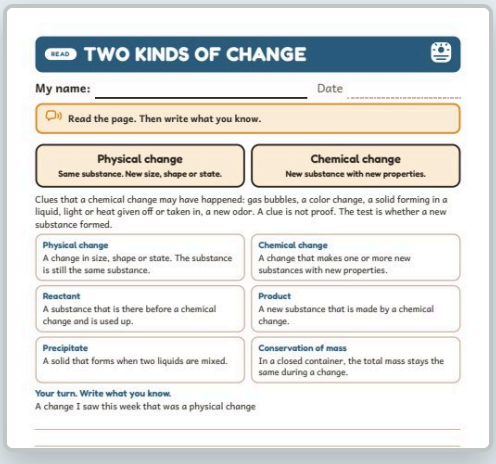
6TH–8TH GRADE · SCIENCE

SORT IT

PHYSICAL AND CHEMICAL CHANGES

Name the clue, fill in the paragraph, follow the mass, read data and draw the graph, sort physical from chemical changes, and write short answers. Answer keys, a tracker and a family page. Print, or type your answers. PDF.


READ TWO KINDS OF CHANGE

My name: _____ Date _____

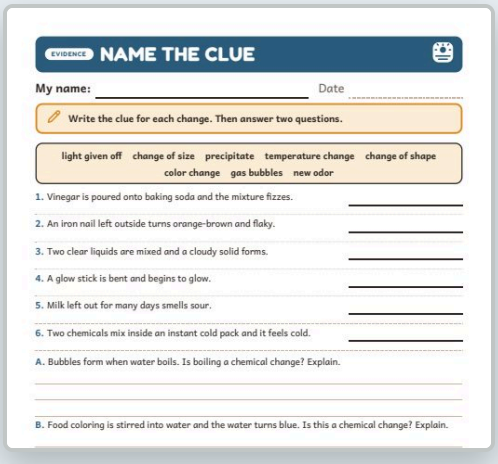
Read the page. Then write what you know.

Physical change	Chemical change
Same substance. New size, shape or state.	New substance with new properties.

Clues that a chemical change may have happened: gas bubbles, a color change, a solid forming in a liquid, light or heat given off or taken in, a new odor. A clue is not proof. The test is whether a new substance formed.

Physical change A change in size, shape or state. The substance is still the same substance.	**Chemical change** A change that makes one or more new substances with new properties.
Reactant A substance that is there before a chemical change and is used up.	**Product** A new substance that is made by a chemical change.
Precipitate A solid that forms when two liquids are mixed.	**Conservation of mass** In a closed container, the total mass stays the same during a change.

Your turn. Write what you know.
A change I saw this week that was a physical change


EVIDENCE NAME THE CLUE

My name: _____ Date _____

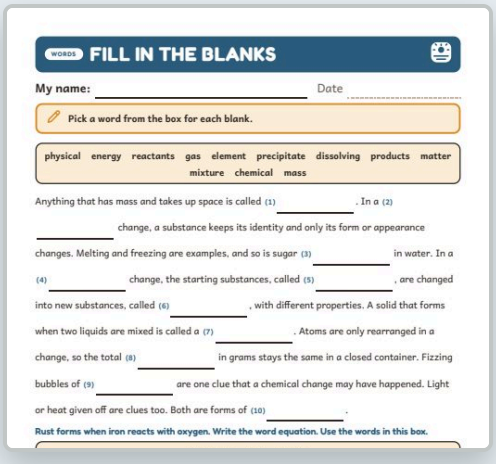
Write the clue for each change. Then answer two questions.

light given off · change of size · precipitate · temperature change · change of shape · color change · gas bubbles · new odor

1. Vinegar is poured onto baking soda and the mixture fizzes. _____
2. An iron nail left outside turns orange-brown and flaky. _____
3. Two clear liquids are mixed and a cloudy solid forms. _____
4. A glow stick is bent and begins to glow. _____
5. Milk left out for many days smells sour. _____
6. Two chemicals mix inside an instant cold pack and it feels cold. _____

