

# Nebraska Grade 3 Physical Science Summer Workbook

*Physical Science: Practice and Readiness*

**Dr. A. Nazari**

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Published by View Math Education

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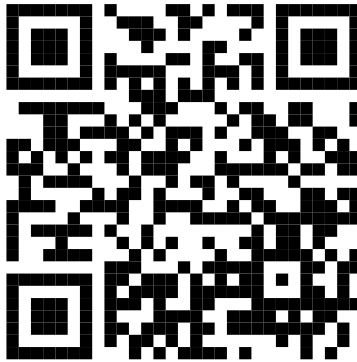
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# Welcome to Grade 3 Physical Science Summer Workbook



An 8-week physical science workbook for writing, checking, and strengthening Grade 3 ideas.

This workbook is for students who need more practice with the science they reviewed in class. Each page gives a short reminder, then asks students to use words, pictures, data, and simple models to answer. The goal is not to finish fast. The goal is to practice carefully and fix thinking when an answer does not match the science.

## Workbook work

- choose answers from science clues
- label arrows, diagrams, tables, and graphs
- write short science phrases and sentences
- compare examples of force, motion, and magnets
- correct missed questions after reading explanations

## Science inside

- pushes, pulls, speed, direction, and position
- balanced and unbalanced forces
- repeating motion patterns and predictions
- magnets, static electricity, attraction, and repulsion
- fair tests and simple design solutions

### How the workbook is different

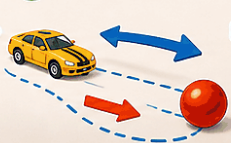
The review book is for refreshing ideas. This workbook gives more room to practice. Days 1–4 build one topic at a time. Friday mixed review asks students to choose which science idea fits each question.

# How to Use Grade 3 Physical Science Summer Workbook

1 Read



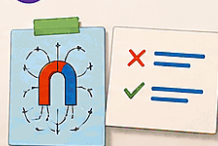
2 Try



3 Check



4 Fix



## Treat each workbook page as a short science work session.

This workbook gives students more practice than the review book. Read the reminder, study the visual, answer the questions, and then use the answer explanations to repair any shaky ideas. Written work can be short, but it should be clear enough to show the science thinking.

- Start the page** Read the quick review and name the topic: force, motion pattern, magnet, static electricity, fair test, or design problem.
- Do the practice** Use the picture, model, table, or graph as evidence. Write a short answer only when the question asks for one.
- Friday review** Mix the week's ideas. Do not guess by page title; decide which science idea each question is testing.
- Check and fix** Correct missed answers in pencil. Reread one sentence from the review that would have helped.

### Mark clues

Circle useful science words, arrows, patterns, or data before choosing an answer.

### Show work

Use a quick label, arrow, drawing, or word phrase when it helps explain your thinking.

### Retry one

Pick one missed question to try again the next day without looking first.

### Student habit

- Try the full page before checking.
- Keep answers short but scientific.
- Use vocabulary from the review when possible.
- Fix mistakes before marking the page complete.

### Adult support

- Ask what clue helped before saying if it is correct.
- If reading is hard, read the question aloud.
- Use missed items to review one science word.
- Let corrected work count as progress.



# My Science Workbook Progress

Track each short lesson, then write the Friday mixed-review score.

8 weeks

32 lessons

8 Friday reviews

This workbook belongs to:

Week	Focus	Mon	Tue	Wed	Thu	Friday Review
1	Balanced and unbalanced forces	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/> / 10
2	Force evidence and motion patterns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/> / 10
3	Motion predictions and magnets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/> / 10
4	Electric forces and magnet design	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/> / 10
5	Magnet problems and force review	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/> / 10
6	Fair tests and motion evidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/> / 10
7	Measuring motion and magnetic forces	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/> / 10
8	Magnetic forces and design review	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/> / 10

## Reflection Notes

A science idea I improved: \_\_\_\_\_

A science idea I want to practice again: \_\_\_\_\_



# ★ Table of Contents ★

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

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*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 Mixed Review*

**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

## Workbook Practice

Choose the best answer.

