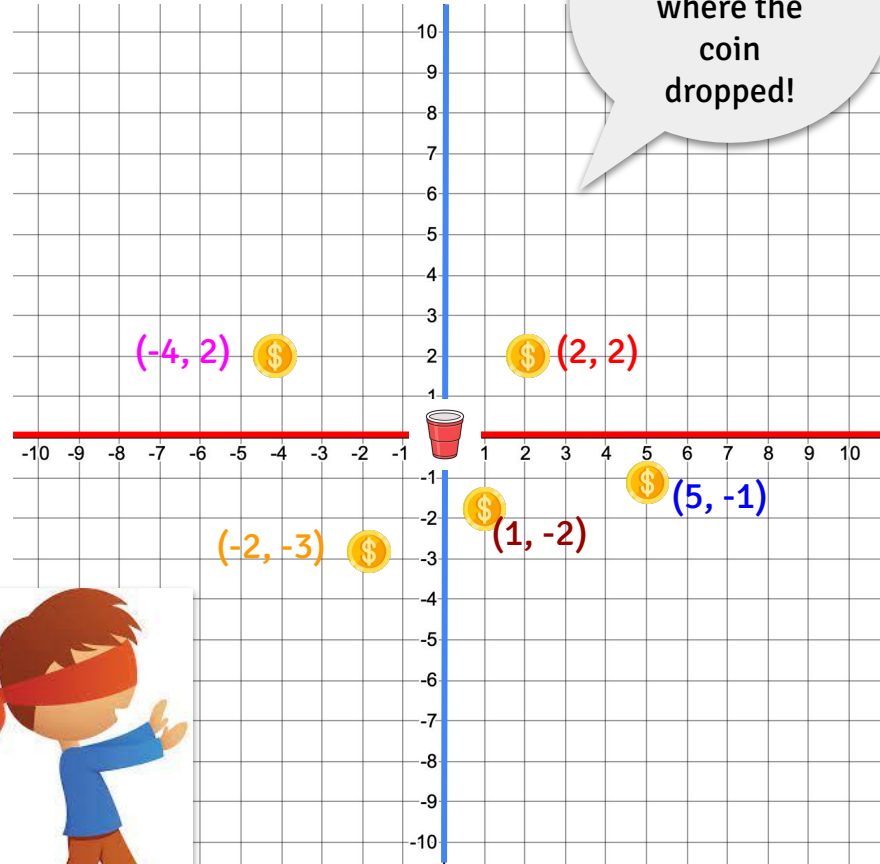
How to Label Points on the Coordinate Grid

- Points on the graph are (x, y)
 - Quadrant I has $(+x, +y)$
 - Quadrant II has $(-x, +y)$
 - Quadrant III has $(-x, -y)$
 - Quadrant IV has $(+x, -y)$
-
- In which Quadrant is the point:
 - $(4, 2)$?
 - $(2, -2)$?
 - $(-3, 1)$?



Activity Instructions: Depth Perception Coin Drop

- **Coin Dropper:** While blindfolded, hold the coin straight out in front so that your hand is at least 1 foot away from the paper.
- **Director:** Cover one eye. Give instructions to the **Coin Dropper**, directing them to move their arms so they drop the coin inside the cup.
- **Recorder:** Mark where the coin landed on the graph paper and label the closest point.
- Record points on **Worksheet 1**.
- Repeat so that the **Coin Dropper** drops the coin 5 times.
- Switch roles so each group member drops the coin 5 times.



Team Activity: Depth Perception Coin Drop

Worksheet 1

- Record each group members name in the table.
- After the **Coin Dropper** drops a coin, the **Recorder** will mark the point where each coin landed on the team grid, and record the point in the table.
- After a **Coin Dropper** drops 5 coins, rotate roles.
- **Record** where the new **Coin Dropper** drops coins in a new row of the table.

Coin Dropper Name	1st Drop	2nd Drop	3rd Drop	4th Drop	5th Drop
Sarah	(1, 5)	(2, -3)	(0, -5)	(-6, 7)	(-2, -3)
Julio					
Kyle					
Marta					



- **What was challenging in this activity?**
- **What did you do to try to improve with each coin drop?**

Embrace the Struggle in Learning

Billy Wagner broke his right arm twice by age 7

He pitched left-handed, still played in the Majors, and was one of the best relief pitchers ever!

VIDEO: [Billy Wagner on HOF Chances](#)



- Why did Wagner start pitching with his non-dominant hand?
- What do you think about Billy Wagner's persistence to get into the Baseball Hall of Fame?



Embrace the Struggle in Learning

VIDEO: [Switch-pitcher Venditte makes his MLB debut](#) (stop at around 3 minutes)

- What does “ambidextrous” mean?
- Pat Venditte started throwing both right-handed and left-handed at age 3.
- Persistence and patience to improve helped him make it to the MLB.



How did patience and persistence help Pat Venditte improve as a baseball player?



- What is something that you have improved over time?
- How did you “embrace the struggle” as you were trying to improve?