A. Bubbles form when water boils. Is boiling a chemical change? Explain.

B. Food coloring is stirred into water and the water turns blue. Is this a chemical change? Explain.


WORDS FILL IN THE BLANKS

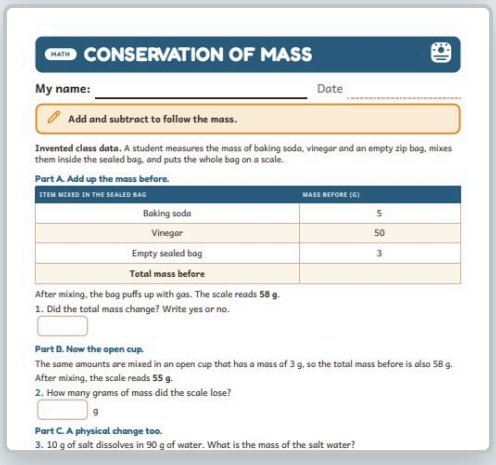
My name: _____ Date _____

Pick a word from the box for each blank.

physical · energy · reactants · gas · element · precipitate · dissolving · products · matter · mixture · chemical · mass

Anything that has mass and takes up space is called (1) _____. In a (2) _____ change, a substance keeps its identity and only its form or appearance changes. Melting and freezing are examples, and so is sugar (3) _____ in water. In a (4) _____ change, the starting substances, called (5) _____, are changed into new substances, called (6) _____, with different properties. A solid that forms when two liquids are mixed is called a (7) _____. Atoms are only rearranged in a change, so the total (8) _____ in grams stays the same in a closed container. Fizzing bubbles of (9) _____ are one clue that a chemical change may have happened. Light or heat given off are clues too. Both are forms of (10) _____.

Rust forms when iron reacts with oxygen. Write the word equation. Use the words in this box.


MATH CONSERVATION OF MASS

My name: _____ Date _____

Add and subtract to follow the mass.

Invented class data. A student measures the mass of baking soda, vinegar and an empty zip bag, mixes them inside the sealed bag, and puts the whole bag on a scale.

Part A. Add up the mass before.

ITEM MIXED IN THE SEALED BAG	MASS BEFORE (G)
Baking soda	5
Vinegar	50
Empty sealed bag	3
Total mass before	

After mixing, the bag puffs up with gas. The scale reads **58 g**.

1. Did the total mass change? Write yes or no. ____

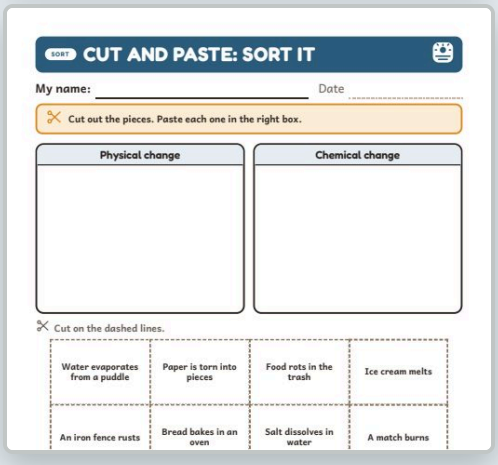
Part B. Now the open cup.

The same amounts are mixed in an open cup that has a mass of 3 g, so the total mass before is also 58 g. After mixing, the scale reads **55 g**.

2. How many grams of mass did the scale lose? ____ g

Part C. A physical change too.

3. 10 g of salt dissolves in 90 g of water. What is the mass of the salt water?


