

Chemistry: Part 1

Unit Topics

These are the topics we've covered so far in the course. They are the topics that will be on your quiz this week!

How do we do science?

- Step 1: See something cool
- Step 2: Guess how it works
- Step 3: Experiment to see if you're right. If not, go back to step 2.

Element of the day:

- What is one interesting thing about each of the elements of the day?

Describing Matter

How can we describe matter?

- Identify and describe things using their physical and chemical properties

Did it react?

- Identify if a physical change or chemical change (reaction) has occurred.

Building Blocks of the Universe

What is matter?

- How do we define matter?
- What are some examples of things that aren't matter?

What is matter made of?

- Understand the parts of the atom and their charges: proton, neutron, electron, nucleus

How small is an atom?

- If you increased the size of each atom in a grapefruit to the size of a blueberry, how big would the grapefruit be?
- How big is the nucleus in the atom? What makes up most of the mass of the atom? What makes up most of the space in the atom?

How come we organize the elements in the periodic table?

- What does the atomic number and atomic mass represent?
- Where can you find metals, non-metals and metalloids on the periodic table?
- What state of matter are most elements on the periodic table?

Where do the elements come from?

- What elements make up most of the universe?
- How are the light and heavy elements formed?

Chemistry Part 1: Review questions

1. Describe 5 physical properties of an egg being fried

- 1.
- 2.
- 3.
- 4.
- 5.



2. Is an egg being fried a physical or chemical change? Describe how you know. State at least 3 reasons.

- 1.
- 2.
- 3.

3. Identify the following as a physical or chemical change:

- | | |
|-------------------------------------|--|
| a. Shattering Glass with a baseball | f. placing the 'diamond' in oil, making it 'disappear' |
| b. Corroding (rusting) Metal | g. cutting a piece of paper in half |
| c. Fireworks Exploding | h. the shell of an egg dissolving in vinegar |
| d. Lighting a match | i. an ice cube melting |
| e. Baking a cake | |

4. What is matter? (2 things)

- | | |
|----|----|
| 1. | 2. |
|----|----|

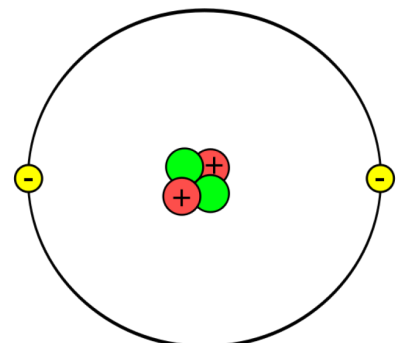
5. Give 3 examples of things that are matter and 3 examples of things that aren't matter.

Matter

Not Matter

- | | |
|----|----|
| 1. | 1. |
| 2. | 2. |
| 3. | 3. |

6. Label the 3 main parts of the atom below. Identify the charge of each part.



7. What does the nucleus of the atom contain?

8. Complete the following table using your periodic table.

Chemical Symbol	Element name	Atomic Number	Atomic mass	Solid, liquid or gas at room temperature?	Metal, non-metal or metalloid?
H					
Te					
Ne					
Cd					
W					
V					
	Sodium				
	Sulfur				
	Tin				
	Polonium				
	Carbon				
	Xenon				

9. Are the following statements true or false? If they are false, correct them.

- The atomic number is equal to the number of neutrons in an atom
- Most of the elements on the periodic table are liquids at room temperature
- Most of the elements on the periodic table are metals
- Metals are found on the right side of the periodic table
- Groups in the periodic table share similar properties
- Most of the space in the atom is taken up by the nucleus
- Most of the mass of the atom is in the nucleus
- The most abundant element in the universe is hydrogen

10. Describe where the light and heavy elements are created.

Light elements:

Heavy elements: