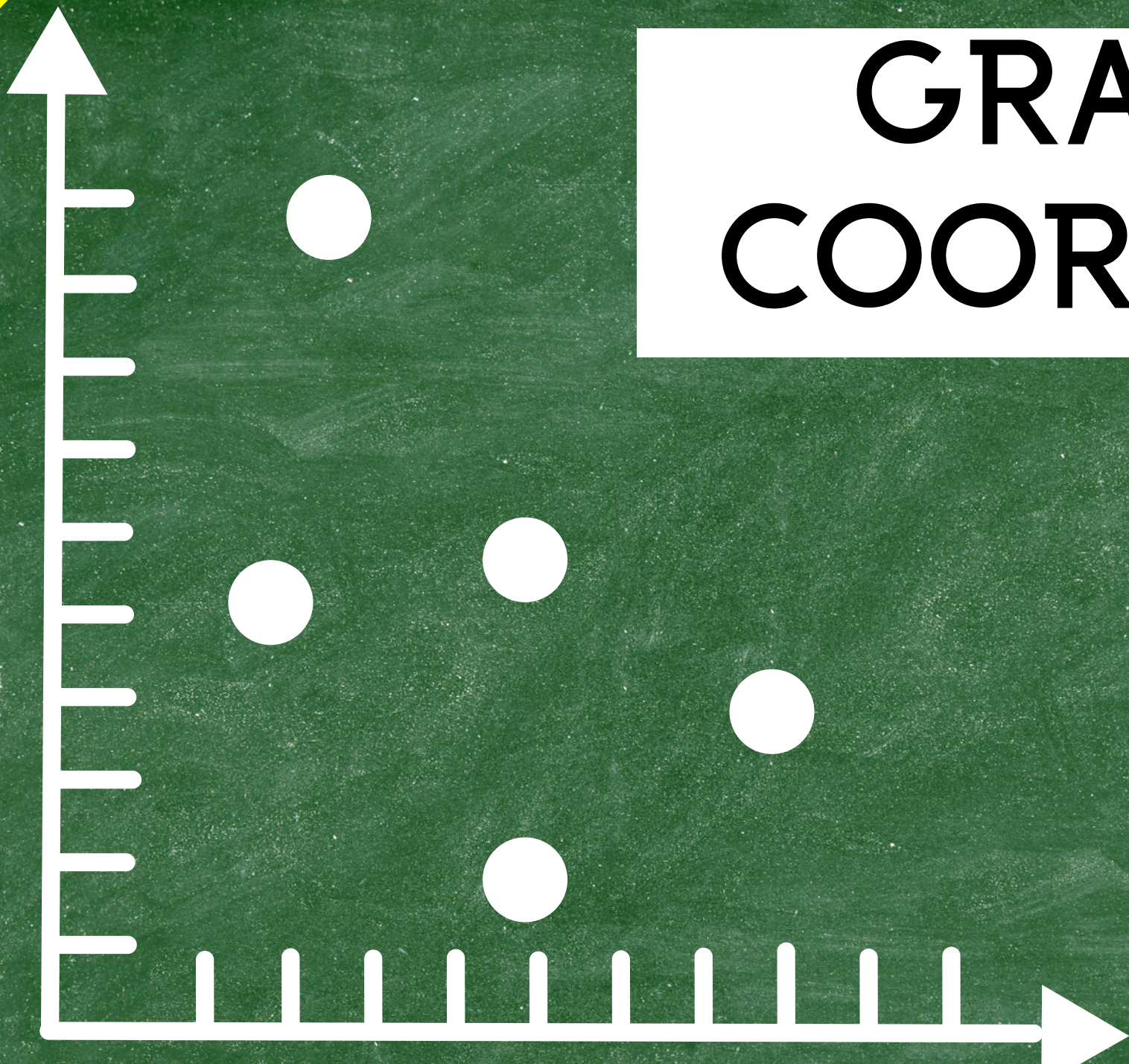


SPECIAL ED

GRAPHING COORDINATES



INCLUDES GOOGLE SLIDES

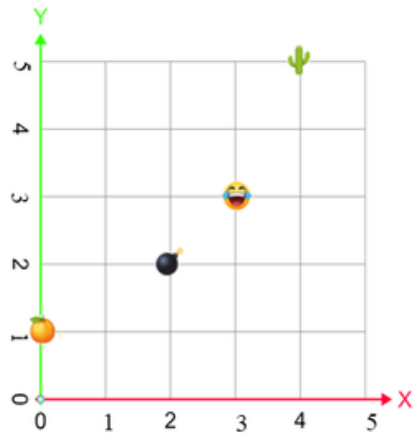
This unit was created with this guy in mind. He has autism and an intellectual disability. He is a non-reader, has a very short attention span, and has a few foundational math skills. With some support, he is able to do this unit and enjoys the challenge. He is my tester!!



Graphing Coordinates Unit

By
Christa Joy

Special Needs for Special Kids



Christa Joy, Special Needs for Special Kids
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Table of Contents

Pages	Activity
4-45	Graphing Coordinates (book)
46-48	Vocabulary board
49-55	Vocabulary cards
56-69	Vocabulary cut and paste
70-79	Hands on graphing activity
80-87	Labeling worksheets
88-95	Determining the coordinates
96-103	Graphing ordered pairs
104-123	Assessment
124-125	Terms of Use

Also included with this unit:

- Lesson plans
- Directions and links to digital activities

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This unit contains over 100 pages of material and 66 google slides. I have included a detailed lesson plan to help you make the most of everything in this unit including how to add some group activities.

Graphing Coordinates

Lesson Plan

Preparation

- Print out a vocabulary board for each student to use throughout unit
 - Laminate or place in page protector
- Book
 - Print out, laminate, and bind
 - OR your students can listen to the pre-recorded version
- Vocabulary cards
 - Print out a set of cards onto cardstock and laminate
 - Make one set for each student and also one for the teacher to use in I Spy games
- Hands on Activity
 - Print out the boards onto cardstock and laminate
 - Print out flash cards onto cardstock and laminate

Preassessment (do day 1 before starting lesson)

- Choose the form of the assessment that best fits the learning level of your students
- Give the assessment to assess what your students may already know
- I cannot emphasize enough how important this step is. If you want to see growth, this preassessment is so important!!

Teaching Tips

1. *Color Coding*: this is a really easy way to add more structure to a matching activity. Outline or color in an empty box or sorting label. Outline or color in the corresponding picture symbols the same colors. Becomes a color matching task.
 - a. For more info, read more here:
<https://specialneedsforspecialkids.org/2015/09/05/using-color-coding-for-differentiation/>
 - b. I also have a blog post on differentiating one activity 3 ways:
<https://specialneedsforspecialkids.org/2018/10/22/differentiating-1-activity-3-ways-easily-and-effectively/>
2. *Make you own copies of the activities*: Every day I review the activity we did yesterday. For that reason:
 - a. I often complete the activity myself and often laminated it for easy review that I could use year after year.

