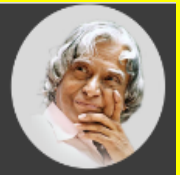
Srini Science Mind

Abdul Kalam Physical Science Group



NEW

8th class

PHYSICAL SCIENCE

MODEL LESSON PLAN

M.SRINIVASA RAO, SA(PS) AGKMHS GUDIVADA PH: 9848143855

MODEL LESSON PLAN

CLASS: 08 **SUBJECT:** PS **Name of the Teacher:** M.SRINIVASA RAO **Name of the School:** A.G.K.M.H.School, Gudivada

Name of the Lesson/Unit	Topic	No.of Periods Required	Timeline for teaching		Any specific information
			From	To	
Synthetic Fibres and Plastics (Chapter-4)	What are Synthetic Fibres?	1	xx/xx/xxxx	xx/xx/xxxx	
	Types of Synthetic Fibres	4	xx/xx/xxxx	xx/xx/xxxx	
	Characteristics of Synthetic Fibres	2	xx/xx/xxxx	xx/xx/xxxx	
	Plastics	2	xx/xx/xxxx	xx/xx/xxxx	
	Plastics as Materials of Choice	2	xx/xx/xxxx	xx/xx/xxxx	
	Plastics and the Environment	2	xx/xx/xxxx	xx/xx/xxxx	

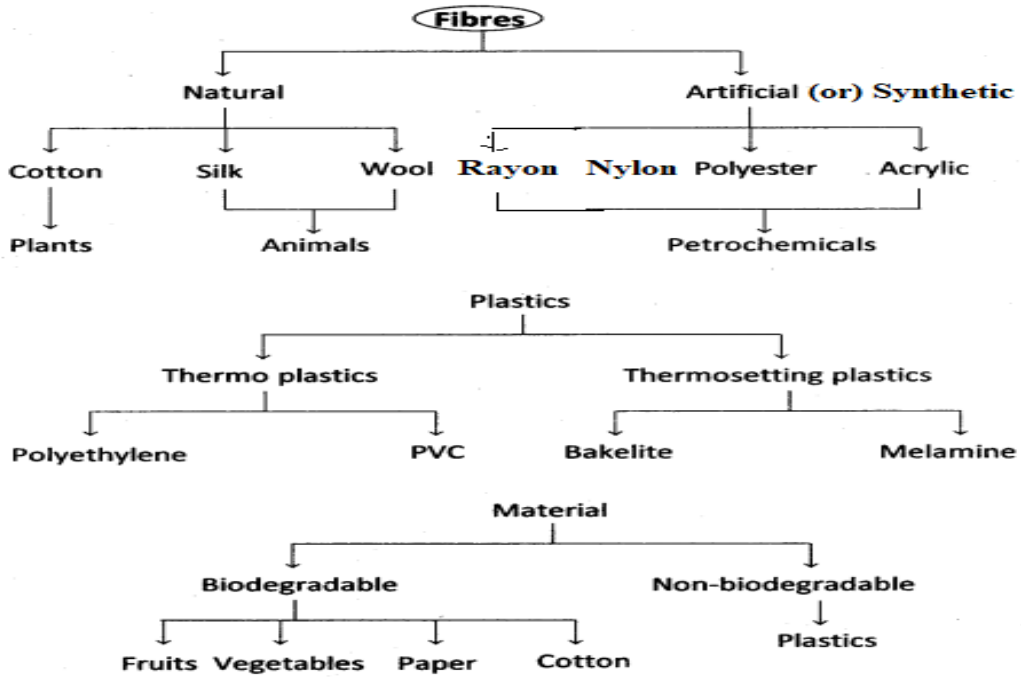
Prior Concept/Skills:

1. What kind of clothes are usually worn during summer?
2. Do you know what thread your school bag is made of?
3. What kind of bags did our elders use to bring home the goods from the grocery shop?

Learning Outcomes:	No. of Periods
1. Differentiates materials of natural and human made fibres on the basis of their properties.	1
2. Relates process and phenomenon which causes of preparation of synthetic fibres	1
3. Draws the flow chart of uses of man-made fibres.	1
4. Conducts simple investigations to seek answers to queries on Man-made fibres are stronger than natural fibres.	1
5. Exhibits creativity in designing, planning, making use of synthetic fibres and plastics.	1
6. Draws flow charts of characteristics of synthetic fibres.	1
7. Applies learning of scientific concepts in day-to-day life on usage of synthetic fibres.	1
8. Discusses and appreciates stories of scientific discoveries of Synthetic fibres and plastics.	1
9. Differentiates materials of thermosetting plastics and thermoplastics.	1
10. Differentiates materials of biodegradable and non-biodegradable materials on the basis of their properties.	1
11. Applies learning of scientific concepts in day-to-day life of segregating biodegradable and non-biodegradable wastes.	1
12. Classifies materials based on properties of can be recycled' and 'cannot be recycled	1
13. Makes efforts to protect environment of using plastics resources.	1

TEACHING LEARNING PROCESS

Induction/Introduction:



Experience and Reflection:

1. Students will acquire adequate knowledge in dressing according to the period.
2. Students apply 4R principles in daily life.
3. Students play their part in protecting the environment when they use synthetic fibres.

