

**DELHI MODERN PUBLIC SCHOOL**

**CLASS:6TH**

**SUBJECT : SCIENCE**

**LESSON NO 4**

## **SORTING MATERIALS INTO GROUPS**

### **DAY 1**

#### **Reading of the lesson**

##### **SUBTOPIC : SORTING**

Sorting involves finding things that are same or alike, and grouping them in a systematic manner for eg a group of animals can be classified on the basis of their color or type of animal.

Eg 2 :we can classify books on the basis of subjects and author. Books of the same subject and author are placed in same group and books with different subject and authors are placed in another group.

#### **THIS IS KNOWN AS SORTING.**

Sorting makes easier for us to find things .If we keep the things randomly we cant find them.

#### **SORTING ON THE BASIS OF MATERIALS THINGS ARE MADE OF**

We can group things on the basis of materials they are made of. Different materials such as plastic, steel wood glass and soil are used to make things. eg plastic can be used to make toys, bags, chairs and tables

We can make objects from more than one material. for eg car can be made from steel ,aluminium, copper, glass and rubber

**MAKE A LIST OF OBJECTS THAT COULD AND COULD NOT BE SORTED ON YOUR FAIR NOTEBOOKS**

## **DAY 2**

### **MATTER**

Anything that has mass and occupies space is called matter. Examples of matter. An apple, a person, a table, air, water etc. you are an excellent example of matter, you have mass and you occupy space.

MASS (it is the amount of substance that makes up an object. It is measured in kilograms.)

### **COMPOSITION OF MATTER**

Matter has three states solid state, liquid state and gaseous state. Matter is made up of atoms and molecules. The tiny particles called atoms are the building blocks of all matter. Atoms can be combined with other atoms to form molecules. For eg if we cut a piece of copper wire into smaller pieces, there will be a point beyond which it cannot be cut any further. This smallest piece is copper atom.

ELEMENTS: A substance that cannot be broken down into any other substances by chemical or physical means. Atoms are made from single type of atom. Elements are the building blocks of the matter in the rest of world. Examples are iron, oxygen, hydrogen etc.

COMPOUNDS: Compound is a substance that is made up of two or more different elements combined chemically in a fixed proportion eg Pure water is compound made from two elements hydrogen and oxygen. The ratio of hydrogen to oxygen is 2:1

READ THE TWO SUBTOPICS GIVEN ABOVE FROM YOUR BOOKS AND UNDERLINE IMPORTANT POINTS WITH PENCIL

## DAY 3

### PROPERTIES OF MATERIALS

1. TRANSPARENCY

2. SOLUBILITY IN WATER

3. APPEARANCE

4. HARDNESS

5. TEXTURE

6. CONDUCTIVITY

7. DENSITY AND FLOATATION

**TRANSPARENCY:** On the basis of transparency we divide materials into three categories. We have seen some materials allow light to pass through them and some do not. Materials that allow light to pass through them are called transparent materials eg Glass, clear water etc.

The materials that don't allow light to pass through them are known as opaque materials eg wood, metal etc

The materials that allow only a small portion of light to pass through them are known as translucent materials eg Butter paper, tissue paper

**SOLUBILITY IN WATER.** Solubility is the ability of something to dissolve in water. Have you poured sugar into your tea and stirred it up? Why does sugar seem to disappear? Well it's actually dissolving, which means it is absorbed by tea. So we can say that sugar is soluble in water because it dissolves in it.

Oil, butter do not dissolve in water they form a layer over it, so they are insoluble.

**APPEARANCE:** By appearance we mean how the materials are different from each other in terms of shine, color, shape etc.

**4.HARDNESS.**We can determine the hardness of a material by simply pressing it..If we press a material and it comes back to normal shape then it is soft eg teddy bear ,pillow etc and if we press a material and it not come back to its normal shape then it is hard eg brick , stone etc

GO THROUGH THE IMP POINTS FROM THE TOPICS ABOVE GIVEN ON YOUR BOOKS AND LEARN THE DEFINITIONS THOROUGHLY

## DAY 4

**5.TEXTURE :** The feel of any material is its texture , it means when any material is touched it does not feel the same. Some materials have smooth texture aSnd they have the finished surfaces for ex , the surface of flower petals and glass. Some materials have rough texture when touched for ex , bark of a tree, sand paper.

**6.CONDUCTIVITY :** Some materials allow the heat and electricity to pass through them , they are known as conductors for ex , metals . Some materials do not allow the heat and electricity to pass through them and are known as insulators.

**7.DENSITY AND FLOATATION:** Density is a word we use to describe how much space an object or substance takes up . It is the amount of mass per unit volume . if an object is heavy it has high density.

Floatation : is determined by the ability of an object to float or sink in water, we have observed that a feather and a straw float on the surface of water while as an iron nail and steel spoon sink in water.

DO PART A FROM THE BOOK BY YOURSELF REFER TO THE DEFINITIONS GIVEN ABOVE

## DAY 5

### Physical states

Matter usually exists in three states:solid,liquid or gas.The chair we sit on is solid,the water we drink is liquid and the air we breathe is gas.solid water is called ice and gaseous water is called steam or vapour.In solids the molecules are held tightly, in liquids they are little looser and in gases the molecules move freely.

FILL IN THE BLANKS(PART B FROM BOOK)

1.MASS AND SPACE

2.SMOOTH AND ROUGH

3.SOLUBLE

4.HEAVIER

5.GASES

PART C 9 (TRUE OR FALSE)

1.TRUE

2.TRUE

3.FALSE

4.FALSE

5.FALSE

GO THROUGH THE CHAPTER AND DO PART E ON BOOK.

## **DAY 6**

:Refer to part F Of your books and write the answers on your notebooks

1.The four objects that can be made from cotton are cotton balls,paper,fishing nets and tissues

2.dry cell,pen ,shoes

3.gels,foams,teddybears

4.alcohol and water,salt and water,sugar and water

5.mirror surface and glossy tiles

## **DAY 7**

:Refer to part G and write down answers on your notebooks

Ans 1.Classification is the process in which the materials are differentiated.It means grouping the things together with same characteristics.We can use classification in our daily lives by organizing clothes in a drawer or by organizing books on a shelf

Ans2.Following are the benefits of classification

a)it gives a systematic knowledge of things

b)it tells us how different members of different groups differ from each other

Ans3.DO IT YOURSELF.REFER TO THE DEFINITION OF TRANSPARENCY GIVEN ABOVE

Ans4.Liquids are immiscible if they are completely insoluble in each other It means they do not mix completely and float on the surface of water.For eg if we add few drops of oil into the water it will not get dissolved into water ,we can see it floating on the top only.

Ans5 Honey is miscible,it has a smooth texture and has a high density

An iron nail is hard,it has low density and is a good conductor

Ice has a smooth texture,it can change from solid to liquid state.it has less density than liquids

Ans5.Sponge is labeled as soft material because it has soft texture and it is compressible which when pressed expels air out of them and when released ,comes back to normal position.