SORT CUT AND PASTE: SORT IT

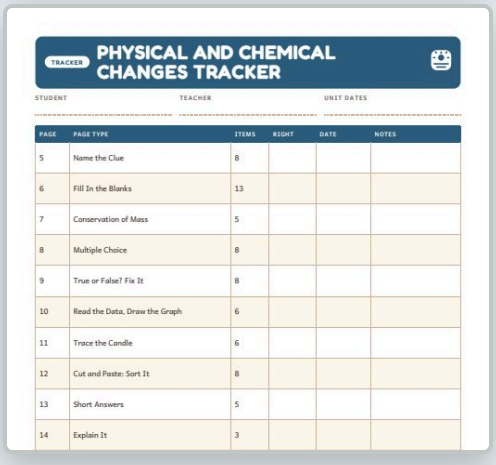
My name: _____ Date _____

Cut out the pieces. Paste each one in the right box.

Physical change	Chemical change

Cut on the dashed lines.

Water evaporates from a puddle	Paper is torn into pieces	Food rots in the trash	Ice cream melts
An iron fence rusts	Bread bakes in an oven	Salt dissolves in water	A match burns


TRACKER PHYSICAL AND CHEMICAL CHANGES TRACKER

STUDENT TEACHER UNIT DATES

PAGE	PAGE TYPE	ITEMS	RIGHT	DATE	NOTES
5	Name the Clue	8			
6	Fill In the Blanks	13			
7	Conservation of Mass	5			
8	Multiple Choice	8			
9	True or False? Fix It	8			
10	Read the Data, Draw the Graph	6			
11	Trace the Candle	6			
12	Cut and Paste: Sort It	8			
13	Short Answers	5			
14	Explain It	3			

25 Pages · **11 Page Types** · **70 Items** · **2 Answer Keys**

BRIGHT PATH SPED

START HERE

QUICK START

One complete kit for a physical and chemical changes unit in grades 6-8. Students read a reference page, name the clues for a chemical change, fill in a paragraph, follow the mass in an experiment, answer questions, read data and draw a graph, trace a burning candle and write short answers — on pages with room to work.

THREE STEPS

1 Teach or review with the reference page

Page 4 has the two kinds of change, the clues, the six key words and a place for the student to write what they know. Read it together or hand it out as the first page.

2 Hand over a page

Every student page opens with a name line and one short instruction. Nothing on it is written for you, so the student can start. Short answers have three or more lines and the explanations have five or six, so the page is the whole workspace.

3 Check it, record it, send it home

The answer keys are pages 15 and 16. Record each page on the tracker (page 17), roll a group up on page 18, and send the family page (20). A filled example is on page 21.

WHICH PAGE, WHEN

WHEN…	USE…
Introducing or reviewing the unit	Two Kinds of Change, page 4 · Name the Clue, page 5
Checking the vocabulary	Fill In the Blanks, page 6 · Multiple Choice, page 8
Connecting it to the math	Conservation of Mass, page 7
Quick check or exit slip	True or False? Fix It, page 9
Reading data and graphing	Read the Data, Draw the Graph, page 10
Hands-on sorting	Cut and Paste, page 12
Writing about science	Trace the Candle, page 11 · Short Answers, page 13 · Explain It, page 14

Everything inside (25 pages)

- **11 student pages** in 11 page types: a reference page, name the clue, fill in, conservation of mass, multiple choice, true or false, data and graph, a candle flow chart, cut and paste and two short-answer pages
- **70 scored items** on 10 pages
- **8 cut-and-paste pieces** on one sort mat
- **2 answer keys, 1 tracker, 1 class grid**, 1 team note, 1 family page, 1 filled example, 1 phrase bank, 1 binder cover and 6 divider tabs

Print or type

Every page prints clean in black and white. The name line, answer boxes, blanks and writing lines are type-in fields in any PDF reader: click one, type, then save. This is a fillable PDF, not a slideshow or a word-processor file. The graph and the cut-and-paste sort are for pencil and scissors.

READ TWO KINDS OF CHANGE

My name: _____ Date .....

Read the page. Then write what you know.

Physical change	Chemical change
Same substance. New size, shape or state.	**New substance with new properties.**

Clues that a chemical change may have happened: gas bubbles, a color change, a solid forming in a liquid, light or heat given off or taken in, a new odor. A clue is not proof. The test is whether a new substance formed.

Physical change
A change in size, shape or state. The substance is still the same substance.

