

OSWAAL CBSE QUESTION BANK

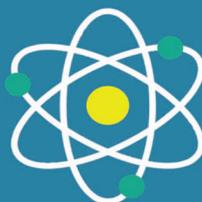
with complete solutions



Class
8



SCIENCE



HIGHLIGHTS

- Strictly as per the NCERT Curriculum
- Chapterwise Synopsis for clarity of concepts
- Variety of questions from NCERT Textbooks
- Typology of Questions includes MCQs, VSA, SA and Long Answer types
- Include HOTS & Value Based Questions
- Answers follow the marking scheme and the prescribed word limit



 **OSWAAL**
QUESTION BANK
WITH COMPLETE SOLUTIONS

Science

Class
8

Published by :

 **OSWAAL BOOKS**

 1/11, Sahitya Kunj, M.G. Road, Agra -282002 (UP) India  0562-2857671, 2527781

 0562-2854582  contact@oswaalbooks.com  www.OswaalBooks.com



OUR DISTRIBUTORS

PORT BLAIR	ANDAMAN & NICOBAR Mitali Enterprises, (03192) 230749 Kumar General Store, 9932082455	GWALIOR INDORE	MADHYA PRADESH Krishna Sons, (0751) 2320431 Arun Prakashan, (0731) 2454372, 2459448, 3244544 Akurti Publishing House, (0731) 2456024, 2456025 Student Book Depot, (0731) 2535892 UBS Publisher & Dist., 97547535412 Akash Book Distributor, (0761) 4063099 Vinay Pustak Sadan, (0761) 2411194 Agrasen Stationers, (07622) 403377, 09229658467 Siddharth Enterprises, (07662) 404019 New Virat Pustak Bhandar, (07652) 244185
GUNTOOR HYDERABAD	ANDHRA PRADESH Y. Renuka Devi, (0863) 2252308 Himalaya Book World, (040) 24732057, 66822350 Sri Balaji Book Depot, (040) 27613300 UBS Publisher & Dist., 9951078309 Unique Book World, (040) 40061423 Sri Kanka Durga Book Stall, 09849144007 Akshaya Book Corner, 09666155555 Vijaysai Book Centre, (0866) 6627554 JBD Educational, (0891) 6666062, 6636669 Sri Rajeshwari Book Link, (0891) 6661718	BHOPAL JABALPUR	MAHARASHTRA Heera Stationers, (0241) 2418774 Harney Book Depot, 09922669647 Rathi Paper Traders, (0724) 2452679, 2452979 Delta Pen House, (0721) 2663672 Aarti Book Centre, (0240) 2663672 Maya Book Centre, (0240) 2360150 Anil Book Depot, (02582) 225412 Novelty Book Depot, (07172) 277418 Sharma Book Depot, (0257) 6958794 Vidhyadhan Book House, (0257) 2225548 Jai Book Co., (0231) 2651008 Shivam Book & Stationers, (022) 28381014, 28236000 Reshma Agency, (022) 23070853 Vidyardhi Sales Agencies, (022) 43029999 Krishna Book Store, (022) 27744962, 32980838 Ravechi Book Stationary, 022-27720445 Triupati Books Store, 0712-24560864 Laxmi Pustakalya, (0712) 2720379 Novelty Book Depot, (0712) 2534884 Renuka Book Distributor, 9765406133 Shree Balaji Agency, (0712) 2452361 UBS Publisher & Dist., (0712) 6437909, 2736010 Vijay Book Depot, (0712) 2534217, 2520496 India Book Agencies, 9890489460 Maheshwari General & Gift Centre, 9422870354 Vijay Book Centre, 9872994436 New Venture Natraj Book Shop, (020) 24485054 Sai Shubham, (020) 69498635, 9975687687 UBS Publisher & Dist., 9860288838 G. R. Tamhankar Books, (0233) 2373605 Mahavir General Store, (0217) 2723405 Unique Traders, (07152) 243617, 9960644752 Dilip Book Agencies, (07232) 245450
VJAYAWADA	ASSAM Raju Pustak Sadan, (03664) 222403 Book Emporium, 9864057226 Manika Books, 8876881519 UBS Publisher, 9401154448	KATNI REWA Shahdol	ODISHA Pragenya Book Store, (0674) 2405757 Sagar Book Store, (0674) 2516040, 2506040 UBS Publishers & Dist., (0674) 2314446
