

Kinematics Hangman

This game reviews the vocabulary students need to describe motion in Physics 20, Unit A: Kinematics ([Topic](#), [Topic](#)). Terms such as displacement, velocity and the use of slope and trigonometry connect directly to the specific outcomes that ask students to define displacement, velocity and acceleration ([Outcome](#)), to interpret motion using displacement and velocity vectors ([Outcome](#)), and to explain two-dimensional motion using vector components, which draws on trigonometric skills from Mathematics 10C ([Outcome](#), n1). Slope also links kinematics to graph analysis of position-time and velocity-time data, a connection identified in the Links to Mathematics table for this unit ([Topic](#)).

- There are 4 words to guess, one per round. Each blank stands for one letter.
- Guess one letter at a time. If it is in the word, write it in every blank where it belongs; if not, write it in the wrong-guess spaces.
- You have 6 wrong guesses per round. Use the clue when you are stuck. The answer key provides words.

Work with a partner or in a small group. One player (or the answer key) keeps track of the hidden word while the rest of the group guesses letters one at a time.

For each puzzle:

1. Count the blanks to see how many letters are in the word.
2. Take turns calling out one letter at a time.
3. If the letter appears in the word, fill it in on every matching blank.
4. If the letter does not appear, record one wrong guess. Each round allows six wrong guesses before the word is revealed and the round ends.
5. Use the physics clue provided with each puzzle to help narrow down the word, especially once a few letters are filled in.
6. The round is won if the full word is guessed correctly before six wrong guesses accumulate.

All four hidden words come from the study of motion in Physics 20: how it is measured, described, graphed and calculated ([Topic](#), [Outcome](#), [Outcome](#)).

Puzzles

Round 1 (12 letters)

D _ _ _ _ _ _ _ _ _ _ _ _

Clue: The change in position of an object, including direction, measured from start to end point

Wrong guesses: _ _ _ _ _ _ _ _

Round 2 (5 letters)

S _ _ _ _

Clue: The steepness of a line on a graph, used to find rate of change in motion graphs

Wrong guesses: _ _ _ _ _ _ _ _

Round 3 (8 letters)

V _ _ _ _ _ _ _

Clue: The rate of change of position, including direction of travel

Wrong guesses: _____

Round 4 (12 letters)

T _ _ _ _ _

Clue: A branch of mathematics using triangle ratios, applied to two-dimensional motion problems

Wrong guesses: _____

Answer key

- Round 1: **DISPLACEMENT**
- Round 2: **SLOPE**
- Round 3: **VELOCITY**
- Round 4: **TRIGONOMETRY**