The lesson plans contain:

Overall tips for teaching students with significant needs

Quick Look

Day	Activity	Day	Activity
1	<ul style="list-style-type: none">• Book• Vocab cards introduction• Worksheet practice	7	<ul style="list-style-type: none">• Book• Vocab cards activity• Hands on graphing• Worksheet practice #1• Worksheet practice #2
2	<ul style="list-style-type: none">• Book• Vocab cards activity• Hands on graphing• Worksheet practice	8	<ul style="list-style-type: none">• Book• Vocab cards activity• Hands on graphing• Worksheet practice #1• Worksheet practice #2
3	<ul style="list-style-type: none">• Book• Vocab cards activity• Hands on graphing• Worksheet practice #1• Worksheet practice #2	9	<ul style="list-style-type: none">• Book• Vocab cards cut and paste• Hands on graphing• Worksheet practice
4	<ul style="list-style-type: none">• Book• Vocab cards activity• Hands on graphing• Worksheet practice #1• Worksheet practice #2	10	<ul style="list-style-type: none">• Book• Vocab cards cut and paste• Hands on graphing• Worksheet practice
5	<ul style="list-style-type: none">• Book• Vocab cards activity• Hands on graphing• Worksheet practice #1• Worksheet practice #2	11	<ul style="list-style-type: none">• Assessment
6	<ul style="list-style-type: none">• Book• Vocab cards activity• Hands on graphing• Worksheet practice #1• Worksheet practice #2		

The lesson plans contain:

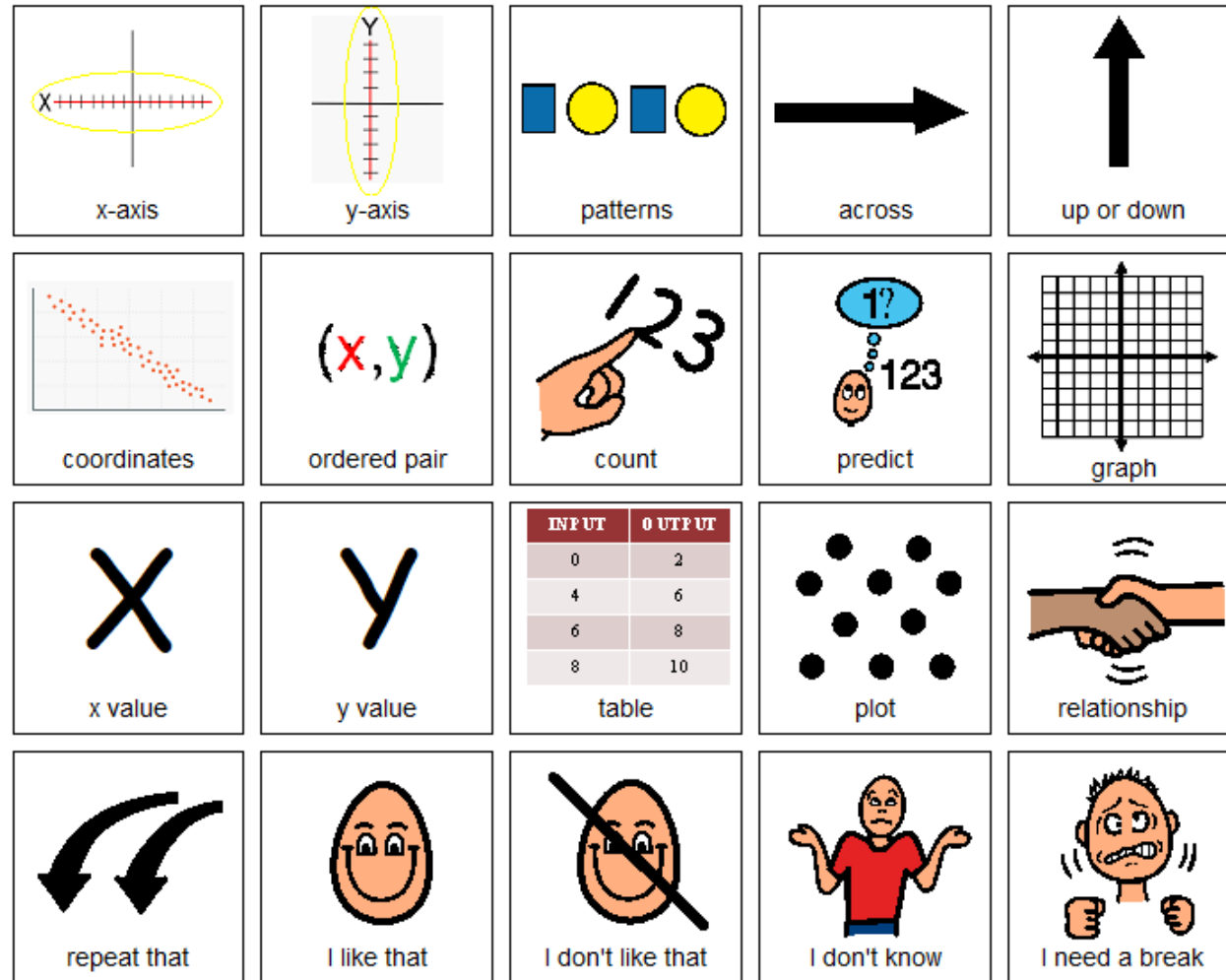
A quick look at what you will do each day

Day 2

Activity	Notes	Materials
Read or listen to a recording of the book (10 minutes)	<ul style="list-style-type: none">• Read through the story, asking lots of questions<ul style="list-style-type: none">◦ Therefore it usually takes me a little longer to read each day. I can ask more questions as they get more familiar with the material.◦ You don't want to ask so many questions you lose the flow of the story, but enough to make sure your students are truly engaged• Continue to make connections between book and vocabulary board	<ul style="list-style-type: none">• Book• Vocabulary board
Vocabulary cards I Spy Game (10 minutes)	<ul style="list-style-type: none">• I play this game, or variations of it the first few days<ul style="list-style-type: none">◦ Determine how many cards your students can handle in front of them. This can vary, some students may be able to have all the cards, so may only be able to handle a field of 3-5• Since this is the first time playing this game, I make it easy. Hold up a card, and have students find the matching one and hold it up• Discuss relevant points on the card<ul style="list-style-type: none">◦ You can also play this game in this manner having them find the symbol on their vocabulary board	<ul style="list-style-type: none">• Vocabulary cards (student set and teacher set)• Vocabulary board
Hands on Graphing activity (10 min)	<ul style="list-style-type: none">• Choose the best graph for your students learning level• Choose the best number of graphing cards to use	<ul style="list-style-type: none">• Laminated grids• Coordinate flash cards• Play-do or other markers
Worksheet review (5 minutes)	<ul style="list-style-type: none">• Review the worksheet completed yesterday	<ul style="list-style-type: none">• Worksheet completed yesterday
Worksheet practice (10 minutes)	<ul style="list-style-type: none">• Do one of the worksheets from the set: Labeling Coordinate Graphs• Choose the best version depending on the learning level of your students (see worksheet directions for more details)• Add color coding if needed	<ul style="list-style-type: none">• Worksheet• Scissors• Glue

The lesson plans contain:

Detailed instructions on how that day's lesson should run

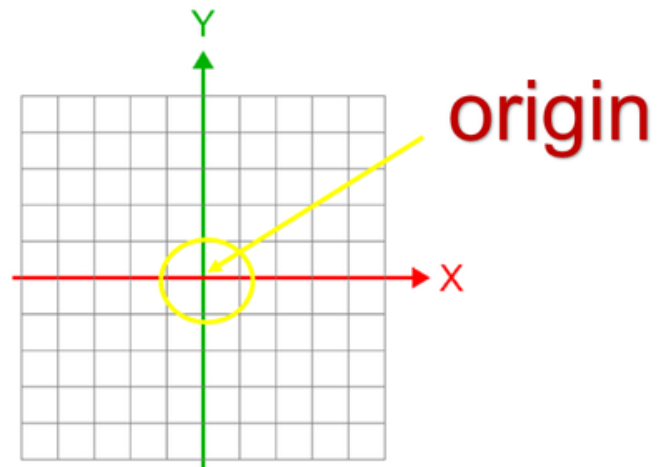


This unit comes with a vocabulary board.