Explicit Teaching/Teacher Modelling (I Do)	Group Work (We Do)	Independent Work (You Do)	Notes for:
1. Discussion and collect the information on natural and synthetic fibres.	1. Students give examples of natural and synthetic fibres.		1. Why is cotton called King of fibres?
2. Discussion on monomer and polymer.	2. Students compare the structure of polymer with beads chain or paper clip chain	2. Students identify the monomer and polymer in the beads chain/paper clips chain	2. What are polymers?
3. Explain the types of synthetic fibres	3. Collect the information on rayon	3. Students give reason about why	3. How is rayon

and uses of rayon.	uses.	synthetic fibres are stronger than natural fibres?	different from synthetic fibres?
4. Discussion and explain Nylon and its uses.	4. Students draw the uses of nylon in a flow chart.	4. Students complete the homework.	4. Which is the first fully synthetic fibre?
5. Conduct an activity on the strength of threads.	5. Group discussion on Why nylon thread is actually stronger than a steel wire.	5. Comparing the strength of the nylon thread with steel thread.	5. What are the advantages of nylon?
6. Explain Polyester and Acrylic.	6 Students will conduct a survey and tell in tabular form how many people around them use PET bottles.	6. Students draw Linear and Cross-linked arrangements of plastics.	6. What is PET? Write its uses.
7. Discussion and Explain the characteristics of synthetic fibres.	7. Reading the Scientific discoveries of Man-made fibres.	7. Students complete the homework.	7. List any three characteristics of synthetic fibres.
8. Discussion on Plastics with some examples.	8. Students give examples of plastics in household articles.		8. What are plastics?
9. Explain the concepts of thermoplastics and thermosetting plastics with examples.	9. Collect projects of can be recycled and cannot be recycled.	8. Students give examples of thermoplastics and thermosetting plastics.	
10. Discussion and explanation of Plastics as Materials of Choice.	10. Group discussion on advantages of Synthetic fibres.	9. Students express the advantages of synthetic fibres.	9. Can we store jams and pickles in plastic containers? Give reason.
11. Explain the biodegradable and non-biodegradable materials with examples.	11. Students classify the materials as biodegradable and non-biodegradable and record the approximate time is taken to degenerate.	10. Students make a list of household items which are biodegradable and non-biodegradable.	10. Differentiate between biodegradable and non-biodegradable materials.
12. Discussion on the environment when the usage of plastics.	12. Collect the information to list the strategies for plastic waste management.	11. Students will explain in their own words how pollution is caused by the use of plastic.	
13. Explain 5R principles		12. Which one is better reuse or recycle?	11. What is the 5R principle of plastics?

Check For Understanding Questions	TLM's (Digital + Print)
1. Factual: 1. How is rayon different from synthetic fibres? 2. Is plastic bag non-biodegradable? Why? 3. Do all plastics have same type of arrangement of units? **2. Open Ended/Critical Thinking:** 1. Why is silk called Queen of fibres? 2. Why is acrylic more popular than wool? 3. Can recycled plastics be used in food containers? Why or why not? **3. Student Practice Questions & Activities:** 1. Explain the difference between thermoplastic and thermosetting plastics. 2. Categorise the materials of the following products into 'can be recycled' and 'cannot be recycled'. Telephone instruments, Plastic toys, Cooker handles, Carry bags, Ball point pens, Plastic bowls, Plastic covering on electrical wires, Plastic chairs, Electrical switches. 3. Give examples to show that plastics are noncorrosive in nature. 4. 'Avoid plastics as far as possible'. Comment on this advice.	1. Used prepared Quiz paper. 2. Utilized digital classroom. 3. Provide video links QR codes, DIKSHA App. 4. YouTube video's links.

Assessment:

1. Describe an activity to show that thermoplastic is a poor conductor of electricity.
2. What are the characteristics of synthetic fibres?
3. Suggest some ways to solve plastic pollution.
4. Why is it advised not to wear synthetic clothes while working in a laboratory or working with a fire in the kitchen?

SIGNATURE OF THE TEACHER

SIGNATURE OF THE HEADMASTER

VISITING OFFICER WITH REMARKS