



CLASS:- VIII

SUBJECT:- CHEMISTRY

CHAPTER:- SYNTHETIC FIBRES AND PLASTICS

GUIDELINES

Dear students,

- Refer to the following content related to the chapter and draw the given table (on Uses of Plastics) in your Chemistry notebook.
- This e-lesson will help you understand the concept and will also enable you to attempt the assignment /activity that follows.

SUB-TOPICS

- Uses of Plastics
- Biodegradable and Non-biodegradable materials
- Plastics and the Environment
- Conservation action for avoiding plastic pollution
- Principle of 5Rs

1.1 USES OF PLASTICS

Uses of plastic in various fields are :

- (i) Plastics find extensive use in the health-care industry. Plastics are used in making packaging of tablets, in threads used for stitching wounds, for making syringes, for making doctors' gloves and a number of other medical instruments.
- (ii) Special plastic cookware is used in microwave ovens for cooking food without affecting the plastic vessel.
- (iii) Teflon is a special plastic on which oil and water do not stick. It is used for making non-stick coating on cook wares.
- (iv) Fire-proof plastic—Since synthetic fibre catches fire easily, uniforms of firemen have a coating of melamine plastic to make them flame resistant.

1.2 Biodegradable and Non-biodegradable materials

Biodegradable materials	Non-biodegradable materials
1. A material which gets decomposed through natural processes, such as action by bacteria, is called biodegradable.	1. A material which is not easily decomposed by natural processes is termed as non-biodegradable.
2. Example: Peels of vegetable and fruits, leftover foodstuff, paper, cotton cloth, wood, woolen clothes, etc.	2. Example: Tin, Aluminium, and other metal cans; plastic bags, etc.

1.3 PLASTICS AND ENVIRONMENT

• Harmful Effects of Plastic

Improper disposal of plastic poses several problems, some of which are:

- Littering of plastic in open spaces creates unhygienic conditions, as it acts as a breeding ground for insects and mosquitoes that cause diseases such as Malaria and Dengue.
- Plastics do not undergo degradation thus, stay in the soil for many years, which affects the soil fertility and degrades the soil quality.
- When plastic artifacts enter the drainage and sewerage system, they block the pipes and the drains leading to waterlogging.
- The improperly disposed food bags, when eaten by animals, cause stomach and intestine related diseases which even lead to suffocation and death.
- Plastic items find their way to the river and other water bodies, which are then swallowed by fish, seabirds and other marine species. Thus it leads to their suffocation and death.
- The waste from the plastic manufacturing industry is thrown directly into the water bodies, thus affecting the chemical property of water and causing large scale hazard.

Proper disposal and smart use of plastic discards can reduce these problems. A set of regulations should necessarily be followed to stop these problems.

1.4 Conservation action to avoid pollution by plastic

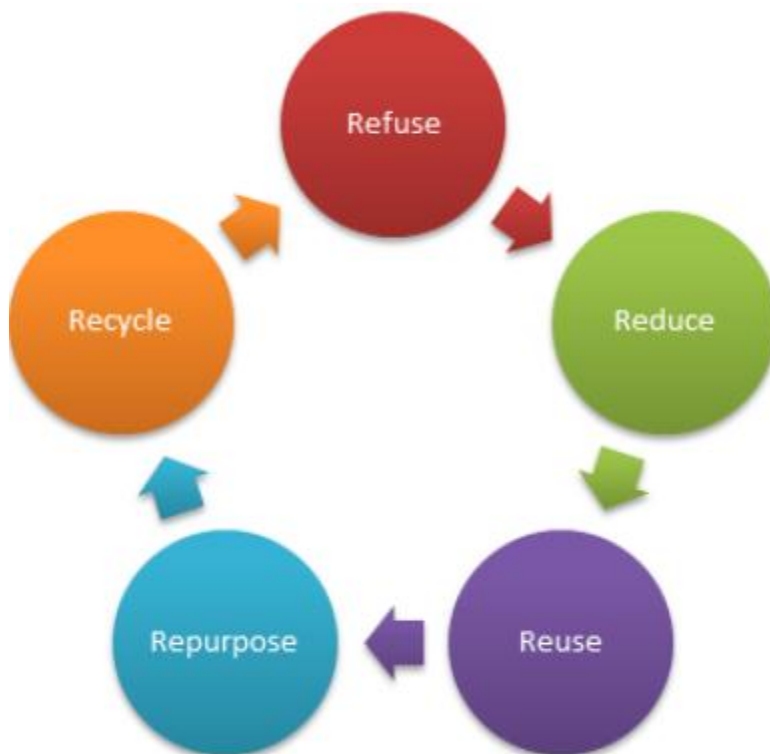
Plastic is not environment friendly. For instance, polythene is a non-biodegradable substance. It means that microorganisms cannot decompose them.

Therefore, certain steps must be taken in order to protect our environment.

Steps that are required to protect the environment are:

1. We should never throw plastic bags or other plastic articles into water bodies, drains or on roads.
2. We should carry cotton or jute bags for shopping.
3. We should buy products with less plastic packaging.
4. We should encourage people to recycle and reuse plastic.

1.5 5 R s to Minimize the Environmental Damage Caused by Plastic



Refuse: Do not buy things we do not need.

Reduce: Minimize the use of plastics in our daily lives.

Reuse: Reuse the items we already have, instead of throwing them away.

Repurpose: If we are not using something, alter or change it to be used in a different way.

Recycle: Some plastic waste can be sorted and made into other things in recycling factories. This helps to reduce carbon footprint.

- **Based on your understanding of the above ideas, perform the following activity.**

Imagine you have been asked by the government to start a campaign to encourage people to stop using plastic bag. Think and write the ways you will adopt to convince people. Think of a good slogan for the campaign and design a poster for the campaign.

ASSIGNMENT

- **ATTEMPT THE QUESTIONS IN YOUR CHEMISTRY NOTEBOOK.**

Q1. Give one word for -

- (a) A special type of plastic used as fire-proof plastic.
- (b) A plastic used for making electrical switches and handles of various utensils.
- (c) A plastic which is used for making floor tiles, kitchenware and fabrics which resist fire.
- (d) A plastic which is used for non-stick coating on cook wares.

Q2. Disposal of plastic is a major problem. Why?

Q3. As a responsible citizen what measures do you suggest to keep public places clean and free of plastic?

Q4. Identify whether the following wastes are biodegradable or non- biodegradable.

- a. Paper
- b. Aluminium
- c. Plastic bags
- d. Cotton clothes

Q5. Read the following statements and tick the correct answer.

- (i) Plastic bags can choke the drains.
 - (ii) Mosquitoes cannot grow in such choked drains.
- (a) both are wrong
 - (b) both are correct
 - (c) Statement (i) is wrong and ii) is correct
 - (d) Statement (ii) is wrong and (i) is correct

Q6. This symbol represents :



- (a) reduce
- (b) reuse
- (c) reverse
- (d) recycle

Q7. Which of the following is not a part of 5R s formula ?

- (a) reduce
- (b) recycle
- (c) repurpose
- (d) reinvent

Q8. Plastics lead to_____.

- (a) Water pollution
- (b) Air Pollution
- (c) Solid Waste Pollution

(d) All the above

BBPS PITAMPURA