Flight Plan (5.G.2)

Summary

Students will apply their understanding of points on a coordinate plane to a task involving air traffic control.

Main Core Tie

Mathematics Grade 5

Strand: GEOMETRY (5.G) Standard 5.G.2

Time Frame

1 class periods of 60 minutes each

Group Size

Small Groups

Life Skills

Thinking & Reasoning, Communication, Systems Thinking

Materials

- Graph paper
- Colored pencils
- Task sheet

Background for Teachers

Teachers need to understand how to plot points in Quadrant One of the coordinate plane and the meaning of a flight plan.

Student Prior Knowledge

Students need a working knowledge of:

- Points
- X-axis
- Y-axis
- Coordinate plane
- Meaning of the term "flight plan"

Intended Learning Outcomes

Students will apply and extend previous understandings of locating and naming points in the first quadrant of a coordinate plane to a real world situation.

Strategies for Diverse Learners

Supports for struggling learners could include:

- larger squares on their graph paper
- the teacher establishes the starting point
- explicitly showing them the location of the hub and the airport
- modeling what it means to be at an intersecting coordinate

Extensions

- Determining the time each flight will take based on mph
- Comparing distances traveled
- Why might a flight not be able to travel in a straight path?

Bibliography

Adapted from: Smith, Margaret Schwan, Victoria Bill, and Elizabeth K. Hughes. "Thinking Through a Lesson Protocol: Successfully Implementing High-Level Tasks." Mathematics Teaching in the Middle School 14 (October 2008): 132-138.

Authors

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