Lesson Plan: Changes in Matter

Grade Level: 3
Subject: Physical Science
Duration: 45–60 min
Concepts of Physical Science: Develop an understanding of the interactions between matter and energy, including physical, chemical, and nuclear changes, and the effects of these interactions on physical systems.

Learning Objectives

By the end of this lesson, students will be able to:

- **Define** matter and the three states of matter: solid, liquid, and gas
- **Distinguish** between physical changes and chemical changes using everyday examples

- Printed copies of the Study Guide (https://newpathworksheets.com/api/guide/study-guide-science-grade-3-changes-in-matter.pdf)
- Vocabulary matching worksheet (https://newpathworksheets.com/api/vocabulary/vocabulary-science-grade-3-changes-in-matter-1.pdf)
- Changes in Matter Worksheet 1 (https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-changes-in-matter-1.pdf)

- Changes in Matter Quiz (https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-changes-in-matter-0.pdf)

Lesson Procedure

Step 1: Introduction (5 minutes)

- Ask the class: "What happens to an ice cube if you leave it on the sidewalk? Is it still water?"
- Discuss student answers to introduce the concept that matter can change states (physical change).
- Show the first page of the Study Guide to visualize physical changes like chopping wood. (https://newpathworksheets.com/api/guide/study-guide-science-grade-3-changes-in-matter.pdf)

Step 2: Direct Instruction (15 minutes)

Step 4: Independent Practice (10 minutes)

- Hand out Worksheet 1 for individual practice. (https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-changes-in-matter-1.pdf)
- Students will answer multiple-choice questions to identify examples of chemical vs. physical changes.
- Circulate to assist students who might struggle distinguishing between the two types of changes.

Step 5: Assessment (10 minutes)

- Administer the 10-question Quiz (Worksheet 0) to evaluate understanding. (https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-changes-in-matter-0.pdf)
- Collect the quizzes to check for mastery of the learning objectives.

Differentiation Strategies

For advanced learners:

- Ask students to create a T-chart listing 5 new examples of physical changes and 5 examples of chemical changes not found in the text.

For learners needing support:

- Study Guide PDF (https://newpathworksheets.com/api/guide/study-guide-science-grade-3-changes-in-matter.pdf)
- Worksheet PDF 0 (https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-changes-in-matter-0.pdf)
- Worksheet PDF 1 (https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-changes-in-matter-1.pdf)
- Worksheet PDF 2 (https://newpathworksheets.com/api/worksheet/worksheet-science-grade-3-changes-in-matter-2.pdf)

- Vocabulary PDF 1 (https://newpathworksheets.com/api/vocabulary/vocabulary-science-grade-3-changes-in-matter-1.pdf)

PREVIEW

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CHANGES IN MATTER

A **physical change** is when something changes its appearance without changing its makeup. An example of a **physical change** is chopping wood. An example of a **chemical change** is burning the wood.

became an invisible gas in the air. When **matter** is cooled, it can also cause a change in states. An ice cube is a solid that when cooled becomes water which is a **liquid**. When water is in a **liquid** state and is heated, the water will soon evaporate and become a gas.

PREVIEW

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Lesson Checkpoint: What is a mixture?

A **solution** is a type of mixture. A **solution** is when one or more substances are dissolved into another. An example of a **solution** is dissolving sugar into a glass of water. **Dissolve** means to break into particles so small that we can no longer see the particles. The dissolved particles seem to become part of the liquid.

Sometimes you can separate parts of a **solution** just like we can do with a **mixture**. For example, if you boil salt water, water will evaporate and salt will remain in the pan. Sometimes, however, you cannot separate parts that make up a solution.

When you bite a piece of food, chew the food, and then swallow the food, it is an example of a chemical change because your saliva breaks down the pieces of food so you can swallow and digest them. The saliva creates a chemical change. **Chemical changes** supply our bodies with energy which we need to grow and survive.

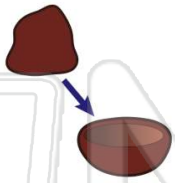
Changes in matter

Sci C

Name_____ Class_____ Date_____

1 A _____ is when something **changes its appearance or shape** without changing what it is made of.

A physical change
B chemical change
C no change
D mixture



2 By heating or cooling, _____ can **change** from one state to another state.

A matter
B grass
C humans
D soil

3 **Matter** can change from one state to another and still be the same kind of matter. For example, ice and water are **different states** of the same kind of matter, which is _____.

4 There are several ways matter can change states. One is when high temperatures cause water to **evaporate**: water changes from a liquid to a _____.

