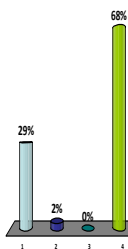


Is chemistry the study of the submicroscopic, the microscopic, or the macroscopic?

1. Submicroscopic, because it deals with atoms and molecules, which can't be seen with a microscope.
2. Microscopic, because it pertains to the formation of crystals.
3. Macroscopic, because it deals with powders, liquids, and gases that fill beakers and flasks.
4. All of these answers, because most everything is made of atoms and molecules.



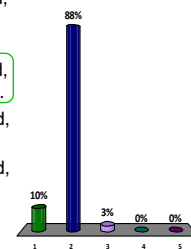
A TV screen looked at from a distance appears as a smooth continuous flow of images. Up close, however, we see this is an illusion. What really exists are a series of tiny dots (pixels). This is similar to a chemist's view of matter in that

1. the fundamental particles of matter can also be seen when looked at closely with a magnifying glass.
2. on the submicroscopic level, chemists find that matter is made of extremely small particles, such as atoms and molecules.
3. anything that a chemist can see, touch, hear, smell, or taste is an illusion.
4. elements are made up of only three basic types of matter.



What is happening?

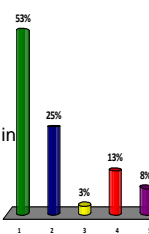
1. The sample is being cooled, and the material is condensing
2. The sample is being cooled, and the material is freezing.
3. The sample is being heated, and the material is boiling
4. The sample is being heated, and the material is melting.
5. The sample is unchanged



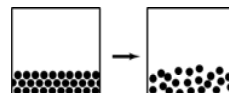
Physical or chemical change?



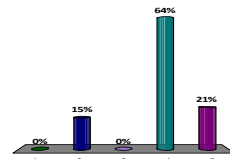
1. Chemical, because the atoms are connected differently.
2. Chemical, because of the formation of elements
3. None of these choices
4. Physical, because of a change in phase
5. Physical, because a new material has been formed



What type of phase change does the following figure best describe?

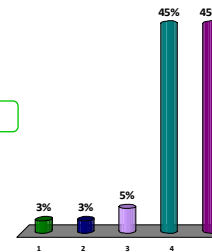


1. Condensation
2. Evaporation
3. Freezing
4. Melting
5. Sublimation



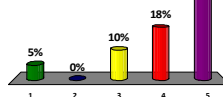
The phase in which atoms and molecules no longer move is the

1. gas phase
2. liquid phase
3. plasma phase
4. solid phase
5. none of these choices



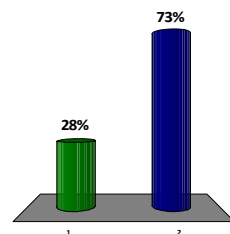
What is the gas found within a bubble of boiling water?

1. Air
2. Chlorine from the water
3. Hydrogen
4. Oxygen
5. Water vapor



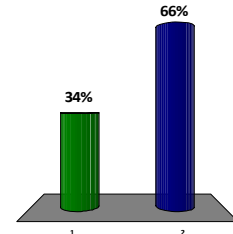
This change is chemical or physical: water begins to boil

1. Chemical
2. Physical



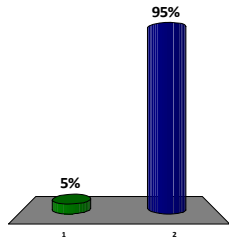
This change is chemical or physical: grass growing

1. Chemical
2. Physical



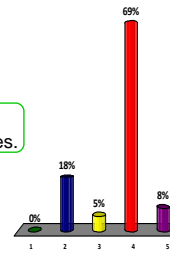
This change is chemical or physical:
rock is crushed to gravel

1. Chemical
2. Physical

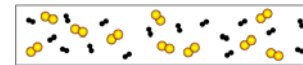


What chemical change occurs when a wax candle burns?

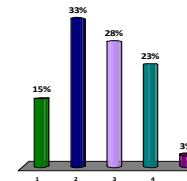
1. The wax within the wick is heated to about 600°C.
2. The wax near the flame melts.
3. The molten wax is pulled upwards through the wick.
4. The heated wax molecules combine with oxygen molecules.
5. You can see light from the flame.



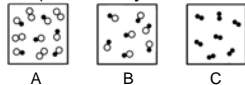
The image shown represents which kind of matter contained in the box?



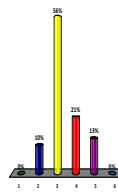
1. An element
2. A mixture
3. A compound
4. All of these choices
5. None of these choices



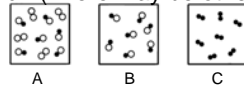
Which of the following boxes contains an element? (There may be other stuff too)



1. Box A
2. Box B
3. Box C
4. Both A and C contain elements
5. Both B and C contain elements
6. Both A and B contain elements



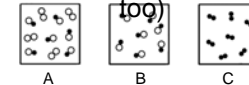
Which of the following boxes contains a compound? (There may be other stuff too)



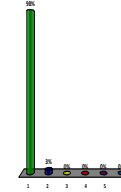
1. Box A
2. Box B
3. Box C
4. Both A and C contain compounds
5. Both B and C contain compounds
6. Both A and B contain compounds



Which of the following boxes contains a mixture? (There may be other stuff too)

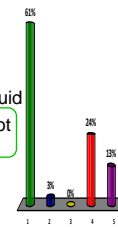


1. Box A
2. Box B
3. Box C
4. Both A and C contain mixtures
5. Both B and C contain mixtures
6. Both A and B contain mixtures



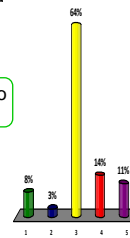
What is the difference between a compound and a mixture?

1. One consists of atoms from different elements; the other does not
2. One has the particles evenly distributed, the other needs to be stirred
3. One is a solid, and the other is a liquid
4. The components of a mixture are not chemically bonded together
5. The way in which their atoms are bonded together



Why can't the elements of a compound be separated from one another by physical means?

1. Elements found within a compound tend to be inert.
2. Elements tend not to be soluble in water.
3. Their atoms are too tightly bound to one another.
4. They are too homogenous when found within a compound.
5. They are too small to be divided.



Oxygen atoms are part of water molecules. Does this mean that oxygen, O₂, and water, H₂O, have similar properties?

1. No, but their similar properties are only a coincidence.
2. No, the properties of water are uniquely different from the properties of the elements from which it is composed.
3. Of course, that's why we can breathe water or air.
4. Yes, and this explains how fish are able to breathe water.
5. Yes, whenever an atom is part of a compound, the properties of each will be similar.

