Nebraska Grade 3 to Grade 4 Physical Science Summer Bridge

Physical Science: Review and Readiness

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A summer path from Grade 3 physical science review into Grade 4 energy readiness.

This book begins with the force and motion ideas students learned in Grade 3, then gently introduces the Grade 4 energy ideas they will see next. The early weeks protect what students already know. The later weeks preview speed, energy transfer, collisions, and simple energy-device design with clear pictures and short practice.

Keep strong

- pushes, pulls, and motion changes
- balanced and unbalanced forces
- evidence from fair investigations
- motion patterns and predictions
- magnets and electric forces at a distance

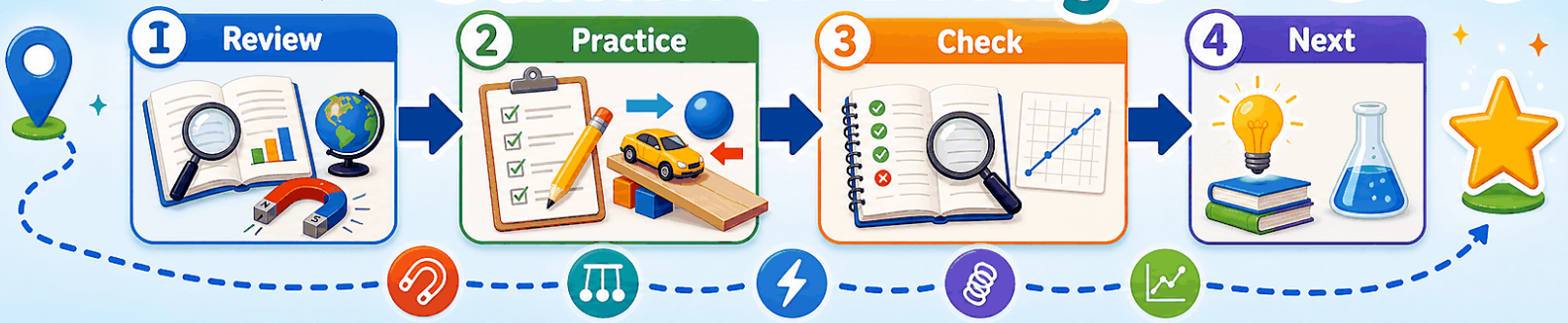
Get ready

- faster objects can have more energy
- sound, light, heat, and electricity can move energy
- collisions can transfer energy
- engineers design devices that change energy
- tests help improve a design

How the Grade 3 to Grade 4 path works

Weeks 1–5 are mostly Grade 3 review. Weeks 6–8 preview Grade 4 physical science in a gentle way. Students do not need to master every Grade 4 idea now; they only need enough background to feel familiar with the new words and examples.

How to Use Physical Science Summer Bridge 3→4



Use the page order as the readiness plan.

This book is not just a repeat of Grade 3. It starts with review so students feel steady, then introduces a few Grade 4 physical science ideas before school begins. Move one page at a time and let the new ideas feel familiar before expecting perfect answers.

Review weeks	Use the early weeks to check forces, motion, magnets, patterns, evidence, and design problems from Grade 3.
Readiness weeks	In later weeks, notice new Grade 4 words: energy, speed, transfer, collision, and device.
Friday quiz	Treat the quiz as a checkup. It shows what is remembered and what should be reread before moving on.
After checking	For missed answers, ask whether the question used a Grade 3 review idea or a Grade 4 preview idea.

Anchor

Start with the science idea students already know from Grade 3.

Connect

Link that idea to a new Grade 4 word, picture, or example.

Check

Use the answer explanation to see which clue mattered most.

For students

- Say whether the page is review or readiness.
- Use the picture before reading the choices.
- Keep short answers simple and science-based.
- Mark new Grade 4 words to revisit later.

For adults

- Do not overteach the preview weeks.
- Ask how the new idea connects to Grade 3 science.
- Use missed answers to name one idea to reread.
- Keep the tone exploratory, not test-like.

My Science Bridge Progress

Check off each lesson and write the Friday quiz score as you move toward Grade 4.

5 review weeks | 3 readiness weeks | 8 Friday quizzes

This bridge book belongs to: _____

Week	Focus	Mon	Tue	Wed	Thu	Friday Quiz
1	Balanced and unbalanced forces	☐	☐	☐	☐	____ / 10
2	Force evidence and motion patterns	☐	☐	☐	☐	____ / 10
3	Motion predictions and magnets	☐	☐	☐	☐	____ / 10
4	Electric forces and magnet design	☐	☐	☐	☐	____ / 10
5	Magnet problems and force review	☐	☐	☐	☐	____ / 10
6	Grade 4 preview: speed and energy	☐	☐	☐	☐	____ / 10
7	Energy transfer and collisions	☐	☐	☐	☐	____ / 10
8	Energy-device design practice	☐	☐	☐	☐	____ / 10

Reflection Notes

A Grade 3 idea that feels strong: _____

A Grade 4 preview idea to revisit: _____

Table of Contents

Here's what we'll explore together!