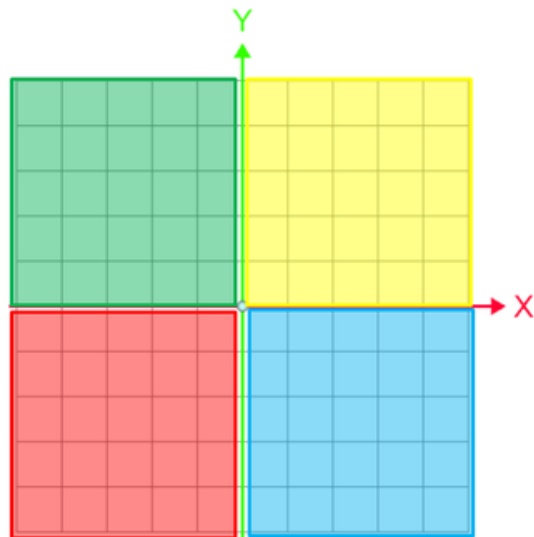
Vocabulary boards are great for ALL students to assist with participation and engagement in group discussions.

Tips on how to use in the unit!!

Where the x-axis and y axis **intersect**, or cross each other, is called the **origin**.



Most graphs are divided into 4 areas. These are called **quadrants**.

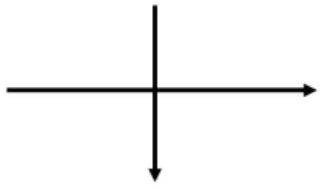


There is a 42-page book about how to read a graph and plot ordered pairs on that graph.

- pdf version
- voice-recorded PPT
- mp4 movie format

axes

Horizontal and vertical lines that ordered pairs are graphed on.



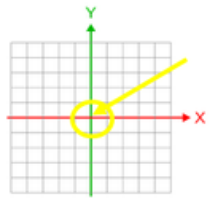
intercept

To cross the path of something traveling.



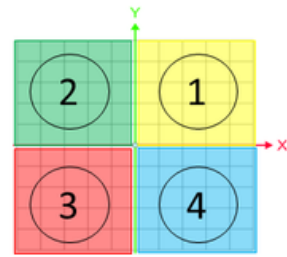
origin

Where X and Y axes cross or intersect. The starting point for graphing ordered pairs.



quadrants

4 areas a graph is divided into.



X-axis

Measurement line that goes across the page.



Y-axis

Measurement line that goes from top to bottom on the page.



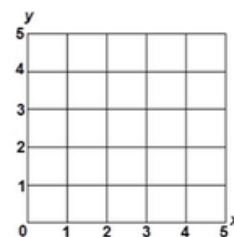
table

Way of organizing a group of numbers in a way they can be then be graphed.

INPUT	OUTPUT
10	5
15	10
10	15
15	20

graph

Picture of patterns and relationships between ordered pairs.

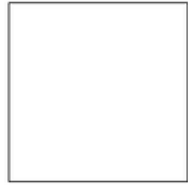


There are 10 vocabulary cards that come in color and black and white.

Included are suggestions for group activities to do with these each day.

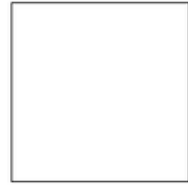
X-axis

Measurement line that goes across the page.



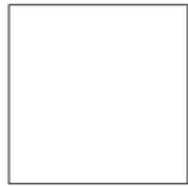
Y-axis

Measurement line that goes from top to bottom on the page.



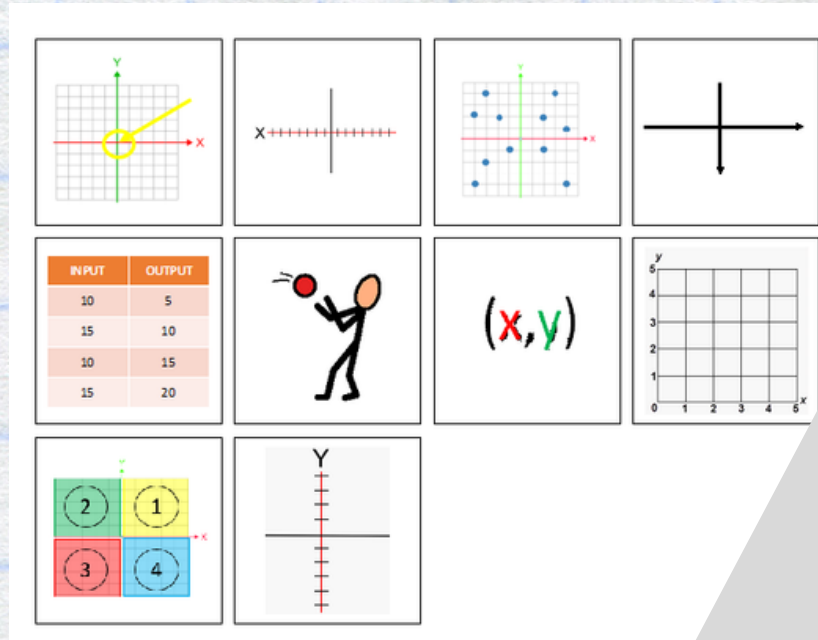
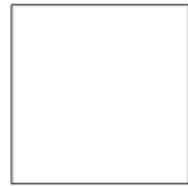
table

Way of organizing a group of numbers in a way they can be then be graphed.

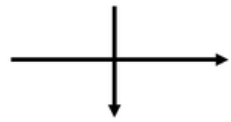


graph

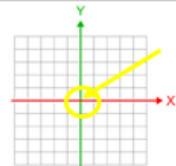
Picture of patterns and relationships between ordered pairs.



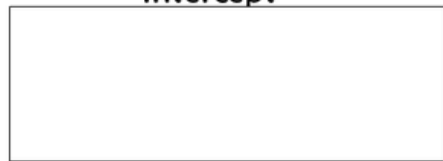
axes



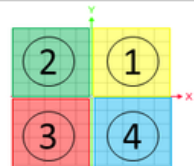
origin



intercept



quadrants



To cross the path of something traveling.

Way of numbers in a table.

