# Maryland Grade 3 Physical Science Summer Review

*Physical Science: Review and Readiness*

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## A calm 8-week review of the Grade 3 physical science ideas students already learned.

This book helps students return to important science ideas without rushing. Each day reviews one idea, gives a picture or model to study, and then asks short practice questions about that same idea. The goal is to remember the science, use evidence, and feel ready for the next school year.

### What students review

- pushes, pulls, and changes in motion
- balanced and unbalanced forces
- patterns that help predict motion
- magnets, static electricity, and force at a distance
- fair tests, evidence, and simple design problems

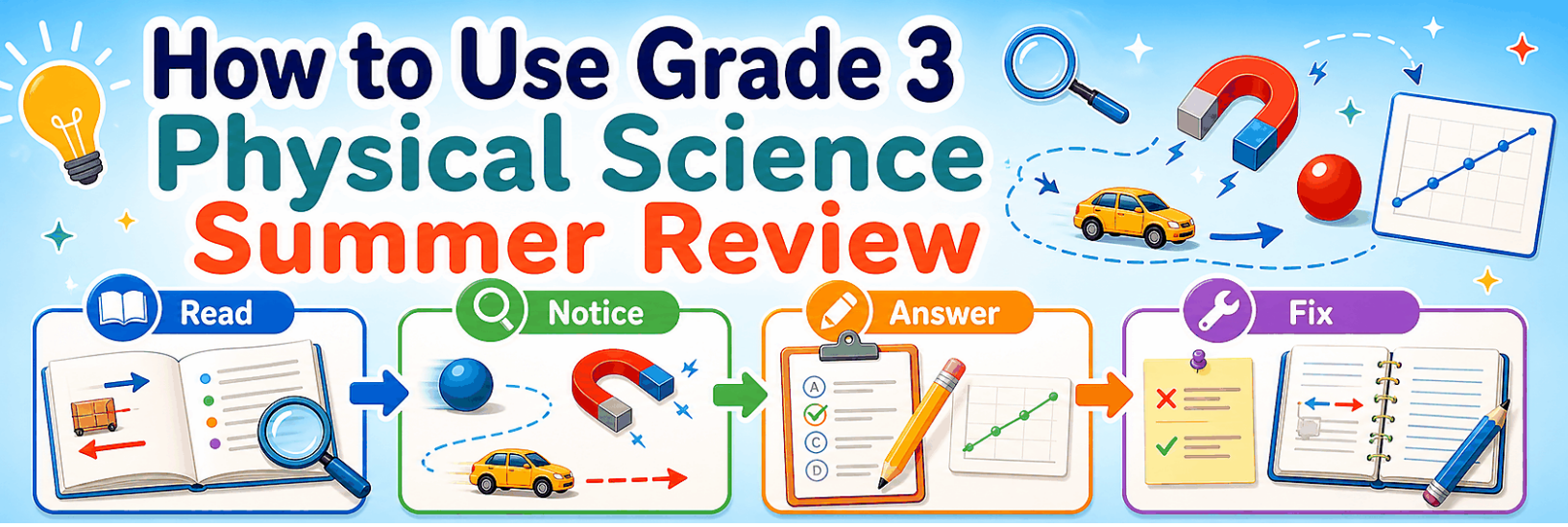
### What students practice

- naming the science idea in a question
- reading pictures, models, tables, and graphs
- choosing the best answer from evidence
- writing short, clear science answers
- correcting mistakes after reading explanations

**A simple weekly rhythm**

Use Days 1–4 for one focused review page each day. Use Day 5 as a weekly quiz. If a question is missed, read the explanation and ask, "What science idea did I need?" That one sentence turns the answer key into a short reteach.

# How to Use Grade 3 Physical Science Summer Review




## Use one page a day for steady science review.

This book reviews the Grade 3 physical science ideas students have already learned: forces, motion, patterns, magnets, static electricity, and simple design problems. Most days have a short science review followed by practice. Day 5 brings the week together with a quiz.

| | |
|---|---|
| **Days 1–4** | Read the review first. Notice the bold science words, the picture or model, and the examples. Then answer the practice questions without using the answer key. |
| **Day 5** | Complete the weekly quiz. It mixes the week's ideas so students can see what they remember and what needs another look. |
| **Best pace** | Plan for about 15–20 minutes. Short, focused practice works better than rushing through several pages at once. |
| **After checking** | Fix missed answers in pencil and reread the explanation. The correction is the learning step. |

### Read

Ask, "What science idea is this page reviewing?" Look for the words and examples that explain it.

### Practice

Use the review, picture, table, graph, or model to choose the answer. For short answers, one clear science phrase is usually enough.

### Check

Check the answer, then read the explanation. It should show why the answer matches the science.

### For students

Try every question before checking. Circle one word, picture, or data point that helped. If you miss one, write the correct science word nearby.

### For parents and teachers

Ask the student to explain the picture or model first. Help with reading, but let the student choose. Use missed items to reteach one science idea.

# Science Summer Progress Tracker

Check off each short review day and the Friday quiz as you finish.