5

7

A solid
B liquid
C gas
D chemical

C evaporate
D harden

9 Many different kinds of **matter** can be **combined**, without changing chemically, to form a _____.

A solution
B nutrient
C chemical reaction
D mixture

10 When two or more kinds of **matter** are combined to form a **mixture**, even though they are being mixed with something else, _____.

A some of the matter changes to a different kind
B the kinds of matter do not change
C the kind of matter changes
D the amount of matter changes

Changes in matter

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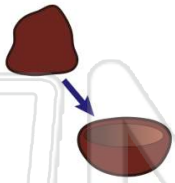

A

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Changes in matter

Sci C

Name_____ Class_____ Date_____

1 **Different** kinds of matter can _____.

A always double in size
B never be separated from a mixture
C sometimes be separated from a mixture
D never be changed in any way

2 A **solution** is a type of mixture. A **solution** is when one or more substances is dissolved into another. What is an example of a **solution**?

A milk and cereal
B different colored marbles together
C sugar dissolved in water
D wearing two unmatched socks

3 **Dissolve** means to break into particles so small that _____.

A we can no longer see the particles
B we can still see the particles

4 Carbon dioxide is mixed with other substances to make soda. When you open a soda can, that POP you hear is the sound of the **carbon dioxide** _____ escaping from the can.

5

7

C physical change
D chemical change

C stays the same kind of matter
D changes into another kind of matter

9 When you cook, you create **chemical changes**. When you mix the ingredients to a cake together and then bake the cake, what takes place?

A a chemical change
B a physical change
C no change
D a change in mixture

10 When matter has gone through a **chemical change**, it usually **cannot** be _____.

A cooled again
B heated again
C changed back into its original matter
D seen without a microscope

Changes in matter

Sci C

Name_____ Class_____ Date_____

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Changes in matter

Sci C

Name_____ Class_____ Date_____

1 **Chewing** and **digesting** food is an example of _____.

A a change in temperature
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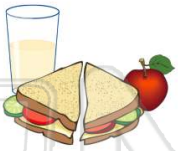
C a chemical change
D no kind of change



2 **Chemical changes** supply our bodies with _____, which we need to grow and survive.

A energy
B blood
C a heart
D healthy skin

3 Which is an example of a **chemical change**?

A cutting out a coupon
B making a sculpture out of ice
C gas burning in a car

4 An example of a **physical change** is chopping wood. Which is an example of a **chemical change**?

A burning the wood
B building with the wood

5

7

B a mixture
C a solution
D a chemical reaction

C no change
D physical reaction

9 If the **effect** is that the water **evaporates**, what is the **cause**?

A The water was melted.
B The water was boiled.
C The water was clean.
D The water was frozen.

10 If an ice cube is placed on a **hot** sidewalk, what is the **result**?

A The ice cube melts and changes into a liquid.
B The ice cube remains frozen all day.
C The ice cube stays frozen and becomes a gas.
D The ice cube melts and changes into a solid.

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PREVIEW

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5

B

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A

Changes in matter

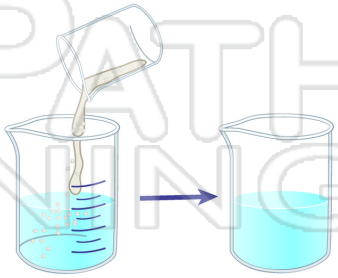
Sci C

Name_____ Class_____ Date_____

Match each of the following terms to its definition:

Physical change	Mixture
Solution	Dissolve

1. - to break into particles so small so that the particles cannot be seen



2. more
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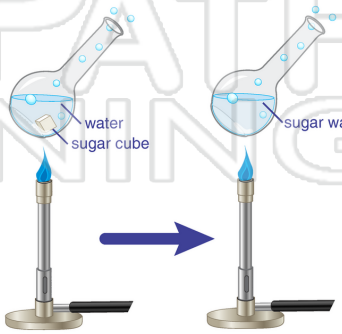
3. state i
make

4. - the combination of a solute and a solvent in which the solute is totally dissolved



Changes in matter

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Physical change	Mixture
Solution	Dissolve

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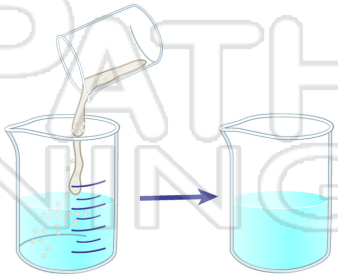

2. mix
mater
chemi
of two

3. phy
state i
make

4. solution - the combination of a solute and a solvent in which the solute is totally dissolved