VISHAKHAPATNAM	BIHAR New Aman Book & Stationers, (06344) 220757 Pustak Bhandar, 9097046555 Gyan Ganga, (0612) 2578394, 2263011 Nova Publisher & Distributors, (0612) 2666404 UBS Publisher, (0612) 267397, 2672856 Shri Durga Pustak Mandir, (0612) 2301704 Vikas Book Depot, (0612) 2304753 Sharda Pustak Bhandar, (0612) 2300600 Bokaro Student Friends, (0612) 2300600 Chaurasia Book Centre, 09006717044	AHMEDNAGAR AKOLA	PUNJAB Bhaian Di Hatti, (01679) 2321717 Nav Chetan Book, 09779050692 Janta Book Depot, (0164) 2253993 Amit Book Depot, (0161) 2727038 Bhatia Book Centre, (0161) 2747713, 9815277131 Adarsh Pustak Bhandar, (0175) 2311430
BONGAIGAON GUWAHATI	CHHATTISGARH Bhagwati Bhawani Book Depot, (0788) 2327620 Shri Ramdev Traders, (0771) 4099446, 9425213679	AMRAVATI AURANGABAD	RAJASTHAN Sunil Book Centre, (05644) 233777, 220650 Raj Trader, 0744-24429090 Nakoda Book Depot, (01482) 239653 Goyal Book Distributors, (0141) 2571673 Saraswati Book House, (0141) 2610823 Student Book Company, (01572) 256094
MUNGER MUZAFFARPUR PATNA	DELHI Mittal Books, (011) 23288887 Prozo (Global Educa Share Pvt. Ltd) 8587837835 R.D. Chawla & Sons, (011) 23282361, 9990093567 UBS Publisher, (011) 23273601	KOLHAPUR MUMBAI	TAMIL NADU CBSE Book Shop, (0422) 2393093 Majestic Book House, (0422) 2382333 Sapna Book House, (0422) 4629999 UBS Publisher & Dist., (0422) 2499914 Arraba Book Traders, (044) 25387868 Indian Book House, (044) 24327784 Kalaimagal Store, (044) 45544072 Ravi Book House, (044) 24613174 Ruby Books, (044) 26425958 UBS Publisher & Dist., (044) 2374622 Sri Laxmi Book Stall, 9443085499 Rasi Publication, (0431) 2703692
PURNEA	GUJARAT Abhyas Book, (079) 26766366 Bhagwati Centre, (079) 40065346, 9825007199 Hardik Book Agency, (079) 22148725 Patel Book Agency, (079) 25324741 Rohinee Sales, (079) 27503622 Tushar Book, (079) 26578741, 26587103 Uppal Brother, (079) 22860529 Ajay Book Store, (02692) 238237 Arham Book Depot, (02836) 237833 College Store, (02637) 258642 Maneesh Book Shop, (0265) 2363270 Vinay General Store, 9925817463, 8758882123 Kazi & Sons, (0261) 2767156, 9879328741 Saraswati Book House, (0261) 22095608, 8153022244 Shopping Point, (0261) 2230097, 9824108663	NAVI MUMBAI	TRIPURA Balaji Book House, 9862208819 Book Corner, (0381) 2301945, 9856358594
DURG RAIPUR	HARYANA Adlakha Stationery, (0124) 2306991, 9136277733	NAGPUR	UTTAR PRADESH Ajay Book, (0562) 2254621 Govind Book Shoppe, (0562) 2526134 Manav Book Dist., (0562) 6545883, 9760021996 Om Pustak Mandir, (0562) 2464014, 3059218 Shaligram & Sons, (0571) 2421887 Mehrotra Book Depot, (0532) 2400129, 2266128 Sasta Sahitya Sadan, (05462) 224421 Saraswati Shishu, (05498) 221042, 8317006473 Vidya Kendra, 9415281234 UBS Publication, (0522) 4025144 Vishnu Book Depot, (0565) 2401096 UBS Publisher & Dist., (0120) 4205516 Bokaro Student Friends, (0542) 2401250
DELHI	DELHI Mittal Books, (011) 23288887 Prozo (Global Educa Share Pvt. Ltd) 8587837835 R.D. Chawla & Sons, (011) 23282361, 9990093567 UBS Publisher, (011) 23273601	NANDED	WEST BENGAL Chukerverty Chatterjee, (033) 22416425 Eureka Book Emporium, (033) 25934001 Katha—O—Kahani Pvt. Ltd., 22419071, 22196313 Krishna Book House, 8420431085 Oriental Publishers, (033) 22191591, 22198367 Saha Book House, (033) 22193671 Agarwal Book House, (0353) 2535274 Novelty Books, (0353) 2525445
