



Directions:

- Type the following link in the address bar: http://www.chem4kids.com/files/matter_intro.html
- Make sure you are in the Matter section and read the information.
- As you get to the bottom of a page, click next page in Matter to go on to the next.
- Answer the following questions as you read- they are in order:

1) What is the name of the 5th state of matter that we did not study? _____

2) Describe or define this 5th state of matter as best as you can. It gets easier towards the end of the description.

3) What needs to happen for matter to change states? (Use the Topics Column: Phase Change I)

- All matter can move from one **state** to another. It may require extreme _____ or extreme _____

- The text says, "**Phase changes** happen when you reach certain special points."

- What did the text mean by certain special points? _____

4) What are the chemistry terms for the following:

Solid to a Liquid	=	_____
Liquid to a Solid	=	_____
Liquid to a Gas	=	_____
Gas to a Liquid	=	_____
Solid to a Gas	=	_____
Gas to a Solid	=	_____



5) Play the video on the Aurora Borealis. <https://youtu.be/PaSFAbATPvk>

What state of matter is the aurora? _____

6) What is the difference between a physical and a chemical change of matter? (Use the Topics Column: Chem-Phys)

- Physical changes are usually about physical _____ of _____ or _____ changes.

- Write one example of a physical change. _____

- Chemical changes happen on a _____ level when you have two or more _____ that interact. Chemical changes happen when _____ are broken or created during chemical _____

- Write one example of a chemical change. _____

- Chemical Reactions (changes) occur when two or more _____ interact and the molecules change. Bonds between _____ are broken and created to form new _____

7) What is a heterogeneous mixture? (Use the Topics Column: Solids)

- According to the text, heterogeneous mixture mixtures have different concentrations of compounds in different areas of the mixture. Please rewrite this so it is easier to understand.

8) What is a crystal? (Use the Topics Column: Solids)

- A crystal is a form of where the are arranged in a very specific order. The atoms are arranged in a regular repeating called a

9) What is a solution? (Use the Topics Column: Liquids)

- Different types of molecules in a liquid, it is called a

9) What is happening when something is compressed? (Use the Topics Column: Liquids)

- When you compress something, you take a certain amount of and it into a smaller or . You force the closer together.

10) Where would we find compressed air? _____

13) What is the difference between a vapor and a gas? (Use the Topics Column: Gases)

- Vapor and mean the thing. The word is used to describe gases that are usually at room

15) What state of matter was created in 1995? (Use the Topics Column: BE Condensate)

16) Why do we say this new state of matter can form a “super atom”? (Use the Topics Column: BE Condensate)

17) What is the difference between a mixture and solution? (Use the Topics Column: Mixtures I)

are absolutely everywhere you look. Most things in nature are . Mixtures are about **properties**, not chemical ones. are also mixtures, but all of the are evenly spread out through the system.

19) Fill in the chart with the missing information: (Use the Topics Column: Solutions I)

SOLUTION	EXAMPLE
Gas-Gas	<input type="text"/>
Gas-Liquid	<input type="text"/>
Gas-Solid	<input type="text"/>
Liquid-Liquid	<input type="text"/>
Liquid-Solid	<input type="text"/>
Solid-Solid	<input type="text"/>



20) What is a colloid? (Use the Topics Column: Solutions I)

Colloids are with bigger particles. are usually foggy or milky when you look at them. In fact, milk is an **colloid**.



Now take some quizzes:

- 1) Type the following into the address bar: http://www.chem4kids.com/extras/quiz_matterintro/
(General Matter Quiz) Score: ____/10
- 2) Type the following into the address bar: http://www.chem4kids.com/extras/quiz_mattermix/index.html
(Mixtures Quiz) Score: ____/10
- 3) Type the following into the address bar: http://www.chem4kids.com/extras/quiz_mattersolution/index.html
(Solutions Quiz) Score: ____/10