

Poles: Attraction & Repulsion

Polarity Bridge with Snapling

Learning target

Predict attraction or repulsion from pole labels.



Before you begin

Use the reference page and discussion prompts on their own, or open the optional browser adventure. No earlier lesson or physical kit is required.

For online play: use an internet-connected current browser with local storage enabled. Read the three-part Gemling briefing, answer the quick check, and apply the evidence at three checkpoints. Retry feedback supports review; results are not a secure test or gradebook.

Use for teacher-led review, science centers or partner practice. Independent readers may need support with the vocabulary below. The design target is grades 3-5; choose support based on the learner.

Vocabulary and concepts to discuss

North and south poles; like and unlike; orientation

Open Polarity Bridge - direct lesson link

Scan the QR code or use the clickable link. This guide is usable offline; the adventure runs on an external educational website.



Poles: Attraction & Repulsion - key ideas

1. The first clues

Magnets have north and south poles. Like poles repel and unlike poles attract in a simple bar-magnet model.

2. How the clues connect

Turning one magnet changes which poles face each other. The force can therefore change from attraction to repulsion.

3. Our evidence record

Our bridge model places north facing south to pull the pieces together. North facing north pushes them apart. The labels let us decide without relying on color.

Keep the science accurate

Not all metals are magnetic. Treat electromagnets qualitatively; no field mathematics or unsupervised powered builds.

Apply the evidence

Use a specific observation from this lesson to explain one choice. Point to a clue, then connect that clue to a scientific idea.

Curriculum reference: <https://www.nextgenscience.org/dci-arrangement/3-ps2-motion-and-stability-forces-and-interactions>

Talk through the evidence

1. Which pair attracts?

Expected answer: North facing south

Reasoning: Our bridge model places north facing south to pull the pieces together. North facing north pushes them apart. The labels let us decide without relying on color.

2. Which pair repels?

Expected answer: South facing south

Reasoning: Our bridge model places north facing south to pull the pieces together. North facing north pushes them apart. The labels let us decide without relying on color.

3. How can the model change from repulsion to attraction?

Expected answer: Turn one magnet to face unlike poles

Reasoning: Turning one magnet changes which poles face each other. The force can therefore change from attraction to repulsion.

4. What lets us interpret the diagram without color?

Expected answer: The north and south labels

Reasoning: Our bridge model places north facing south to pull the pieces together. North facing north pushes them apart. The labels let us decide without relying on color.

Guide the discussion

Ask learners to name the evidence that supports their answer. If an answer differs, revisit the matching key idea on page 2 and invite a revised explanation.

Online rewards: this lesson grants one fixed digital Expedition Discovery. Five saved digital Gemling friends become available only after all six distinct subject lessons are complete, in any order. Digital rewards do not establish physical ownership.