

DETAILED SYLLABUS

2024-25

CLASS: VIII
SUBJECT: SCIENCE

BOOK

Science- VIII

NCERT

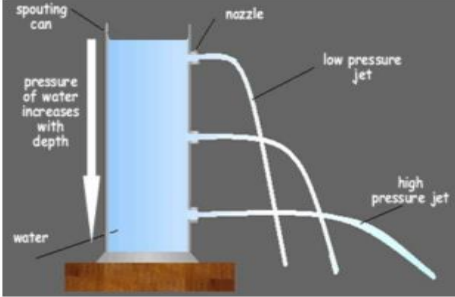

OBJECTIVES:

The students will be able to:

1. analyze the relationship between the natural, social and cultural environment
2. synthesize the fundamentals of science
3. analyze the concepts and connect them with the surroundings
4. strengthen logical and analytical skills
5. create scientific attitude

MONTH/ BOOK	SYLLABUS	CONCEPT OBJECTIVES
APRIL Course Book	Lesson -1: Crop Production and Management Lesson - 3: Coal and Petroleum	Students will be able to: <ul style="list-style-type: none"> • classify crops grown in India according to the season • analyze the steps of crop cultivation • differentiate between fertilizer and manure • analyze the traditional and modern methods of irrigation • distinguish between exhaustible and inexhaustible natural resources • synthesize carbonization of plant remains to coal and conversion of animal remains to crude oil • analyze the processing of coal products and refining of petroleum
Activity	1. Compare the growth of potato plant in three separate pots by providing <ul style="list-style-type: none"> • fertilizer to the first pot • manure to the second pot • plant to grow in soil in the third pot 2. Do research and prepare a project file. The file must cover the following:	
Subject Enrichment	<ul style="list-style-type: none"> • Introduction to coal & Petroleum • Coal: <ul style="list-style-type: none"> ✓ Formation of coal ✓ Types of Coal ✓ Destructive distillation of coal (along with major products & their uses) • Petroleum <ul style="list-style-type: none"> ✓ Formation ✓ Refining ✓ Products obtained from petroleum • Natural Gas <ul style="list-style-type: none"> ✓ Characteristics ✓ Uses ✓ Advantages ✓ Places where there are reserves in India • Petrochemicals <ul style="list-style-type: none"> ✓ What are they? ✓ Uses 	
MAY	Lesson -11: Chemical Effects Of Electric Current	

Course Book		Students will be able to:
Activity (Subject Enrichment)	Perform experiments the conduction of electricity through various liquids; distilled water, tap water, lemon juice, vinegar (construct an electric tester)	<ul style="list-style-type: none"> experiment the conduction of electricity through various liquids; distilled water, tap water, lemon juice, vinegar and Infer the chemical effects of electric current Illustrate the process of electroplating and analyze its advantages
PA I		
JULY	Lesson 2: Microorganisms	
Course Book	Friend and Foe	Students will be able to:
Activity	Research and present in groups:	<ul style="list-style-type: none"> classify microorganisms into bacteria, fungi, protozoa, algae and virus and identify their characteristics analyze the importance of microorganisms by identifying their usefulness and the diseases caused by them identify various methods used in food preservation analyze the nitrogen fixation in the soil and illustrate it in the form of nitrogen cycle
Multiple Assessment		
GROUP DISCUSSION	<ul style="list-style-type: none"> Microbes as friends Microbes as Foe Food Preservation Nitrogen Fixation (research for the group discussion to be given as summer project)	
AUGUST	Lesson-8: Force and Pressure	Students will be able to:
Course Book	Lesson-9: Friction	<ul style="list-style-type: none"> identify force and analyze its effects differentiate between contact forces; muscular, frictional and non-contact forces; magnetic, gravitational and electrostatic identify pressure and analyze its effects identify and interpret the role of atmospheric pressure identify factors that affect friction identify the ways of increasing and decreasing friction
Subject Enrichment Activity	Activity- To demonstrate that a) liquid exert equal pressure in all directions at a given depth. b) liquid pressure varies with depth.	

