

# Coordinate-Plane Journey

Classroom-ready printable pack · Grades 5–8

**Pack contents**

First- and four-quadrant mats, point/path tokens, challenges, and keys. Two student sets are included.

**Teacher directions**

1. Choose the same plane and identify the origin.
2. The Describer states ordered pairs in sequence.
3. The Builder plots and connects the points.
4. Compare coordinates before the finished path.

**Before class**

- Print at 100% on US Letter paper. Use cardstock or laminate for reuse.
- Cut on the thick solid borders. Keep Set A and Set B separate.
- Give challenge/model cards only to the Describer.
- Use a folder, book, or tabletop barrier so partners cannot see each other's work.

**Accessibility and accommodations**

Start in quadrant I. Use x first, then y and trace from the origin.

## Storage-envelope labels

**Coordinate-Plane Journey**

Set A — Describer

Count pieces before storing.

**Coordinate-Plane Journey**

Set B — Builder

Count pieces before storing.

**Coordinate-Plane Journey**

Challenge / model cards

Count pieces before storing.

**Coordinate-Plane Journey**

Teacher reference

Count pieces before storing.

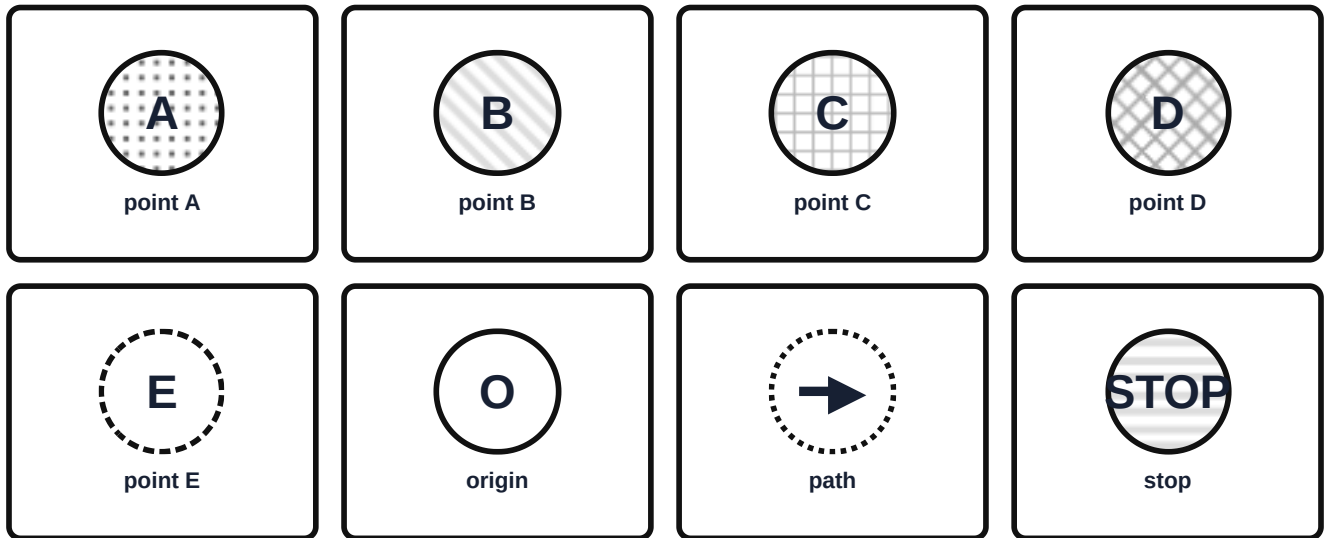
## Student language supports

**Position:** above · below · beside · between · near · far · left · right · clockwise**Clarify:** “Please repeat...” · “Is \_\_\_ beside \_\_\_?” · “What should I place next?”**Compare:** same · different · rotate · move · replace · sequence