1 Which action is a push? \_\_\_\_\_

- |  |  |
|--|--|
| <input type="radio"/> A pulling a wagon toward you | <input type="radio"/> C holding a pencil still |
| <input type="radio"/> B kicking a ball away        | <input type="radio"/> D watching a shadow      |

2 Which action is a pull? \_\_\_\_\_

- |  |   |
|--|---|
| <input type="radio"/> A dragging a backpack closer | <input type="radio"/> C pushing a door open |
| <input type="radio"/> B tapping a drum             | <input type="radio"/> D dropping a marker   |

3 A force arrow points to the right. What does the arrow show? \_\_\_\_\_

- |   |   |
|---|---|
| <input type="radio"/> A the color of the object | <input type="radio"/> C the force direction |
| <input type="radio"/> B the object's mass       | <input type="radio"/> D the weather         |

True or false.

4 A push moves an object away from the force. \_\_\_\_\_

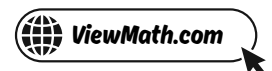
True  False



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# 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

C

4

True

5

False

6

True

7

force

8

pull

9

gravity

10

yes

11

See Explanation

12

See Explanation

### Explanations

1

Kicking sends the ball away from the foot, so the force is a push.

2

Dragging brings the backpack toward the person, so the force is a pull.

3

A force arrow shows the direction the push or pull acts.

4

A push acts away from the object or person doing the pushing.

5

A force can also start motion, such as a push that starts a still cart moving.

6

Gravity pulls objects toward Earth, so falling down is evidence of that pull.

7

Force is the science word for a push or a pull.

8

Tugging brings the rope toward the student.

9

Gravity pulls the eraser toward Earth, so falling shows the pull of gravity.

10

The ball changed from still to moving, so the kick caused a motion change.

11

A harder push is a stronger force, so it can cause a bigger motion change on the same toy car.

12

Good evidence names the action and motion change, such as someone pulled the backpack and it moved closer.



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## Week 1 Day 2: Balanced Forces

## Answers

- 1 A   2 C   3 B   4 False   5 True   6 True   7 equal   8 balanced  
9 no   10 opposite   11 See Explanation   12 See Explanation

## Explanations

- 1 Equal arrows in opposite directions show forces that cancel.
- 2 Equal opposite pushes are balanced, so they do not change the motion.
- 3 The book stays at rest because the downward pull and upward push balance.
- 4 Balanced forces cancel, so the motion does not change.
- 5 The object can stay still when the forces are balanced.
- 6 Equal opposite arrows show matching forces that cancel.
- 7 Balanced forces have equal strength in opposite directions.
- 8 Balanced forces cancel and do not change motion.
- 9 A still box remains still when the forces are balanced.
- 10 Balanced forces act in opposite directions.
- 11 A resting book can still have balanced forces. Gravity pulls down while the table pushes up, and the motion does not change.
- 12 Equal arrows show equal strength, and opposite directions show the forces cancel each other.

## Week 1 Day 3: Unbalanced Forces

## Answers

- 1 B   2 A   3 C   4 True   5 False   6 True   7 unbalanced



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8 stronger

9 yes

10 longer arrow

11 See Explanation

12 See Explanation

**Explanations**

1 A still cart starts moving when the forces do not cancel.

2 The rope moves toward the stronger pull because that side has the unbalanced force.

3 A longer arrow can show that one force is stronger than another.

4 Unbalanced forces can speed up, slow down, or turn an object.

5 Unbalanced forces do not cancel, so one side is stronger and motion can change.

6 Speed is part of motion, so slowing down is a motion change.

7 Unbalanced forces do not cancel, so one side is stronger and motion can change.

8 Motion changes toward the stronger force because that side does not cancel out.

9 Changing direction is a motion change because the path is different after the force acts.

10 The longer arrow shows the stronger force direction.

11 The ball's speed changed. Speed is part of motion, so slowing down is a motion change.

12 Look for unequal arrows or a motion change. If one side is stronger, the forces do not cancel.

**Week 1 Day 4: Planning a Fair Force Test****Answers**

1 A

2 B

3 A

4 True

5 False

6 True

7 variable

8 constants

9 same line

10 strength

11 See Explanation

12 See Explanation

**Explanations**

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