

**Virginia Essentialized Standards of Learning (VESOL)
Instruction Resource
Mathematics Sample Activities**

Grade 6 Measurement and Geometry (MG)

| VESOL Code | VESOL Reporting Category | VESOL Text | Complexity Continuum |
|------------|-------------------------------|--|---|
| M-6 10 | Measurement and Geometry (MG) | Identify points graphed in the first quadrant of the coordinate plane. | Points to be identified could be from a given point, X, with directions to find point, Y, or identified from an ordered pair. |

Instructional Example

Objective:

Students will Identify points graphed in the first quadrant of the coordinate plane.

Vocabulary:

X axis, Y axis, point, coordinates, graph, coordinate panel, up, go, here, there, across

Materials:

- Painters tape of three colors
- Cards with X, Y, and various coordinates
- Printable coordinate plane for students [Coordinate Plane](#)
- Large coordinate plane for teacher to model on
- Writing utensil or small circle shaped stickers

Procedures for Instruction:

These instructional activities can be used at various points on the complexity continuum, depending upon student ability. Many possibilities exist for lesson creation between the examples presented here. It is important to start instruction where the student is currently functioning and implement the appropriate instructional strategy with them. Once data indicates that the student is ready for the next level of instruction, proceed to it after reviewing the level the student has mastered. Let the data be your guide.

Sample Activity 1

Create a coordinate plane on the floor using painters tape using one color for the x axis, a different color for the y axis, and another for the grid

- Teacher stands on the (0,0) point of the coordinate plane and models that Y goes UP and DOWN (modeling UP and DOWN on a Core Communication Board if students use AAC)
- Teacher returns to (0,0) and models that the x axis goes across (core words: GO, ACROSS HERE/THERE)

- Teacher returns to (0,0) and holds up either a paper with a large X or a large Y. Students tell teacher to GO UP or DOWN or TO side (or right/left)
- Students then take turns pulling a card and moving along the coordinate plane. Use a visual, like a paper plate placed in the correct spot, to support students in locating their destination.
- For the following sample activities, use the above lessons as a guide and transfer to the floor coordinate plane

Sample Activity 2 (*prerequisite: 1:1 correspondence counting*)

Building upon instruction above, the teacher provides explicit instruction and models finding points on the X and Y axes by counting up or across and tracing the path from the origin (0,0 along the X and Y axes).. Using scaffolded supports, EBPs and effective feedback students successfully complete multiple practice opportunities to start at the origin (0,0) and either count across the specified number in a coordinate to find a point on the x axis, or count up to identify the point on the Y-axis.

Sample Activity 3 (*Prerequisite: 1:1 correspondence counting*)

Similar to above, the teacher provides explicit instruction to demonstrate that coordinates are listed X first, then Y. The X is found by starting at the origin (0,0) and counting the lines to the right until arriving at the specified number. Y is found by starting at the origin (0,0) and counting up the lines. The coordinate is found by following the X and Y lines until they meet. Students find the coordinate (5,6) by counting five lines to the right and six lines upward from the origin (0,0), receiving acknowledgement or corrective feedback showing them what to do the next time to successfully find the coordinate. Using scaffolded supports, EBPs, and effective feedback, students complete multiple practice opportunities to find varied coordinates.

Sample Activity 4 (*Prerequisite: Number identification 0-10*) Teacher models identifying coordinate (3,7) on the large plane. Students find varied coordinates (i.e. (6,2) on their own individual planes).

Additional Resources:

- [3D Printed math manipulatives](#) for students with visual impairments
- Assistive Technology listed in the students' IEP accommodations
- Additional AT that may be helpful to explore:
 - Software incorporating switch scanning
 - Computer Interfaces and switches
 - Alternative computer mice like joysticks
 - Pencil grips
 - Adapted paper
 - Slant boards

Communication

- [36 Location Universal Core Board](#)
- Core Vocabulary and Math: Core words that can be modeled and targeted during lessons:
 - Go/Stop
 - Up/Down
 - Across
 - Same/Different
 - Put in/on

- Go/Stop
- Here/There