8 weeks | 32 review days | 8 Friday quizzes

This summer review belongs to: _____

| Week | Focus | Mon | Tue | Wed | Thu | Fri Quiz |
|---|---|---|---|---|---|---|
| 1 | Balanced and unbalanced forces | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2 | Force evidence and motion patterns | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3 | Motion predictions and magnets | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4 | Electric forces and magnet design | ☐ | ☐ | ☐ | ☐ | ☐ |
| 5 | Magnet problems and force review | ☐ | ☐ | ☐ | ☐ | ☐ |
| 6 | Fair tests and motion evidence | ☐ | ☐ | ☐ | ☐ | ☐ |
| 7 | Measuring motion and magnetic forces | ☐ | ☐ | ☐ | ☐ | ☐ |
| 8 | Magnetic forces and design review | ☐ | ☐ | ☐ | ☐ | ☐ |

## Reflection Notes

The week I felt strongest: _____

One science idea to revisit: _____

# Table of Contents

*Here's what we'll explore together!*



*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:** A force is a push or a pull. Forces explain why objects start moving, stop moving, speed up, slow down, or change direction.

- **Push or pull:** A push moves an object away from the force. A pull moves an object toward the force.
- **Force vocabulary:** The word **force** means any push or pull. Kicking, tugging, lifting, and dragging can all use force.
- **Motion changes:** A force can start, stop, speed up, slow down, or turn an object.
- **Unbalanced force:** A still object starts moving when forces do not cancel. A stronger push usually changes motion more.
- **Picture and examples:** Arrows show force direction. Kicking a ball is a push; tugging a drawer is a pull.

Pushes and Pulls

## Practice

### Daily Practice

1. Which action is a push?

   A dragging a wagon toward you
   B kicking a ball away
   C holding a book still
   D listening to sound

2. Which action is a pull?

   A closing a drawer by tugging it
   B tapping a drum
   C shining a light
   D drawing a shadow

3. A force can change the direction an object moves. True ◯ False ◯

4. What one word means a push or a pull?

5. A cart is still. What kind of force can make it start moving?

6. If you push a toy car harder, will it usually move more or less?

# 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. B
2. A
3. True
4. force
5. unbalanced force
6. more

**Explanations**

1. A push moves an object away from the force, and your foot sends the ball away.
2. A pull moves an object toward the force, and tugging brings the drawer toward you.
3. A force can change direction because a push or pull can turn an object a new way.
4. Force is the vocabulary word scientists use for a push or a pull on an object.
5. A still cart needs an unbalanced force because balanced forces cancel and keep it still.
6. A harder push gives a bigger force, so the toy car usually moves more.

## Week 1 Day 2: Balanced Forces

**Answers**

1. A
2. B
3. False
4. equal
5. No
6. balanced

**Explanations**

1. Equal arrows pointing opposite ways mean the pushes match, so the forces cancel and motion stays the same.
2. Balanced pushes cancel each other, so the still box stays still instead of starting to move.
3. Balanced forces are equal and opposite, so a still object does not start moving from them.
4. Balanced forces have matching strengths in opposite directions, so neither side wins or changes the motion.

5 A resting book is not changing motion because balanced forces keep it in the same place.

6 Balanced means the forces cancel each other and leave the object's motion unchanged instead of speeding or turning.

## Week 1 Day 3: Unbalanced Forces

### Answers

1 B | 2 A | 3 True | 4 unbalanced | 5 Yes | 6 longer arrow

### Explanations

1 A cart starts moving when one force is stronger than the others, which makes the forces unbalanced.

2 In tug-of-war, the stronger pull wins because the forces are unbalanced toward that side.

3 When forces do not cancel, an object can start, stop, speed up, slow down, or turn.

4 Unbalanced means the forces do not cancel because one side is stronger than the other.

5 Speed is part of motion, so a ball that slows down has changed its motion.

6 In a force model, the longer arrow marks the stronger force and points toward the motion change.

## Week 1 Day 4: Planning a Fair Force Test

### Answers

1 A | 2 A | 3 False | 4 variable | 5 distance | 6 same line

### Explanations

1 A fair test changes one variable so you can connect the result to that one change.

2 Using the same surface keeps that condition steady, so only push strength is being compared.

3 If two variables change at once, you cannot tell which change caused the result.

4 The variable is the one part of a fair test you purposely change to compare results.

5 Measuring distance shows how far the object moved after each push, so you can compare the pushes.

6 Starting every trial at the same line keeps distance comparisons fair and easier to trust.

## Week 1 Day 5: Quiz

### Answers

1 B | 2 A | 3 B | 4 A | 5 True | 6 True | 7 force

8 unbalanced force | 9 more

### Explanations

1 A push moves an object away from the force, and your foot sends the ball away.

2 Equal arrows pointing opposite ways mean the pushes match, so the forces cancel and motion stays the same.

3 A cart starts moving when one force is stronger than the others, which makes the forces unbalanced.

4 A fair test changes one variable so you can connect the result to that one change.

5 A force can change direction because a push or pull can turn an object a new way.

6 When forces do not cancel, an object can start, stop, speed up, slow down, or turn.

7 Force is the vocabulary word scientists use for a push or a pull on an object.

8 A still cart needs an unbalanced force because balanced forces cancel and keep it still.

9 A harder push gives a bigger force, so the toy car usually moves more.