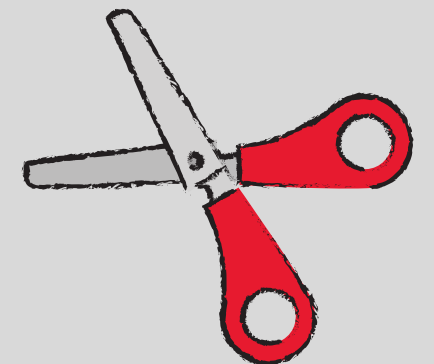
Measurement line that goes across the page.

4 areas a graph is divided into.

Set of numbers to plot a point on a graph.

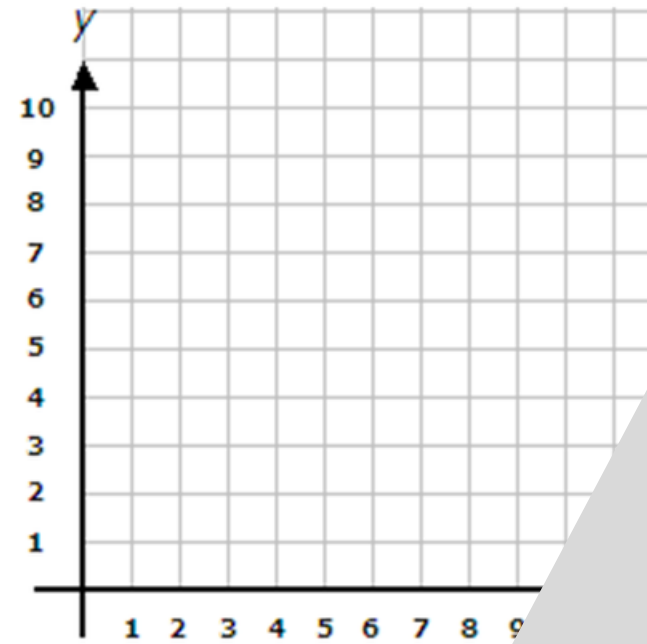
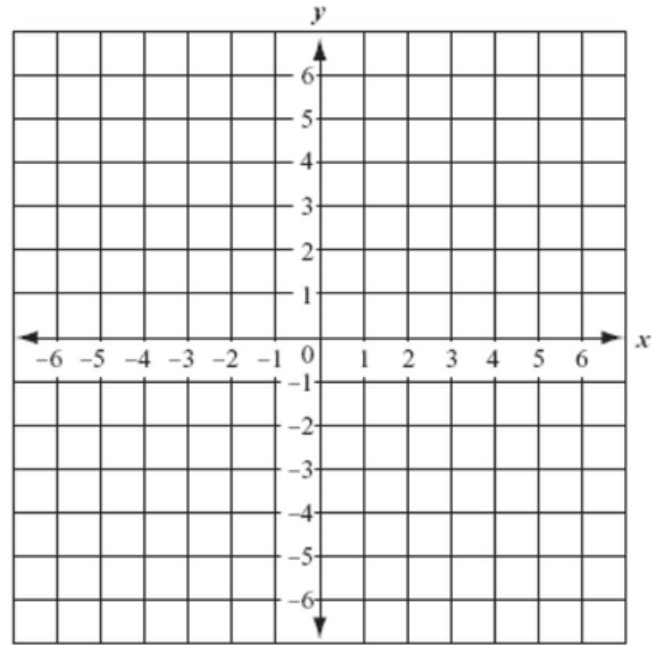
Horizontal and vertical lines and ordered pairs are graphed.

There is a cut and paste activity where students will match either the picture to the definition (easier) or the definition to the picture (harder).

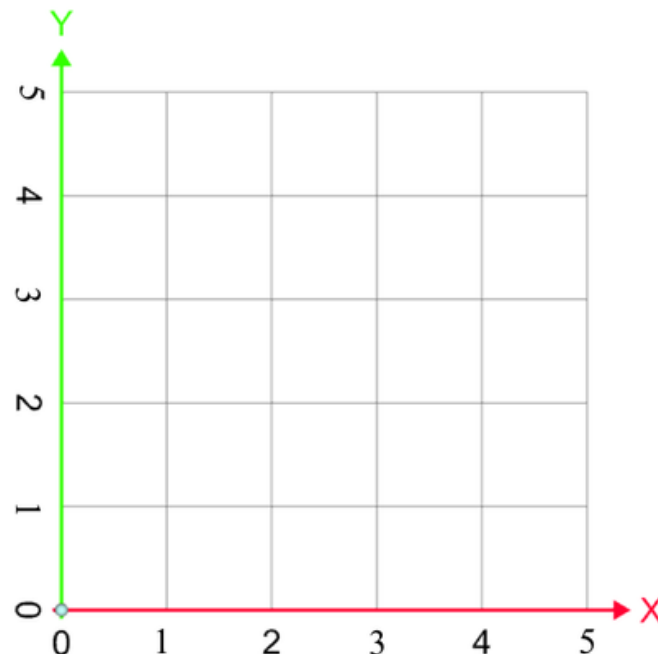
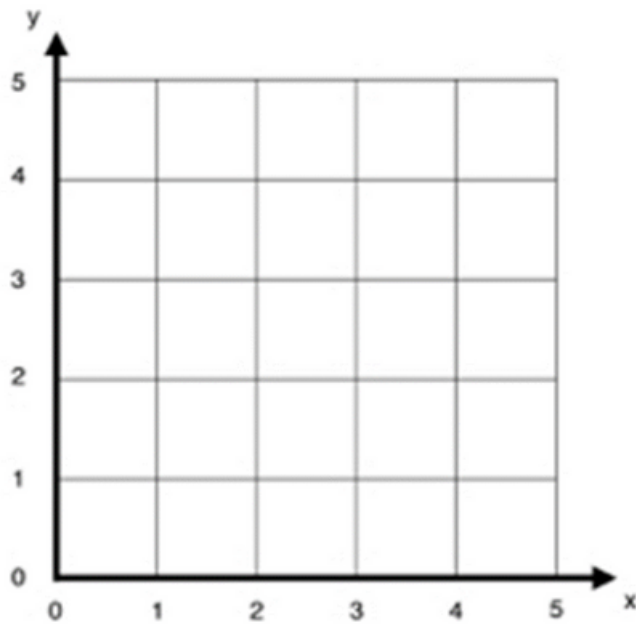


Hands on Graphing Activity

- This activity is a great way for students to practice graphing ordered pairs using a large grid and physical objects.
- I am including several grids, some with quadrant 1 and one with all 4 quadrants.
- The flashcards only include coordinates in quadrant 1.
- Supplies
 - Play-do
 - Laminated grids
 - Coordinate flash cards
 - Extra: thick spaghetti
- Give students as many coordinate flash cards as you think a student can do
- Have them place balls of play-do in the correct location on the grid
- ***BONUS: if you are teaching more advanced skills, you can have students try to connect the play-do dots with a piece of spaghetti. This is a great way if you are teaching about relationships or functions.