GOA	GOA Golden Heart Emporium, (0832) 2725208, 3257383	PUNE	
AHMEDABAD	GUJARAT Abhyas Book, (079) 26766366 Bhagwati Centre, (079) 40065346, 9825007199 Hardik Book Agency, (079) 22148725 Patel Book Agency, (079) 25324741 Rohinee Sales, (079) 27503622 Tushar Book, (079) 26578741, 26587103 Uppal Brother, (079) 22860529 Ajay Book Store, (02692) 238237 Arham Book Depot, (02836) 237833 College Store, (02637) 258642 Maneesh Book Shop, (0265) 2363270 Vinay General Store, 9925817463, 8758882123 Kazi & Sons, (0261) 2767156, 9879328741 Saraswati Book House, (0261) 22095608, 8153022244 Shopping Point, (0261) 2230097, 9824108663	SANGLI SOLAPUR WARDHA YAVATMAL	
BALLABH VIDYANAGAR GANDHIDHAM NAVSARI VADODARA VAPI SURAT	GUJARAT Abhyas Book, (079) 26766366 Bhagwati Centre, (079) 40065346, 9825007199 Hardik Book Agency, (079) 22148725 Patel Book Agency, (079) 25324741 Rohinee Sales, (079) 27503622 Tushar Book, (079) 26578741, 26587103 Uppal Brother, (079) 22860529 Ajay Book Store, (02692) 238237 Arham Book Depot, (02836) 237833 College Store, (02637) 258642 Maneesh Book Shop, (0265) 2363270 Vinay General Store, 9925817463, 8758882123 Kazi & Sons, (0261) 2767156, 9879328741 Saraswati Book House, (0261) 22095608, 8153022244 Shopping Point, (0261) 2230097, 9824108663	BHUBANESWAR	
GURGAON	HARYANA Adlakha Stationery, (0124) 2306991, 9136277733	BARNALA	
BOKARO DHANBAD HAZARIBAGH	JHARKHAND Bokaro Student Friends, (06542) 234706 Bokaro Student Friends, (0362) 2302493 Khandelwal Book Depot, (06546) 222287, 225325, 9708607489	BHATINDA LUDHIANA	
RANCHI	Gyan Ganga Ltd., (0651) 2563570 Bokaro Student Friends, (0651) 2212447	PATIALA	
BENGALURU	KARNATAKA Vasanta Book House, (080) 22216342 Maruti Book Centre, (080) 40124558 Prakash Sahitya (080) 22871030 Sri Sai Ram Book House, (080) 41472635 Sri Balaji Books & Stationers, (080) 22117659 Sapna Book House – (Gandhinagar, (080) 40114455), (Sadashivnagar, (080) 41236271), (Jayanagar, (080) 49066700), (Koramangala, (080) 40839999), (Residency Road, (080) 49166999), (Indiranagar, (080) 40455999), (Bannerghatta Road, (080) 42566299), (Nagavara, (080) 67294151), UBS Publisher & Dist., 9341621469, 22266681 Chaitanya Agency and Books, 8277477778 Laxmi Agencies, (08192) 231271 L.E. Bhavikatti, (08472) 261400 Renuka Book Depot, (0836) 4257624 Sapna Book House, (0836) 4249999 School Book Co., (0824) 2496938, 4281777 Sapna Book House, (0824) 4232800 Sapna Book House, (0821) 4004499 Diana Book Gallery, 09886185310	BHARATPUR KOTA BHILWARA JAIPUR	
BELLARY DAVANGERE GULBARGA HUBLI	KERALA Aman Book Stall, (0495) 3048187, 2721282 Asad Book House, (0484) 2370431 Academic Book House, (0484) 2376613 Surya Book House, (0484) 2363721 H & C Store, (0484) 2350128 UBS Publisher & Dist., (0484) 2353901 Mustafa, (0497) 2769809 H & C Store, (0481) 2304351 BOOK Centre, (0481) 2566992 T.B.S. Publishers, (0495) 2721025, 2720085 H & C Store, (0484) 2344337 Minerva Books, (0457) 2338301 Academic Book House, (0471) 2333349 H & C Store, (0471) 2572010, 9446411996	SIKAR	
MANGALORE		COIMBATORE	
MYSORE SHIMOGA		CHENNAI	
CALICUT ERNAKULAM		PONDICHERRY TRICHY	
JOMER NILAYAM		AGARTALA	
KANNUR KOTTAYAM		AGRA	
KOZHIKODE PALARIVATTOM THRISSUR TRIVANDRUM		ALIGARH ALLAHABAD AZAMGARH BALIA	
		LUCKNOW MATHURA NOIDA VARANASI	
		KOLKATA	
		SILIGURI	

