

The Particle Model of Matter Maze

This maze helps you learn about the particle model of matter. This model says that all matter is made of tiny particles that are always moving with spaces between them ([Knowledge](#), [PDF p.1](#)). As you work through the maze, you will learn about the states of matter. You will also learn about physical properties that the particle model explains. These properties include mass, volume, density, and compressibility ([Knowledge](#), [Understanding](#)).

How to play

Start at the entrance marked S. Find your way through the maze to the exit marked E. You can move up, down, left, or right. You cannot move diagonally. You cannot pass through walls.

Before you start, read this word bank of 8 key terms from the particle model of matter:

particle, solid, liquid, gas, mass, volume, density, compressibility

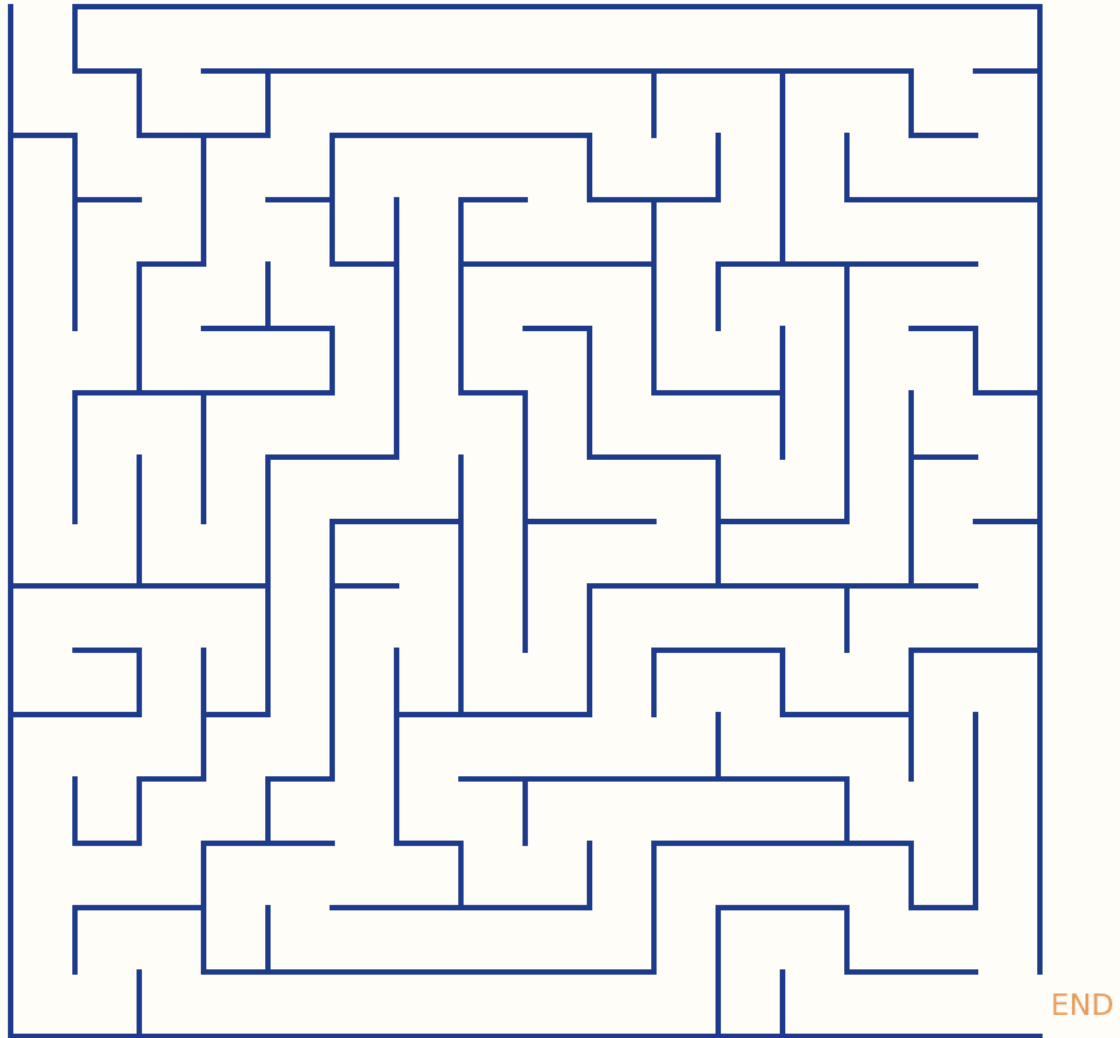
While you trace your path through the maze, think about where each word fits. Solids have particles that stay close together and vibrate in place. Liquids have particles with more space between them. These particles can slide past each other. Gases have particles with large spaces between them. These particles move freely in all directions ([Knowledge](#), [Resource](#)).