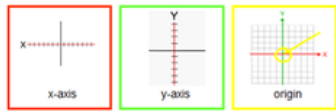
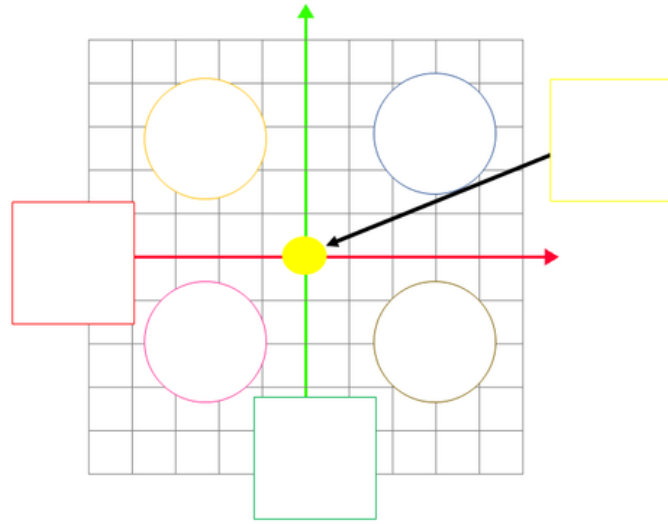


There are large coordinate planes that can be laminated and used to plot ordered pairs using objects like small erasers, play-do, stickers, and more. Ordered pairs are included.



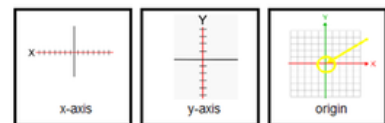
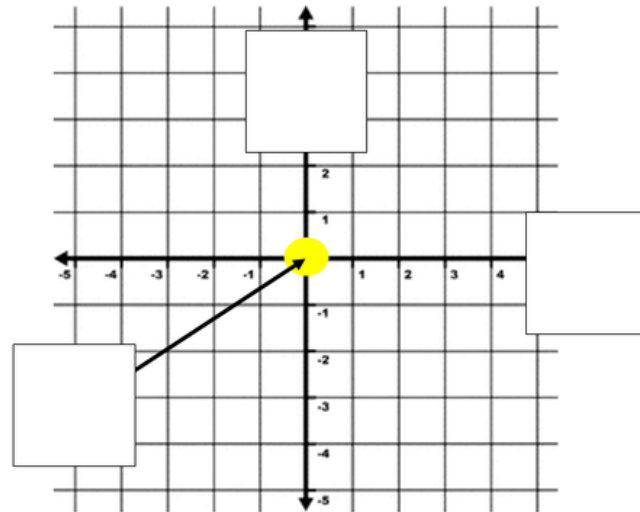
Color-coded example

Cut out the labels below and add them to the graph.



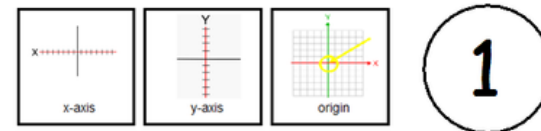
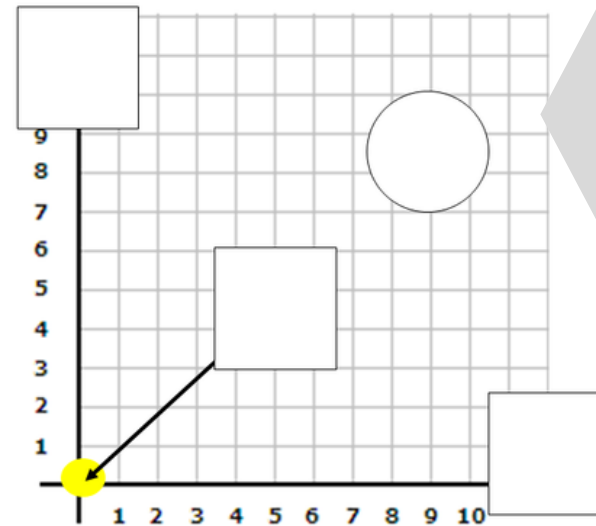
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Cut out the labels below and add them to the graph.



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Cut out the labels below and add them to the graph.

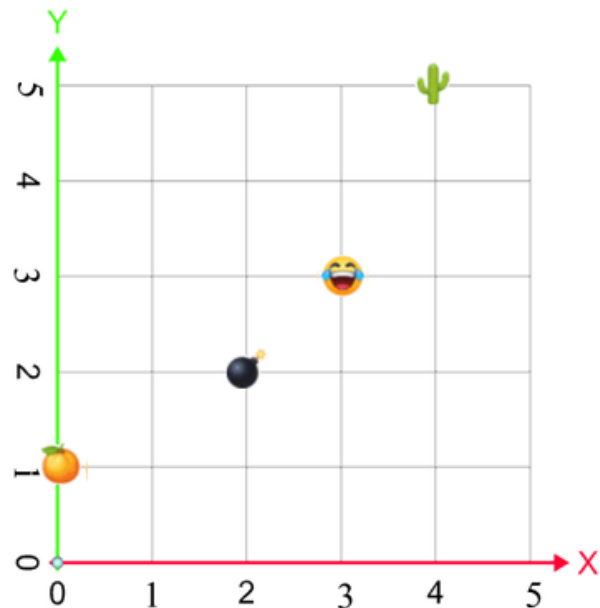


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There are 6 worksheets where students will label parts of a coordinate plane.

Color-coded example

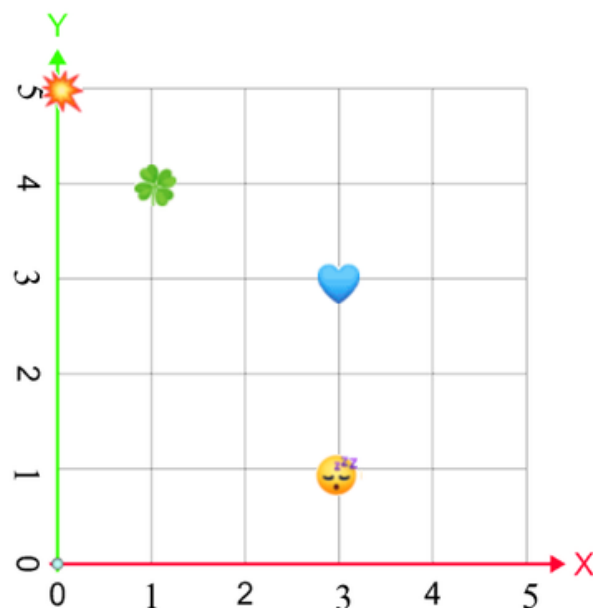
Determine the ordered pair for the following images on the graph.



- (,)
- (,)
- (,)
- (,)

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Determine the ordered pair for the following images on the graph.