- Week 1: Balanced and Unbalanced Forces 2
- Week 2: Balanced and Unbalanced Forces and Patterns of Motion . . . 8
- Week 3: Patterns of Motion and Magnetic and Electric Forces 14
- Week 4: Magnetic and Electric Forces and Solving Problems with Magnets 20
- Week 5: Solving Problems with Magnets and Balanced and Unbalanced Forces 26
- Week 6: Grade 3 Review and Grade 4 Preview 32
- Week 7: Grade 4 Preview: Energy Moves from Place to Place and Energy in Collisions 38
- Week 8: Grade 4 Preview: Energy in Collisions and Converting Energy by Design 44
- Answer Key & Explanations 50

Let's learn and have fun!

WEEK

1

Balanced and Unbalanced Forces

Practice this week's science ideas.

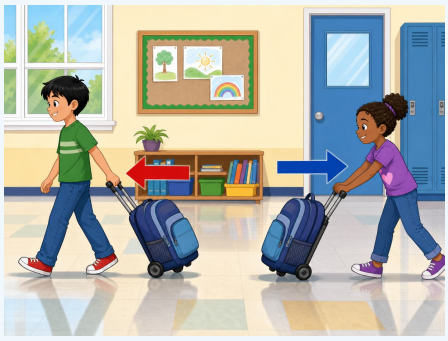
This Week's Days

Day 1	Pushes and Pulls
Day 2	Balanced Forces
Day 3	Unbalanced Forces
Day 4	Planning a Fair Force Test
Day 5	Week 1 Quiz

Week 1 Day 1 Pushes and Pulls

Big idea: Important ideas include force as a push or a pull that can make an object start moving, stop moving, speed up, slow down, or change direction.

- **What to notice:** Every force has a strength (strong or gentle) and a direction (shown with an arrow).
- **Important examples:** Include gravity only as a force that pulls objects down.
- **Science thinking:** Use everyday examples: opening doors, kicking balls, pulling wagons, sliding books.
- **Use evidence:** You identify the force, its direction, and what it does to motion in pictured situations, then draw your first force arrows.
- **Common mistake:** Keep everything qualitative; no formulas or units.
- **Grade 3 check:** Key words for this lesson: force, push, pull, motion, balanced.



Pushes and Pulls: study the picture, model, or data before answering.

Check yourself: A strong answer names the science idea and uses evidence, data, a model, or a clear example.

Practice

Bridge Practice

1. What is the main idea of Pushes and Pulls?
2. Name two important details from today's review.
3. Which key word helps you talk about this lesson?
4. What evidence or model could help support an answer about Pushes and Pulls?
5. Why does this lesson belong in the chapter Balanced and Unbalanced Forces?
6. A classmate gives an answer with no evidence. What should they add?

Answer Key & Explanations

Check the answer first, then read the explanation to see the evidence or reasoning.

Week 1 Day 1: Pushes and Pulls

Answers

1. Important ideas include force as a push or a pull that can make an object start moving, stop moving, speed up, slow down, or change direction.
2. Accept two accurate review details, such as one fact about force and one example, model, or evidence source from the lesson.
3. force
4. Use a picture, table, graph, model, observation, or source fact from the lesson.
5. It helps explain Balanced and Unbalanced Forces.
6. a fact, observation, data point, or model from the lesso

Explanations

1. Start with the lesson's core idea. The review explains that Important ideas include force as a push or a pull that can make an object start moving, stop moving, speed up, slow down, or change direction.
2. Good details come straight from the review bullets, not from a guess. Use two facts that help explain the lesson idea.
3. The word force names one of the important science ideas in this lesson. Use it when you explain your answer.
4. Evidence can be an observation, a table, a graph, a model, or a source fact. It must connect directly to the claim.
5. The topic is one part of the larger chapter idea, Balanced and Unbalanced Forces. Connecting the day to the chapter helps you see the pattern across lessons.
6. Science answers are stronger when they name the evidence. The evidence shows why the claim should be trusted.

Week 1 Day 2: Balanced Forces

Answers

1. Two forces of equal strength pushing or pulling in opposite directions are balanced: they cancel each other, so the object's motion does not change.

2 Accept two accurate review details, such as one fact about force and one example, model, or evidence source from the lesson.

3 force

4 Use a picture, table, graph, model, observation, or source fact from the lesson.

5 It helps explain Balanced and Unbalanced Forces.

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6 Science answers are stronger when they name the evidence. The evidence shows why the claim should be trusted.

Week 1 Day 3: Unbalanced Forces

Answers

1 Forces that do not cancel are unbalanced, and unbalanced forces change motion: the object starts, stops, speeds up, slows down, or turns toward the stronger force.

2 Accept two accurate review details, such as one fact about force and one example, model, or evidence source from the lesson.

3 force

4 Use a picture, table, graph, model, observation, or source fact from the lesson.

5 It helps explain Balanced and Unbalanced Forces.

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Week 1 Day 4: Planning a Fair Force Test

Answers

1. How scientists plan an investigation before doing it: a question, a prediction, what to change, what to keep the same, and what to observe.
2. Accept two accurate review details, such as one fact about force and one example, model, or evidence source from the lesson.
3. force
4. Use a picture, table, graph, model, observation, or source fact from the lesson.
5. It helps explain Balanced and Unbalanced Forces.
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