Chemical change
A change that makes one or more new substances with new properties.

Reactant
A substance that is there before a chemical change and is used up.

Product
A new substance that is made by a chemical change.

Precipitate
A solid that forms when two liquids are mixed.

Conservation of mass
In a closed container, the total mass stays the same during a change.

Your turn. Write what you know.

A change I saw this week that was a physical change

One question I still have about physical and chemical changes

EVIDENCE

NAME THE CLUE

My name: _____ Date .....

Write the clue for each change. Then answer two questions.

light given off **change of size** **precipitate** **temperature change** **change of shape**
color change **gas bubbles** **new odor**

1. Vinegar is poured onto baking soda and the mixture fizzes. _____

2. An iron nail left outside turns orange-brown and flaky. _____

3. Two clear liquids are mixed and a cloudy solid forms. _____

4. A glow stick is bent and begins to glow. _____

5. Milk left out for many days smells sour. _____

6. Two chemicals mix inside an instant cold pack and it feels cold. _____

A. Bubbles form when water boils. Is boiling a chemical change? Explain.

B. Food coloring is stirred into water and the water turns blue. Is this a chemical change? Explain.

WORDS FILL IN THE BLANKS

My name: _____ Date .....

Pick a word from the box for each blank.

physical	**energy**	**reactants**	**gas**	**element**	**precipitate**	**dissolving**	**products**	**matter**
mixture	**chemical**	**mass**						

Anything that has mass and takes up space is called (1) _____. In a (2) _____ change, a substance keeps its identity and only its form or appearance changes. Melting and freezing are examples, and so is sugar (3) _____ in water. In a (4) _____ change, the starting substances, called (5) _____, are changed into new substances, called (6) _____, with different properties. A solid that forms when two liquids are mixed is called a (7) _____. Atoms are only rearranged in a change, so the total (8) _____ in grams stays the same in a closed container. Fizzing bubbles of (9) _____ are one clue that a chemical change may have happened. Light or heat given off are clues too. Both are forms of (10) _____.

Rust forms when iron reacts with oxygen. Write the word equation. Use the words in this box.

iron oxide	**iron**	**oxygen**		

[ ] + [ ] → [ ]

Reactants (go in) **Product (comes out)**

A. Choose one word from the first box that you did not use. Write what it means.

MATH CONSERVATION OF MASS

My name: _____ Date .....

Add and subtract to follow the mass.

Invented class data. A student measures the mass of baking soda, vinegar and an empty zip bag, mixes them inside the sealed bag, and puts the whole bag on a scale.

Part A. Add up the mass before.

ITEM MIXED IN THE SEALED BAG	MASS BEFORE (G)
Baking soda	5
Vinegar	50
Empty sealed bag	3
Total mass before	

After mixing, the bag puffs up with gas. The scale reads **58 g**.

1. Did the total mass change? Write yes or no.

Part B. Now the open cup.

The same amounts are mixed in an open cup that has a mass of 3 g, so the total mass before is also 58 g. After mixing, the scale reads **55 g**.

2. How many grams of mass did the scale lose?

g

Part C. A physical change too.

3. 10 g of salt dissolves in 90 g of water. What is the mass of the salt water?

g

Part D. Explain it.

4. Why did the open cup lose mass but the sealed bag did not? Use the word gas.

SORT CUT AND PASTE: SORT IT

My name: _____ Date .....

Cut out the pieces. Paste each one in the right box.

Physical change	Chemical change

Cut on the dashed lines.

