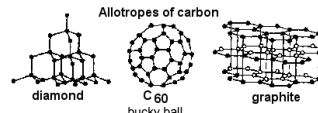


Page 25 Lesson 4

3. Diamonds are made of only carbon atoms.

Three forms of carbon are diamond, graphite, and soot. Since all are forms of the element carbon, they each have the same chemical symbol C.



Allotropes of carbon

diamond C₆₀ bucky ball graphite

In a diamond the carbon atoms are bonded to one another producing a three dimensional network solid. Each carbon atom is bonded to four other atoms throughout the crystal lattice.

Diamond is a poor conductor of electricity.

Diamond is the hardest substance known and is used to cut glass and in industrial drill bits.

Graphite is also made of carbon atoms. Graphite consists of carbon atoms bonded together in a layers made up of hexagons, like chicken wire.

Coal is also made of carbon atoms plus hydrogen, nitrogen, and oxygen in a very complex structure.

http://www.chemicalformula.org/diamond

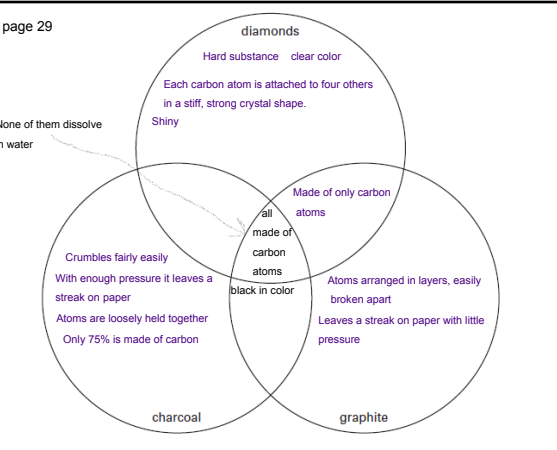
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Properties of Matter: The categories we use to describe substances/matter. They do not change without changing the substance.

Properties of Matter		Not Properties of Matter	
Texture	Density	Hardness	
	Mass	Luster/Shine	Size
Color	Bouyancy	Shape	Streak
	Magnetism	Flexibility	Weight

Nov 16-8:07 PM

page 29



None of them dissolve in water

Nov 23-1:26 PM

page 30

- Describe how atoms are arranged differently in graphite, charcoal, and diamond.
 - Graphite atoms are arranged in layers, like one sheet laid over another sheet.
 - Charcoal is only about 75% carbon atoms and those atoms are loosely attached in no particular order.
 - In diamonds, the carbon atoms are strongly attached to four other carbon atoms in a stiff/rigid 3 dimensional shape.
- What makes carbon an element?
 - There is nothing in it but atoms of carbon in the element of carbon.

Nov 23-1:26 PM