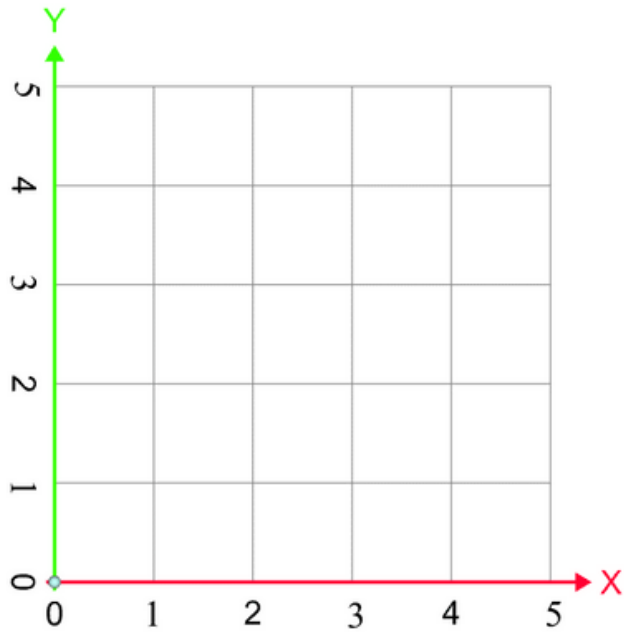


- (,)
- (,)
- (,)
- (,)

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There are 5 worksheets where students will determine the coordinates of various images on a graph.

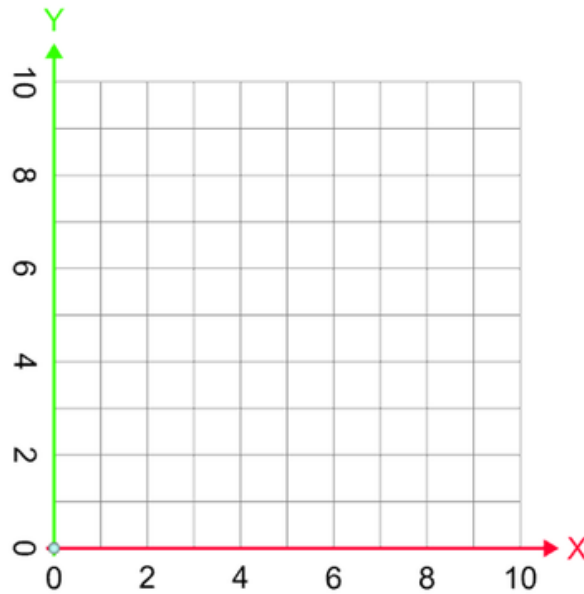
Determine the ordered pair for the following images on the graph.



- (,)
- (,)
- (,)
- (,)

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Determine the ordered pair for the following images on the graph.

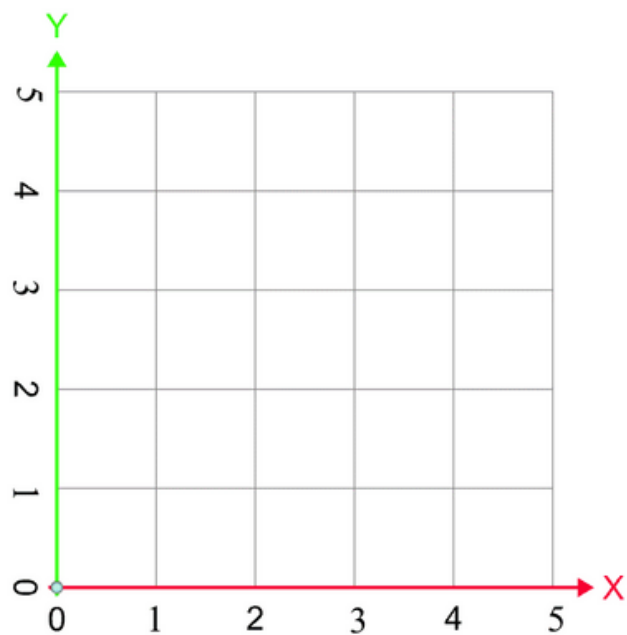


- (,)
- (,)
- (,)
- (,)

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There are 2 blank coordinate planes included that you can easily add dots for students to label the coordinates for more practice.

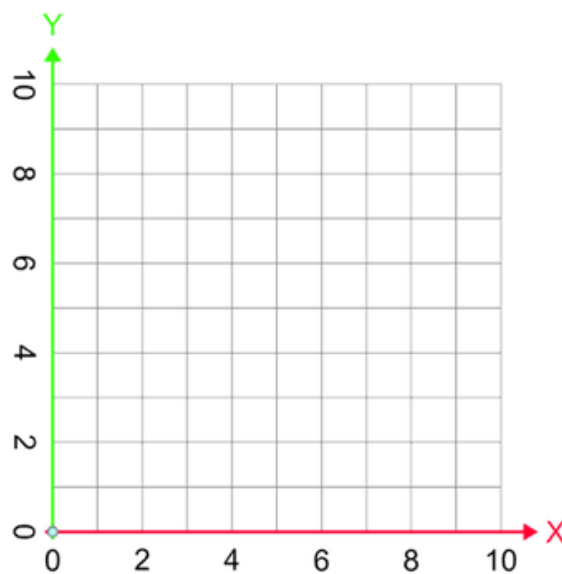
Draw a dot on the appropriate place on the graph.



- | | |
|-----------|-----------|
| (4 , 0) | (2 , 4) |
| (0 , 0) | (1 , 3) |

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Draw a dot on the appropriate place on the graph.

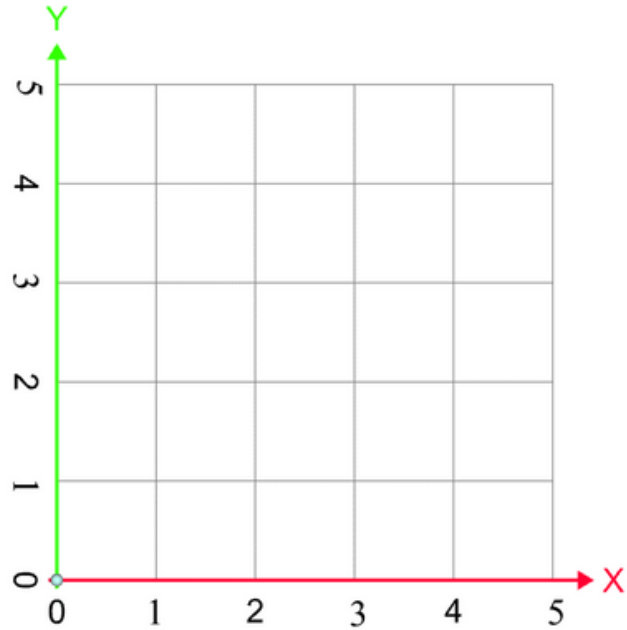


- | | |
|-----------|------------|
| (8 , 2) | (10 , 6) |
| (6 , 4) | (0 , 8) |

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There are 5 worksheets where students will draw the dots on the graph based on the coordinates given.

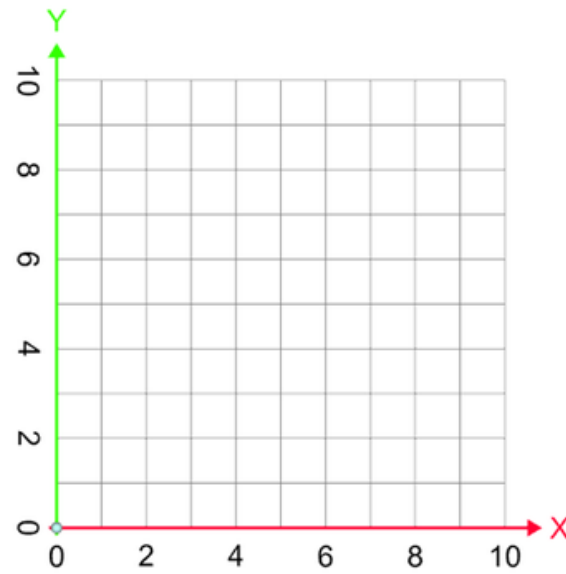
Draw a dot on the appropriate place on the graph.



