

Go to BBC Bitesize Matter link on Nechita Science: Chemistry Page. Start with changing states. Each has an activity a reading and a quiz. You will do all three in that order. Select Play and follow the directions. Answer the questions as you go through.

- 1) At what temperature did your ice turn to water? _____ Does Ice take up more volume or less than water? _____ (look at the demonstration a couple of times)
- 2) What happens to the water when it reaches 100°C? _____
- 3) What happens when you heat the steam above 100°C _____.
- 4) Explain why this happens? _____
- 5) Go back to the reading section. What are the three most common states of matter? _____
 _____ and _____. Choose next.
- 6) How are materials changed from one state to another? _____ and _____.
- 7) Heating: Changing from a solid to a liquid is called _____. Changing from a liquid to a gas is called _____.
- 8) Cooling: Changing from a gas to a liquid is called _____. Changing from a liquid to a solid is called _____.
- 9) Explain in detail the A, B, C & D of the water cycle and what it has to do with the changing states of matter _____

- 10) If the rain fell on a cold high mountain what other change of state would happen? _____
- 11) Take the quiz. What is your score. _____ Take the quiz till you get all of them correct.

Go back to Materials, choose Gases, liquids and solids. Do the sort. What went in each category?

- 12) Experiment with the liquids and gases. a) What happened when you heated the liquid? b) Where did the liquid go?
 a) _____ b) _____
- 13) When you cooled the liquid back down describe what happened. _____

- 14) Why was the liquid in both beakers now? _____

15) What happens if you remove the lids from the beakers after you have heated the liquid? _____
_____ Explain why this happens? _____

Go to the reading for Solids, Liquids and Gases.

16) Solids liquids and gases have different properties. Liquids and gases _____ . Solids keep their _____ and gases can be _____.

17) **Gases** are often _____. They do not keep their _____ and they spread out and change their shape to _____ whatever container they are in. Cooling a gas turns it into a _____.

18) Describe the properties of a liquid _____

19) Describe the properties of a solid _____

20) Take the quiz. What is your first score? _____ Take it till you are at 100% _____

21) Go to different changes. This is about physical and chemical changes.

22) Which substance dissolved in water _____. Where does it go? _____

23) Which other substances dissolve in water? _____

24) Experiment with reversing (going backwards). Can you reverse the melting of ice? _____

25) Can you reverse the cooking of an egg? _____. Can you get the salt and sand back out of the water _____ . What were the two ways you could do this? _____ / _____.

Is dissolving salt or mixing sand with water reversible or not (circle one).

26) Go to the reading. A change is irreversible if it _____ be changed back again. Give an example _____.

27) In an irreversible change _____ materials are always formed.

What are the three ways given that an irreversible reaction might take place? heating and _____ and _____. What is an example of each? _____ and _____

28) Reversible changes _____ be changed back again.

29) List 4 examples of reversible changes _____ and _____

30) Dissolving: Substances that dissolve in water often become _____. Which means it looks like it disappears. Substances that will dissolve are called _____ substances.

31) What are 4 ways to separate mixtures _____

32) Take the quiz. What was your first score _____. Take it till it is 100%. Discuss wrong answers with your partners.

33) Finished: Go to Keeping warm. Fill out the table for polystyrene and one other insulator. Explain how you know which worked best? _____

34) How long did it take each to come to room temperature? _____

35) What did you learn you didn't know _____