UNIT 1: Scientific Knowledge

**3.- Physics and Chemistry**

a) Complete this chart:

|  |  |
| --- | --- |
| Word | Translation |
| Aim to |  |
| Matter |  |
| Found |  |
| Focus on |  |
| Research |  |
| Melt |  |
| Physical |  |
| Physics |  |
| Physicist |  |
| Chemical |  |
| Chemistry |  |
| Chemist |  |
| Change |  |
| Therefore |  |
| Hydrogen |  |
| oxygen |  |
|  |  |

b) Listen to this audio and fill in the blanks:

Physics and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are two scientific disciplines that \_\_\_\_\_\_ \_\_\_\_\_\_\_ **explain changes in matter found all around us.** However, each science focuses \_\_\_\_\_ changes in different characteristics.

To do this, they \_\_\_\_\_\_\_\_\_\_\_\_\_ their research on defined portions of matter known as **matter systems** or, if they have defined limits, **bodies.** \_\_\_\_\_\_\_\_ systems may be \_\_\_\_\_ small \_\_\_\_ an atom, or as \_\_\_\_\_ as the entire universe.

Physical and chemical changes

When ice melts the substance that we are observing throughout the process is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the same: \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Physical changes, or physical phenomena, are those in which the \_\_\_\_\_\_\_\_\_\_\_ of the substance does not change.**

Therefore, after a physical change, the same substances that were before the \_\_\_\_\_\_\_\_\_\_\_\_\_ can be seen.

However, if an electric current is passed through water, substances that are different from the initial ones ( \_\_\_\_\_\_\_\_\_\_\_ and oxygen) are obtained.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ changes, or chemical phenomena, are those in which nature of substance changes.**

After a chemical change, different substances to the initial ones can be \_\_\_\_\_\_\_\_\_\_\_\_.

c) Activities

1.- What is a physical change?

What is a chemical change?

2.- Indicate whether the following changes are physical or chemical:

a) Water that freezes­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b) Iron that rusts.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c) An object falls toward the floor.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

d) Alcohol evaporates.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

e) A jar breaks.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

f) Wine turns to vinegar.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

g) Wood that burns\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

h) Turning a light on in a room \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3.- Classify the following changes into physical or chemical changes:

a)Creation of a rainbow.

b) Copper is obtained from copper oxide.

c) Melting iron.

d) Solidifying ethanol.

e) Creation of clouds.

f) A glass bottle breaking.

g) Ripening fruit.

h) Turning a light on in a room.

i) Toast burning

4.- Write down all new words and look into the dictionary.