

LESSON PLAN 5 E
PHYSICAL SCIENCE
(ENGLISH MEDIUM)

Lesson Plan

Name of Student Teacher - ARCHANA
Roll Number - —
Class - 8
Subject - PHYSICAL SCIENCE
Duration - 40 min
Date - —
Topic - SYNTHETIC FIBRES PLASTIC
Sub-Topic - PLASTIC.

• Teaching point -

- (i) Plastic
- (ii) Types of Plastic
- (iii) Uses of Plastic
- (iv) Characteristic of Plastic
- (v) Plastics and the Environment.

• General Objectives -

- (i) To develop the students interest towards science.
- (ii) To develop habits of exploration.
- (iii) To develop scientific thinking, reasoning and attitude among students.
- (iv) To develop the scientific attitude towards experimental evidence
- (v) To enable student to make their decision on the basis of facts and ideas.

- Specific Objective -

- (i) Student will be able to define plastic.
- (ii) Student will be able to give example of plastic.
- (iii) Student will be able to explain types of plastic.
- (iv) Student will be able to ~~uses~~ explain the uses of plastics.
- (v) Student will be able to explain the characteristics of Plastics.
- (vi) Student will be able to give example of plastics.

- Teaching Approach - Constructivist Approach (SE)

- Teaching Method - Demonstration Cum Discussion Method

- Teaching - learning Material - chart paper, toys, floor tiles, comb, container, switch

- Previous knowledge - Student have some basic knowledge about Natural and Synthetic fibres.

Phase of teaching

Student - Teacher Activity

Engage
(In this phase the teacher open a

Student you know the clothes which we wear are made of fabrics

demon with questions to engage students, generate interest and offer the opportunity to share what they already know about the subject)

This fabrics are made from which materials?

What are the types of fibres?

Give some examples of Synthetic fibre.
Good!

which of this synthetic fibre is most used in everyday life.

Very Good!

What is the ~~str~~ structure of Plastics?

In today's class we will discuss about Plastics.

Explore
(During this phase teacher provide student with activity that allow student to explore a new topic and ask questions)

Make a list of plastic items and their uses which are used in everyday life

Student Activity

Black Board Work / TLM

Yes, Ma'am

Fibres

There are 2 types of fibre.

(a) Natural fibre

(b) Synthetic fibre

Plastic, Nylon, Rayon

Plastic

Problematic Situation.

PLASTICS

Plastic items	Their uses
1) Plastic container	for storing purpose
2) Toys	for entertainment

Phase of teaching

Student - teacher Activity

Explain

(During this phase the teacher explains the teaching points to student. Teacher will introduce definition and explanation of the concept)

• Plastic → It is a polymer like the synthetic fibres.

These are polymers of long carbon chains arranged either linearly or cross-linked.

Some common plastics are:-

(I) Bakelite (II) Nylon (III) Terylene
(IV) Polythene (V) PVC (VI) PET

(Polyethylene
Terephthalate)

Student Activity

Black Board Work / TLM

3) polythene

used as
polythene bags

4) Bottle

for storing
purpose
(water, oil)

Plastic

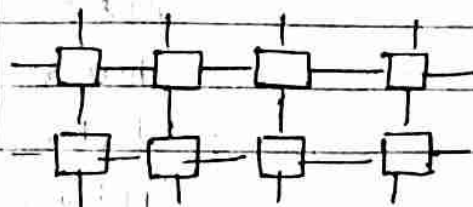
↳ polymer like synthetic
fibre.

Ma'am give some examples
of plastics.

There are polymer of long
chain arranged either
linearly or cross-linked.



(a) Linear



(b) Cross-linked.

Example - Polythene, Bakelite,
Nylon, Terylene, Polyvinyl
chloride (PVC) etc

Phase of teaching	Student - Teacher Activity
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Explain

• Types:-

Plastics are of two types:-

(a) Thermoplastic:-

A plastic which can be easily bent or softened on heating and moulded repeatedly in the desired shape is called thermoplastic.