(,) (,)
(,) (,)

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Draw a dot on the appropriate place on the graph.



(,) (,)
(,) (,)

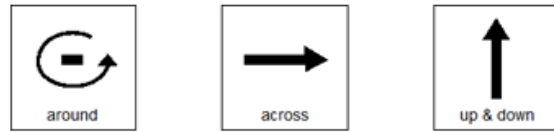
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Again there are 2 blank coordinate planes included for students who need more practice.

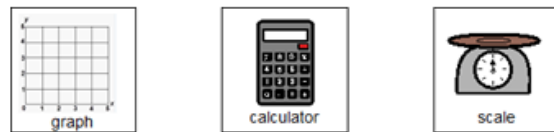
1. The x-axis goes which way on the graph:



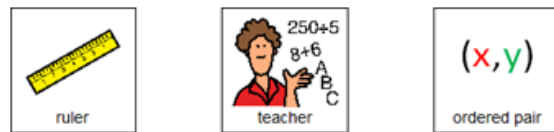
2. The y-axis goes which way on the graph:



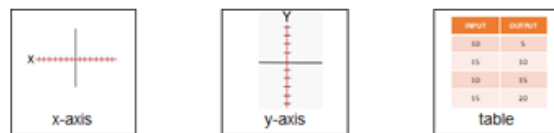
3. All the numbers you put into a table, you can also put on a:



4. In order to figure out where to put the dot on the graph, you look at the:



5. In each ordered pair, the first number tells you where to go on the:

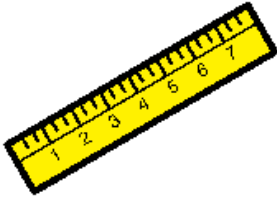
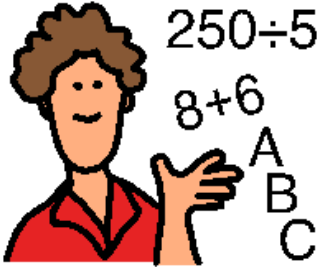



FINALLY the assessment!!
There are 3 versions. This version has 10 questions with 3 picture choices for each question.

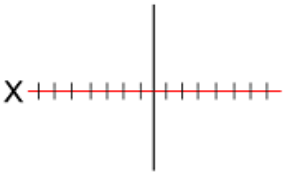
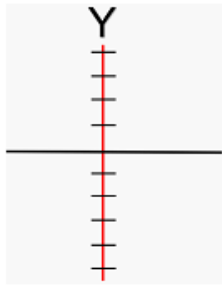
Answer key included.

Print onto cardstock or mount on index cards. Cut pictures apart and show student answer choices for each question.

Q 4

 <p>ruler</p>	 <p>teacher</p>	 <p>ordered pair</p>
--	--	---

Q 5

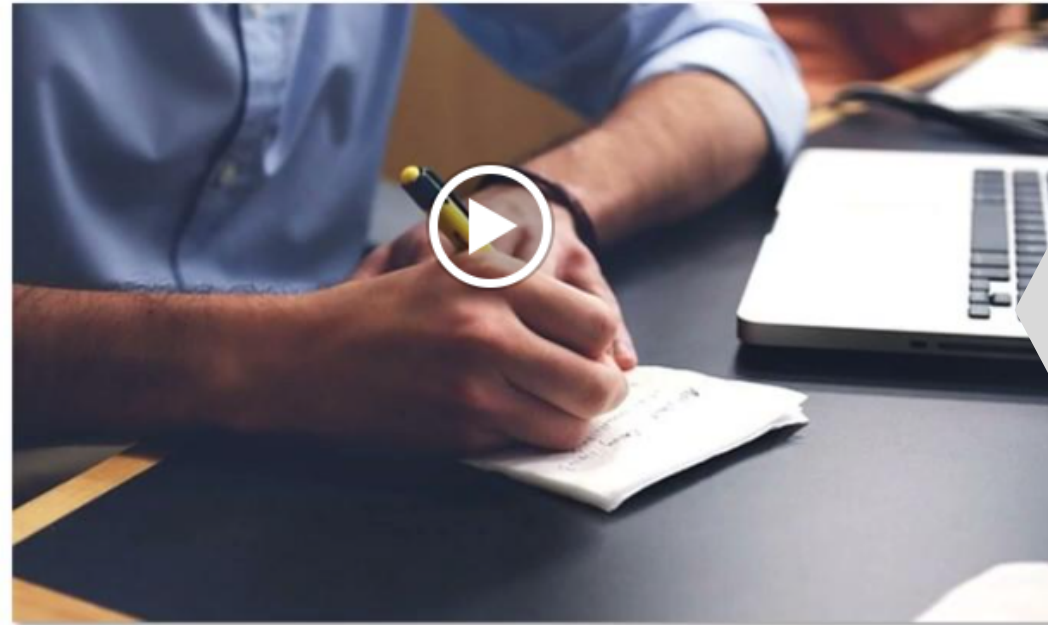
 <p>x-axis</p>	 <p>y-axis</p>	<table border="1"><thead><tr><th>INPUT</th><th>OUTPUT</th></tr></thead><tbody><tr><td>10</td><td>5</td></tr><tr><td>15</td><td>10</td></tr><tr><td>10</td><td>15</td></tr><tr><td>15</td><td>20</td></tr></tbody></table> <p>table</p>	INPUT	OUTPUT	10	5	15	10	10	15	15	20
INPUT	OUTPUT											
10	5											
15	10											
10	15											
15	20											

With this version, you cut out the answer choices and glue them on index cards. Ask the student the question, and they point to the correct answer.

1. The x-axis goes which way on the graph:
 - A. Around
 - B. Across
 - C. Up & down
2. The y-axis goes which way on the graph:
 - A. Around
 - B. Across
 - C. Up & down
3. All the numbers you put into a table, you can also put on a:
 - A. Graph
 - B. Calculator
 - C. Scale
4. In order to figure out where to put the dot on the graph, you look at the:
 - A. Ruler
 - B. Teacher
 - C. Ordered pair
5. In each ordered pair, the first number tells you where to go on the:
 - A. X- axis
 - B. Y- axis
 - C. Table
6. In each ordered pair, the second number tells you where to go on the:
 - A. X- axis
 - B. Y- axis
 - C. worksheet

This is your traditional multiple choice version. It can also be used as a recording sheet if your students are using the version with index cards.