## Movable pieces

**Set A**

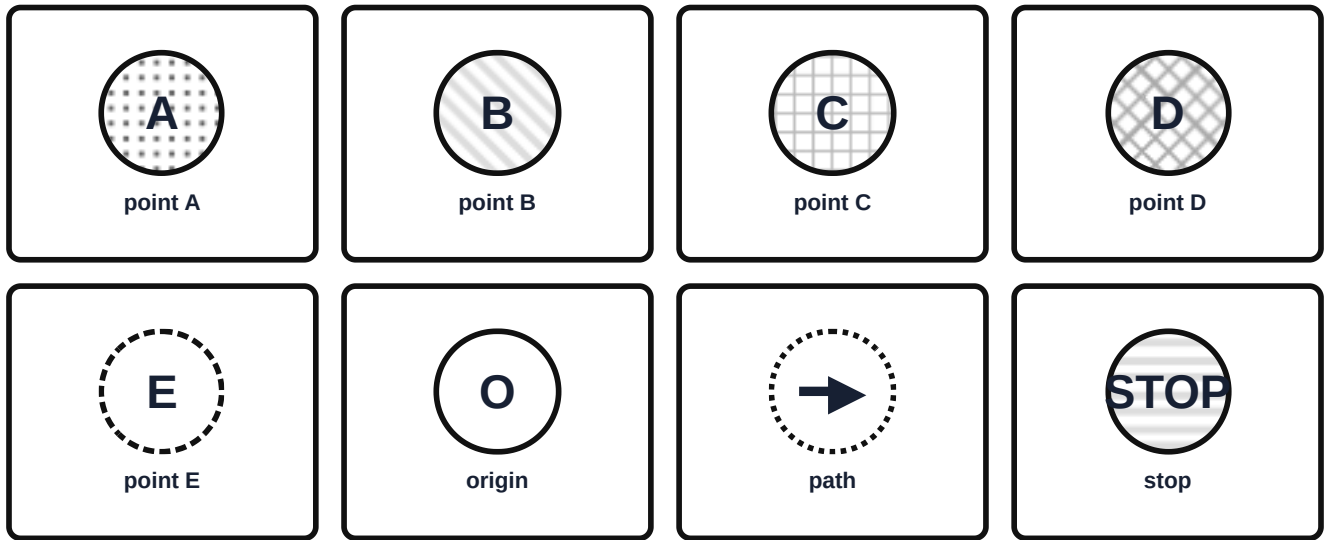
Cut on the solid borders. This set is identical to the partner set.



## Movable pieces

**Set B**

Cut on the solid borders. This set is identical to the partner set.



# First-quadrant plane

Cut the page in half. Both partner mats are identical.

Set A — First-quadrant plane

origin bottom left • x then y • 0–10

top / far

center

bottom / near

Set B — First-quadrant plane

origin bottom left • x then y • 0–10

top / far

center

bottom / near

# Four-quadrant plane

Cut the page in half. Both partner mats are identical.

Set A — Four-quadrant plane

origin centered • axes -5 to 5

top / far

center

bottom / near

Set B — Four-quadrant plane

origin centered • axes -5 to 5

top / far

center

bottom / near

## Describer-only challenge cards

Keep these cards hidden from the Builder.

### Challenge 1: Triangle

$(1,1) \rightarrow (5,1) \rightarrow (3,4) \rightarrow \text{start.}$

### Challenge 2: Rectangle

$(-4,-2) \rightarrow (4,-2) \rightarrow (4,2) \rightarrow (-4,2).$

### Challenge 3: Axis points

$(0,4), (-3,0), (0,-4), (3,0).$

### Challenge 4: Original

Create six valid ordered pairs.

## Coordinate-Plane Journey reference

### Coordinate key

Ordered pairs are  $(x, y)$ : move horizontally for  $x$ , then vertically for  $y$ . An axis point has one coordinate equal to zero. Sample rectangle:  $(-4, -2)$ ,  $(4, -2)$ ,  $(4, 2)$ ,  $(-4, 2)$ .

### Quality check after a round

- Can each student identify pieces by shape or label without relying on color?
- Do both models match in pieces, order, orientation, and relative position?
- Which direction was most precise? Which should be revised?