

Vector Hunt

Instructor Guide

1 Objective

This activity is meant to enforce the importance of both magnitude and direction in describing a vector. In addition, it will build student's spatial and measurement skills.

2 Materials

- Worksheet
- Pencils
- Ruler
- Protractor
- Nine Vectors, placed and recorded before activity begins (Ninth at the front of the room).

3 Preparation

Create nine "vectors" of various sizes out of paper, and label 1-8, saving one for the front of the classroom.. Measure and record their length. On the day of the activity, place eight of the vectors around the classroom (could be outside with supervisor's permission). While placing, record direction of the vectors with use of the protractor(make sure that there is some reference frame that is obvious for measuring the angle from. Placing vectors on walls coming up from the ground is usually the simplest way.). Make an answer sheet with the information you recorded. Place the ninth one at the front of the classroom, at an angle on the board.

4 Activity

Begin by reviewing what content the students have learned about vectors up to this point. Make sure to emphasize that a vector has both magnitude and direction. Then explain to the students that vectors have been hidden around the classroom. Show them the one at the front of the room, and demonstrate how to measure both it's length and direction with the ruler and protractor.

Once you have explained ot the best of your ability, set a time limit (depending on how far the vectors are, and how hidden they are), by which the students need to be back. You may want to pair them up to ensure successful completion. Then allow the students to explore, find the vectors, and record. Once everyone has returned, compare the answers everyone had. Show how important direction is in being able to explain to you where the vector is. If there is one on which there is significant disagreement, consider revisiting the vector with the class and showing them how to measure it.

VECTOR HUNT

Student Answer Sheet

1 Collected Answers

#	Magnitude(cm)	Direction (degrees) counterclockwise of " "	Location
1			
2			
3			
4			
5			
6			
7			
8			