Ex → PVC, polystyrene, Nylon, polythene etc.

Uses → They are good for making toys, bottles, combs, container, pipes etc.

(b) Thermosetting Plastics:-

A plastics substance which once moulded into a shape cannot be softened or melted on reheating is called a thermosetting plastics.

Example - Melamine, Bakelite

Uses →

They are used to make hardboard, electric switch, handles of electric appliance and kitchen utensils, floor & tiles etc.

Student Activity

Black Board work / TLM.

Student will listen carefully and note down in their copy.

Ma'am,

What are the uses of this type of plastics.

Types →

(a) Thermoplastic -



It can be easily bend or softened on heating and moulded repeatedly in the desired shape.

Example → PVC, polystyrene, Nylon, polythene.

Uses → for making toys, bottles, combs, container, pipes etc.

(b) Thermosetting Plastics -

A plastics substance which once moulded into a shape cannot be softened or melted on reheating is called a thermosetting plastics.

Example - Melamine, Bakelite.

Uses -

They are used to make hard board, electric switch, handles of electric appliance and kitchen utensils, floor tiles etc.

Phase of teaching

Student - Teacher Activity

Explain

• Characteristics of Plastics-

- ① They are poor conductor of heat and electricity.
- ② They does not react with air and water
- ③ Plastic are light weight, durable, cheap and very strong.
- ④ It is a non-biodegradable substance

• Difference between Thermoplastic and Thermosetting Plastic.

Thermoplastic	Thermosetting plastics
(1) Soften on heating	(1) Do not Soften on heating.
(2) Linear long chain	(2) 3D or cross-linked structure
(3) Can be reshaped and reused.	(3) Cannot be reshaped
(4) Soft, weak and less brittle	(4) Hard and strong.

Student Activity

BlackBoard work / TLM

Student will listen carefully and note down in their copy.

Mo'm, what is difference between thermoplastic and thermosetting plastics

Characteristics of Plastics -

- ① They are poor conductor of heat electricity.
- ② They does not react with air and water.
- ③ Light weight, durable, cheap and very strong.
- ④ Non-biodegradable substance

Difference between thermoplastics and thermosetting plastics

Thermoplastic	Thermosetting plastics.
① Soften on heating	① Do not soften on heating
② Linear long chain	② 3D or Cross-linker structure.
③ Can be reshaped and reused	③ Cannot be reshaped.
④ soft, weak and less brittle	④ Hard and strong.

Phase of teaching

Student - Teacher Activity

Elaborate

Plastic and the Environment

(During this phase student can develop deeper understanding)

- Plastic is a non-biodegradable substance which either do not decompose or take many years to get decomposed through the natural process.
- Burning of plastic produces many toxic fumes into the atmosphere causing air pollution.

Some Preventive Measure

- (1) Avoid the use of plastic as far as possible
- (2) Make use of bags made of cotton or jute when you go for shopping
- (3) Biodegradable and non-biodegradable waste should be collected separately and disposed off separately.
- (4) we should follow the 5R principle -
i.e., Reduce, Reuse, Recycle and Recover, and Refuse

Student Activity

Black Board work / TLM:

Student will listen carefully and note down in their copy.

• Plastic
↓
non-biodegradable substance
↓

do not decompose or take many year to get decomposed through the natural process.

• Burning of plastic produces many toxic fumes into the atmosphere causing air pollution.

Some Preventive Measure-

- i) Avoid the use of plastic as far as possible
- ii) Make use of bags made of cotton or jute when you go for shopping.
- (iii) Biodegradable and non-biodegradable waste should be collected separately and disposed off separately.
- (iv) We should follow the 4R principle i.e, Reduce, Reuse, Recycle & Recover & Refuse.

Phase of teaching

Student - Teacher Activity

Evaluate -

① Define plastic. Give three example

(During this
Phase teacher

② What are the uses of thermoplastics

asses the

effectiveness of
teaching. It

provides feedback
to the teachers
about their
teaching)