When you reach the exit, write a short sentence for two of the words from the bank. Explain how particles behave for that state of matter or property. For example, you might explain why gases are the easiest state to compress ([Knowledge](#), [Skills](#)).

Grab a pencil and trace one single path with no crossings or backtracking. If you hit a dead end, back up and try a different route.

The maze

START

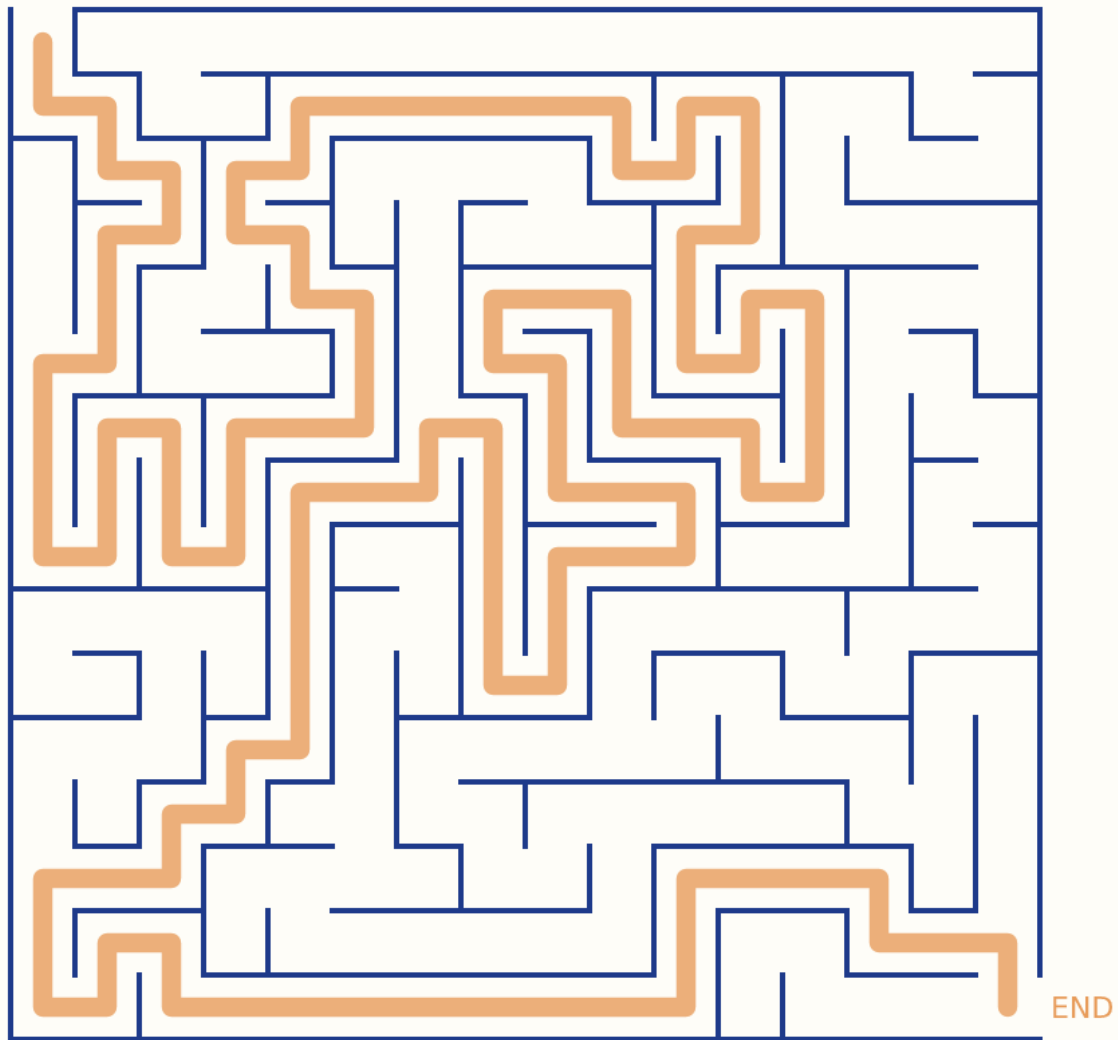


Maze

Answer key

The Particle Model of Matter Maze (solution)

START



Maze solution

Path: down 1, right 1, down 1, right 1, down 1, left 1, down 2, left 1, down 3, right 1, up 2, right 1, down 2, right 1, up 2, right 2, up 2, left 1, up 1, left 1, up 1, right 1, up 1, right 5, down 1, right 1, up 1, right 1, down 2, left 1, down 2, right 1, up 1, right 1, down 3, left 1, up 1, left 2, up 2, left 2, down 1, right 1, down 2, right 2, down 1, left 2, down 2, left 1, up 4, left 1, down 1, left 2, down 4, left 1, down 1, left 1, down 1, left 2, down 2, right 1, up 1, right 1, down 1, right 8, up 2, right 3, down 1, right 2, down 1