<p>Multiple Assessment</p>	  <p>Concept Dictation</p>	
<p>SEPTEMBER</p>	<p>Lesson15: Some Natural Phenomena</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • identify different charges; positive, negative and neutral and relate it with static electricity • analyze transfer of charge in a conductor and insulator • synthesize the phenomena of lightning and earthquakes
<p>Activity (Project)</p>	<p>construct an electroscope in groups of five which has an aluminum foil to test whether an object is carrying a charge or not; plastic ruler, ruler made of metal, steel spoon, paper strip, balloon, eraser</p> <p>Make a scrap book</p> <p>REVISION AND MID TERM EXAMINATION</p>	

<p>OCTOBER</p> <p>Course Book</p>	<p>Lesson-4 Combustion and Flame</p> <p>Lesson-6: Reproduction in animals</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • identify combustion and analyze the conditions necessary for combustion • differentiate between flammable and inflammable substances • differentiate between rapid, spontaneous and explosion combustion • identify and illustrate different zones of a candle flame define reproduction and analyse different types of reproduction; asexual reproduction and sexual reproduction • identify and illustrate asexual reproduction in hydra by budding and amoeba by binary fission • illustrate the structure of human sperm and egg • identify the process of fertilization and differentiate between internal fertilisation and external fertilisation • distinguish between viviparous and oviparous animals
<p>Project</p> <p>Multiple assessment</p>	<p>*Make a model of fire extinguisher by using household substances.</p> <p>* On an A/4 sheet do research illustrate and explain the different types of fire extinguishers used.</p> <p>*Extempore-Pick a chit and teach the topic!</p>	
<p>NOVEMBER</p> <p>Course Book</p>	<p>Lesson -7: Reaching the age of Adolescence</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • analyse the changes that take place at the time of puberty in both male and female body • analyze the role of hormones in initiating reproductive function in human beings • analyze gender determination in humans • synthesise function of various hormones secreted by endocrine glands
<p>Activity</p> <p>Subject Enrichment</p> <p>Multiple Assessment</p>	<p>1. Interview Directions:</p> <p>Conduct a family interview with an adult in your family that you are comfortable talking to. Together, find a quiet spot to talk together and use the following questions to guide your interview.</p> <p>1) What did it feel like to go through puberty when you were my age?</p> <p>2) What did you like about growing up into an adult?</p> <p>3) What was difficult about going through puberty for you?</p> <p>4) What do you wish you had known about puberty when you were my age?</p> <p>5) What advice do you have for kids going through puberty today?</p> <p>Paste pics of your parents in their adolescence along with yours!</p> <p>*Concept Dictation</p>	

<p>DECEMBER</p> <p>Course Book</p>	<p>Lesson -10: Sound</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • identify the process of production of sound through vibration and its propagation
<p>Activity</p> <p>Subject Enrichment</p> <p>Multiple assessment</p>	<p>* Make a musical Instrument with recycled material. On an A/4 sheet write the material used, the science behind its sound and its pictures.</p> <p>*Reasoning assertion quiz</p>	<ul style="list-style-type: none"> • identify and illustrate the structure of larynx and internal and external ear in human body • Interpret the amplitude, time period and frequency of a vibration • differentiate between infrasonic and ultrasonic sounds and compare their frequencies • identify the audible range for human ear
<p>JANUARY</p> <p>Course Book</p>	<p>Lesson-13: Light</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • analyze the laws of reflection in plane mirror • illustrate the structure and function of human eye • identify the braille system
<p>Activity</p> <p>Subject Enrichment</p>	<p>* Make a Kaleidoscope</p> <p>* Showcase laws of reflection using a plane mirror and laser light.</p> <p>& By using a plane mirror, A/4 sheet and all pins.</p>	
<p>FEBRUARY</p> <p>Course Book</p>	<p>Lesson-7: Conservation of plants and animals</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • analyze the causes and consequences of deforestation • differentiate between biosphere reserve, wildlife sanctuary and national park • identify ecosystem • synthesize the effects of reforestation
<p>Activity Project</p>	<p>Discover India: Make a scrap book on flora and fauna of India</p> <p>(To be done as a winter vacation project)</p>	