

CoordinArt Tips

QUADRANT ONE only:

- **Before beginning for the first time**—have students use a highlighter and a ruler to highlight the x axis. Then using the same highlighter highlight the first coordinate (x) in each ordered pair.

This will help students remember the first number (x -coordinate) is found first along the horizontal (x -axis).

- **Always plot in pencil! (We ALL make mistakes. ☺)**
- **Do the first few points together with you using either an overhead projector or a document camera.**
- **Point out the "STOP's**
- **Use a straight edge to connect consecutive points within each grouping of ordered pairs.** A 6-inch ruler or protractor works great. I prefer my little 6-inch ruler to a full 12-inch one because it is small enough to quickly flip around any way I need.
- **Trouble following the correct line for the x -coordinate till you meet the y -coordinate?** Use a piece of sturdy poster board or light weight cardboard like what you find at the back of most spiral or similar notebooks. The thin white cardboard packaging that is used to keep men's dress shirts neat in the cellophane wrap works great, too. These all will allow for students to successfully see both lines come together to plot the point each time.
- **WHERE WAS I?** It is important for students to keep track where they are on the coordinate sheet as they plot the points. It is best to make a little check in front of the ordered pair as opposed to drawing a line through each one. Drawing through the numbers prohibits students from easily looking back at them to correct a point that was incorrectly plotted. They will eventually realize if a line drawn all of a sudden goes randomly through the middle of the picture that they made a mistake in reading the coordinates.
- **COLORING TIP:** Students tend to be more motivated to make the CoordinArt when they see the colored result that I provide. But they are often afraid of ruining their result if they try to color it, so please share these tips!

When **coloring faces** begin with a much lighter shade than you think you want. This gives you room to build depth to the face by adding darker and darker colors as needed. You can go over light colors with success, but not the other way around. Building light to dark will give 3-dimensional feel to the faces. This technique is the same whether you are coloring a Caucasian or dark, African American face. Selecting only a dark color and coloring evenly with it will result in a very flat, 2-dimensional face. This is disappointing to students after their hard work of plotting all the points!

This same philosophy works with **coloring other subject matter** as well. If the subject matter is three-dimensional it is NOT all one even color! Where light hits the surface it reflects a lighter shade and causes shadows in other areas. Use related colors to help with shading darker. Just remember to start with the lightest colors first since you can't go light once you've gone dark.

- If students are coloring at home...suggest they use something like Google to bring up images of the subject matter. This is just to give them something to look at that will assist them seeing where the light and shadows may tend to be. Kids really do like making their pictures look as good as possible, so don't be afraid to suggest this strategy.

CoordinArt Tips

Build Awareness of All 4 Quadrants

Take the opportunity to build student awareness of all four quadrants anytime you are working with graphs and number lines.

How?

- Whenever using horizontal number lines extend the line a little to the left. Put an arrow on the extending left end indicating there are numbers to the left of zero. What would that be? (Many will think it is fractions, so this is an important to build and reinforce awareness of negative numbers!)
- When talking about temperatures or elevation use a vertical number line and talk about the numbers that are below zero.
- When making graphs show how they are made from a vertical and a horizontal number line. Extend both of them a little with an arrow to represent the numbers less than zero on both lines (axes).

ADDITIONAL TIPS for Plotting in All FOUR Quadrants

- Before beginning have students take out a highlighter (or borrow one) and **highlight the NEGATIVE portion of the x-axis**. Demonstrate for students with a document camera or using an overhead if possible.
- Using that **same highlighter....highlight ONLY the x coordinates** on the instructions **that are NEGATIVE**. (Continue to demonstrate.)
- Take a **different color highlighter and highlight the NEGATIVE portion of the y-axis**. (Students are good at sharing with each other to find a second color to use.)
- Using this second color **highlight ONLY the negative y-coordinates**.
- Quickly walk around to check **that coordinate grids and instructions are highlighted correctly**. (Have a few extra on hand for those who didn't highlight as directed.)

Taking the time to do this helps call attention to the negative numbers and promotes more success right from the start.