Water evaporates from a puddle	Paper is torn into pieces	Food rots in the trash	Ice cream melts
An iron fence rusts	Bread bakes in an oven	Salt dissolves in water	A match burns

1. Pick one piece. Explain how you know which box it goes in.

TRACKER

PHYSICAL AND CHEMICAL CHANGES TRACKER

STUDENT _____ TEACHER _____ UNIT DATES _____

PAGE	PAGE TYPE	ITEMS	RIGHT	DATE	NOTES
5	Name the Clue	8			
6	Fill In the Blanks	13			
7	Conservation of Mass	5			
8	Multiple Choice	8			
9	True or False? Fix It	8			
10	Read the Data, Draw the Graph	6			
11	Trace the Candle	6			
12	Cut and Paste: Sort It	8			
13	Short Answers	5			
14	Explain It	3			

How to fill this in

Write how many items the student got right and the date. A written answer counts as one item when it makes every point in the key (pages 15 and 16). A blank means not tried yet, never wrong. There are 70 items on the 10 pages above; the reference page (4) is not scored. Filled example: page 21.

STANDARD OR UNIT GOAL (YOUR OWN WORDING)

EXAMPLE JORDAN'S TRACKER

Jordan T. is invented; nothing on this page describes a real student. The blank tracker is on page 17.

STUDENT **Jordan T. (an invented student)**

TEACHER **Ms. Reyes (invented)**

UNIT DATES **October**

PAGE	PAGE TYPE	ITEMS	RIGHT	DATE	NOTES
5	Name the Clue	8	7	10/12	Mixed up gas and odor
6	Fill In the Blanks	13	11	10/13	Used a spare word twice
7	Conservation of Mass	5	5	10/14	–
8	Multiple Choice	8	7	10/15	Missed number 7
9	True or False? Fix It	8	8	10/16	–
10	Read the Data, Draw the Graph	6	–	–	–
11	Trace the Candle	6	–	–	–
12	Cut and Paste: Sort It	8	7	10/19	One piece in the wrong box
13	Short Answers	5	–	–	–
14	Explain It	3	–	–	–

How to read it

Jordan T. has done **6 of 10** scored pages and got **45 of 50** items right. **2** pages were all right and **5** items were missed across 4 pages. Every number here comes from the table above.

The family note this tracker would produce

"This month Jordan finished 6 pages and got 45 of 50 items right. The next thing to practice is naming the clue for a chemical change and the word precipitate." — every number in it is a row of the table above.

What the table points to

4 pages carry a note and each one is short of full. Pages left blank (4 of them) are not tried yet, never wrong. The two writing pages, Short Answers and Explain It, are among them, so they are the next step.

THANK YOU

BEFORE YOU GO

THANK YOU FOR USING THIS RESOURCE

Built for the teacher whose students each need a different amount of support reading, writing and reasoning about science. If this helped, leaving feedback on TPT helps other teachers find it.

Everything inside, one more time

- **11 student pages** in 11 page types, **70 scored items**, every answer read from the same lists that draw the pages.
- **8 multiple-choice questions**, **8 true-or-false statements**, **8 cut-and-paste pieces** and **2 answer keys**.
- **1 tracker, 1 class grid, 1 team note, 1 family page, 1 filled example, 1 phrase bank** (15 starters), **1 binder cover** and divider tabs.

No real student anywhere in this file

The filled example on page 21 names "Jordan T.," an invented student used only to show how the tracker fills in. The experiment on page 10 is invented class data. No table, note or score anywhere in this resource describes a real child, and nothing here is a clinical judgment, an eligibility timeline, or a medical claim of any kind. Once you fill in a real student's name, the tracker, class grid and team note (pages 17, 18 and 19) do carry real information — keep completed pages secure the same way you would any other record.

Something missing or wrong?

Please use the **Ask a Question** tab on the product page first — every question is read, and a fix to the file is a free update you re-download from **My Purchases**.

WHAT'S NEXT FROM THIS STORE

More science and vocabulary for the same classroom, including lower-reading-level sets for students who need them.



Content Area Vocabulary: Science and Social Studies
Progress-monitoring probes for science and social studies words, grades 4-6.



Push and Pull Worksheets
A lower-reading-level science set: circle push or pull, sort and fill in, K-2.



Landforms and Bodies of Water Worksheets
A lower-reading-level earth science set: anchor chart, circle, odd word, cut and paste, K-2.

Click **Follow** on the store page and TPT will email you when new products go up.

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