29/4/20

SUB- SCIENCE

CLASS- VIII

CHAPTER- 3

* Write Q|A in f|c

Q13. Write down some uses of plastics in your home.

Ans (i) Plastic is used in kitchenware such as cooking oil bottles etc.
(ii) Used to making shopping bottles.
(iii) Used in making cookware like microwave ovens for cooking food.
(iv) Used in making stationery items.
(v) Used in making toyes and many house-hold items.

Q14. Write down advantages and disadvantages of plastic.

Ans Advantages:→ (i) Plastic is a poor conductor of heat and electricity.
(ii) Plastic do not corroded or rusted.
(iii) Plastic items are light in weight
(iv) Available in many colours.
(v) Cheaper than metals.

Disadvantages:→ (i) Plastic is non-biodegradable.
(ii) Take hundred years to decompose
(iii) Release toxic gases on burning.
(iv) Stick to melting body after melting.

(v) Block the drains.
(vi) Block the respiratory system of animals

Q15 Give eg. which indicate that nylon fibres are very strong.

Ans. Nylon fibres are are very strong. These are used for making climbing ropes and for making parachutes. This shows that nylon fibres are very strong.

Q16. Explain why plastic containers are favoured for storing food items.

Ans * The plastic do not react with with the food that stored in them.
* Plastic items are light in weight and are strong.
* Easy to handle and safe.
* Cheap and ductile.

### Plastics are Poor Conductors

You have learnt above that plastics are poor conductors of heat and electricity. That is why electrical wires have plastic covering, and handles of screw drivers are made of plastic. As mentioned above, handles of frying pans are also made of plastic.

**Did You Know?**

- Plastics find extensive use in the healthcare industry. Some examples of their use are the packaging of tablets, threads used for stitching wounds, syringes, doctors' gloves and a number of medical instruments.
- Special plastic cookware is used in microwave ovens for cooking food. In microwave ovens, the heat cooks the food but does not affect the plastic vessel.
- Teflon is a special plastic on which oil and water do not stick. It is used for non-stick coating on cookwares.
- Fire-proof plastics: Although synthetic fibre catches fire easily, it is interesting to know that the uniforms of firemen have coating of melamine plastic to make them flame resistant.

## 3.6 Plastics and the Environment

When we go to the market, we usually get things wrapped in plastic or packed in polythene bags. That is one reason why plastic waste keeps getting accumulated in our homes. Ultimately, plastic finds its way to the garbage. Disposal of plastic is a major problem. Why?

A material which gets decomposed through natural processes, such as action by bacteria, is called **biodegradable**. A material which is not easily decomposed by natural processes is termed **non-biodegradable**.

Look at Table 3.3.

**Table 3.3**

| Type of Waste | Approximate Time taken to Degenerate | Nature of Material |
|---|---|---|
| Peels of vegetable and fruits, leftover foodstuff, etc. | 1 to 2 weeks | Biodegradable |
| Paper | 10 to 30 days | Biodegradable |
| Cotton cloth | 2 to 5 months | Biodegradable |
| Wood | 10 to15 years | Biodegradable |
| Woollen clothes | About a year | Biodegradable |
| Tin, aluminium, and other metal cans | 100 to 500 years | Non-biodegradable |
| Plastic bags | Several years | Non-biodegradable |

• Source: http://edugreen.teri.res.in/explore/solwaste/types.htm

Since plastic takes several years to decompose, it is not environment friendly. It causes environmental pollution. Besides, the burning process in the synthetic material is quite slow and it does not get completely burnt easily. In the process it releases lots of poisonous fumes into the atmosphere causing air pollution. How can this problem be solved?

Have you ever seen a garbage dump where animals are eating garbage? In the process of eating the food waste they swallow materials like polythene bags and wrappers of food. Can you imagine the consequences? The plastic material chokes the respiratory system of these animals, or forms a lining in their stomachs and can be the cause of their death.

The polybags carelessly thrown here and there are responsible for clogging the drains, too. Sometimes we are very careless and throw the wrappers of chips, biscuits and other eatables on the road or in parks or picnic places. Should we not think twice before doing so ? As a responsible citizen what measures do you suggest to keep public places clean and free of plastic?

Avoid the use of plastics as far as possible. Make use of bags made of cotton or jute when you go for shopping. The biodegradable and non-biodegradable wastes should be collected separately and disposed off separately. Practise this in your homes. Can you suggest some other ways in which you can contribute towards reducing the use of plastic materials?

It is better to recycle plastic waste. Most of the thermoplastics can be recycled. Make a list of items that can be recycled. However, during recycling certain colouring agents are added. This limits its usage especially for storage of food.

As a responsible citizen remember the **5 R** principle. **Reduce, Reuse, Recycle, Recover and Refuse**. Develop habits which are environment friendly.

**Fibre-wise**

- Do not throw plastic bags in the water bodies or on the road.
- Take a cotton carry bag or a jute bag while going for shopping.
- Try to minimise the use of plastic materials e.g., use a steel lunch box instead of a plastic one.