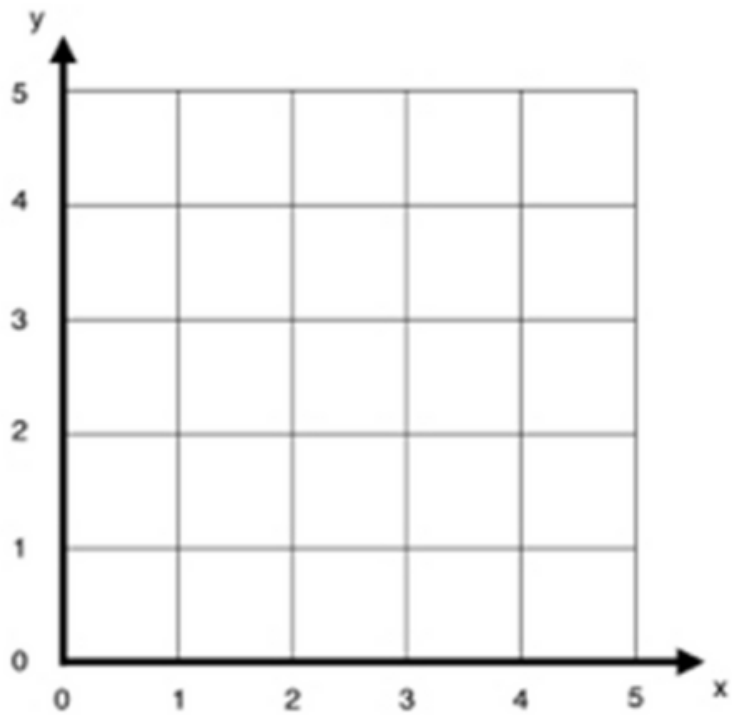
So, we might decide to write it all down in a table so we have it all in one place.



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Watch the
movie on
Graphing
Coordinates

This unit also has
digital activities.
There is a movie
version of all 3 books
students can listen to
read aloud.



Place the colored dot by each ordered pair onto the correct location on the graph.



5,5



4,4



3,3

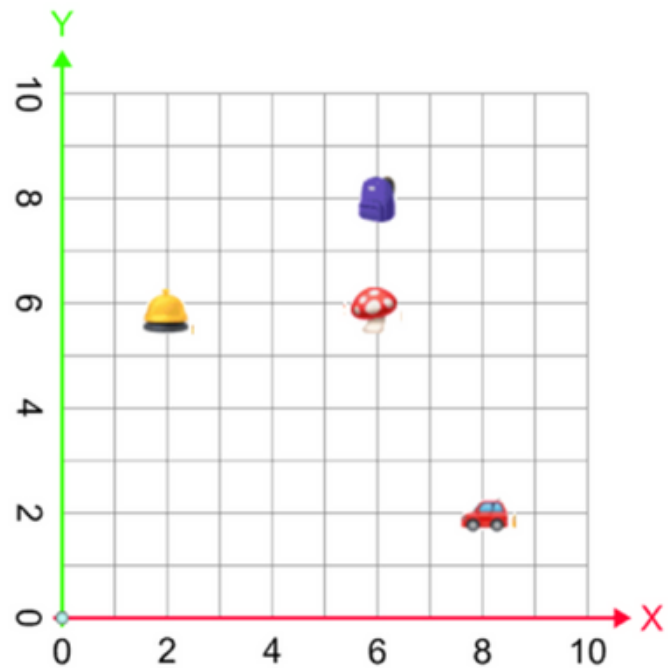


2,2



1,1

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Determine the ordered pair for the following images on the graph. Type the answers in the boxes.



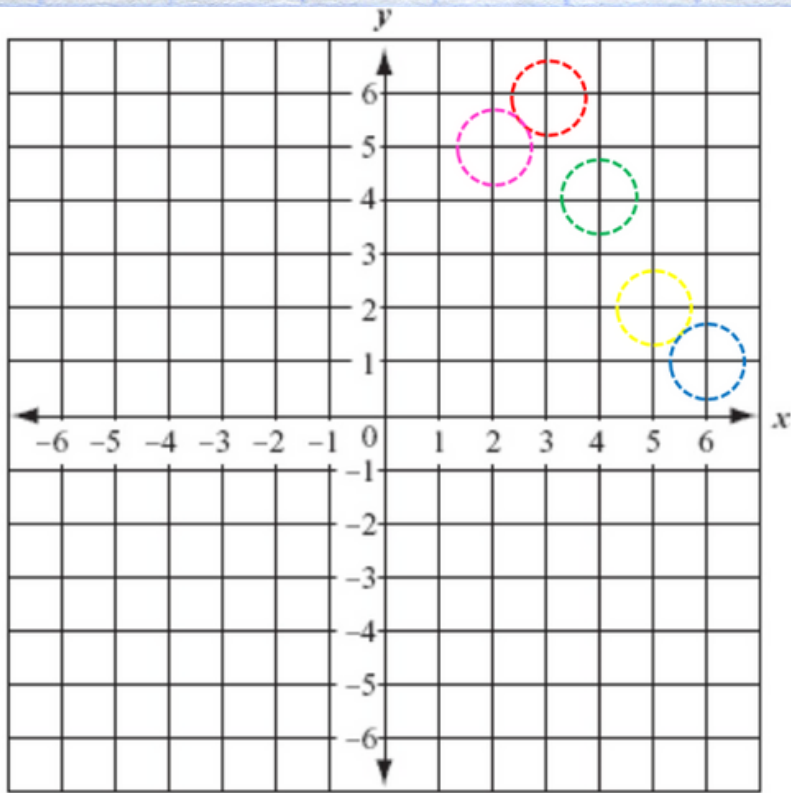






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The digital activities have students mainly click and drag their answers. There is some typing involved in the set without differentiation. There are 2 sets of 56 slides.

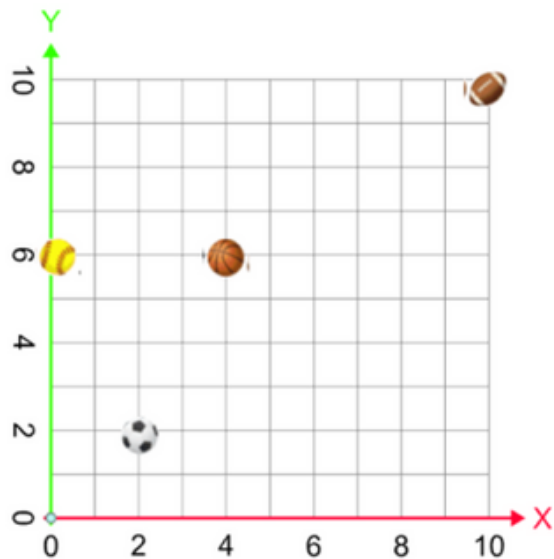


Place the colored dot by each ordered pair onto the correct location on the graph.

- 3,6
- 5,2
- 6,1
- 2,5
- 4,4

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The second set of slides is differentiated using color. There is no typing in this set of slides.



Determine the ordered pair for the following images on the graph. Match the answers to the images.

- (__, __)
 - (__, __)
 - (__, __)
 - (__, __)
- (2,2)
 - (10,10)
 - (0,6)
 - (4,6)

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I realize there will be some students out there unable to do cutting activities. I have a blog post with ways to complete activities without a pair of scissors!!

All of the activities (except the book) come in color and black and white.