For more Book-shops visit www.OswaalBooks.com

© Publisher

Oswaal Books

Disclaimer :

Oswaal Books has exercised due care and caution in collecting the data before publishing this book. In spite of this if any omission, inaccuracy or printing error occurs with regards to the data contained in this book, Oswaal Books will not be held responsible or liable. Oswaal Books will be grateful if you could point out any such error or your suggestion which will be of great help for other readers.

CONTENTS

● <i>Syllabus</i>	<i>iv - viii</i>
1. Crop Production and Management	1 - 6
2. Micro-Organisms : Friend and Foe	7 - 13
3. Synthetic Fibres and Plastics	14 - 18
4. Materials : Metals and Non-Metals	19 - 25
5. Coal and Petroleum	26 - 30
6. Combustion and Flame	31 - 36
7. Conservation of Plants and Animals	37 - 42
8. Cell - Structure and Functions	43 - 47
9. Reproduction in Animals	48 - 54
10. Reaching the Age of Adolescence	55 - 60
11. Force and Pressure	61 - 64
12. Friction	65 - 68
13. Sound	69 - 74
14. Chemical Effects of Electric Current	75 - 79
15. Some Natural Phenomena	80 - 85
16. Light	86 - 91
17. Stars and the Solar System	92 - 97
18. Pollution of Air and Water	98 - 103



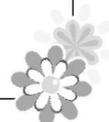
Science Syllabus Class-VIII

Questions	Key Concepts	Resources	Activity/ Processes
<p style="text-align: center;">1. FOOD</p> <p>Crop production Crop production : How are different food crops produced? What are the various foods we get from animal sources?</p> <p>Micro-organisms What living organisms do we see under a microscope in a drop of water? What helps make curd? How does food go bad? How do we preserve food?</p> <p style="text-align: center;">2. Materials</p> <p>Materials in daily life Are some of our clothes synthetic? How are they made? Where do the raw materials come from? Do we use other materials that are synthetic? Do we use cloth (fabric) for purposes other than making clothes to wear? What kind of fabric do we see around us? What are they used for?</p> <p>Different kinds of materials and their reactions. Can a wire be drawn out of wood? Do copper or aluminium also rust like iron? What is the black material inside a pencil? Why are electrical wires made of aluminium or copper?</p> <p>How things change/react with one another What happens to the wax when a candle is burnt? Is it possible to get this wax back?</p>	<p>Crop production Soil preparation, selection of seeds, sowing, applying fertilizers, irrigation, weeding, harvesting and storage; nitrogen fixation, nitrogen cycle.</p> <p>Micro organisms – useful and harmful.</p> <p>Synthetic clothing materials. Other synthetic materials, especially plastics; usefulness of plastics and problems associated with their excessive use. There are a variety of fibrous materials in use. A material is chosen based on desired property.</p> <p>Metals and non metals.</p> <p>Combustion, flame.</p>	<p>Interaction and discussion with local men and women farmers about farming and farm practices; visit to cold storage, go- downs; visit to any farm/nursery/garden.</p> <p>Microscope, kit materials; information about techniques of food preservation.</p> <p>Sharing of prior knowledge, source materials on petroleum products.</p> <p>Collection of material from neighbourhood or should be part of the kit.</p> <p>Kit items.</p> <p>“The Chemical History of a Candle”, by M. Faraday, 1860.</p>	<p style="text-align: center;">(Periods - 22)</p> <p>Preparing herbarium specimens of some crop plants; collection of some seeds etc; preparing a table/chart on different irrigation practices and sources of water in different parts of India; looking at roots of any legume crop for nodules, hand section of nodules.</p> <p>Making a lens with a bulb; Observation of drop of water, curd, other sources, bread mould, orange mould under the microscope; experiment showing fermentation of dough – increase in volume (using yeast) – collect gas in balloon, test in lime water.</p> <p style="text-align: center;">(Periods - 26)</p> <p>Survey on use of synthetic materials. Discussion. Testing various materials – for action of water, reaction on heating, effect of flame, electrical conductivity, thermal conductivity, tensile strength.</p> <p>Simple observations relating to physical properties of metals and non-metals, displacement reactions, experiments involving reactions with acids and bases.</p> <p>Introduction of word equations.</p> <p>Experiments with candles.</p>

Questions	Key Concepts	Resources	Activity/ Processes
<p>What happens to kerosene/natural gas when it is burnt?</p> <p>Which fuel is the best? Why?</p> <p>3. The World of the Living</p> <p>Why conserve</p> <p>What are reserve forests/sanctuaries etc? How do we keep track of our plants and animals? How do we know that some species are in danger of disappearing? What would happen if you continuously cut trees?</p> <p>The cell</p> <p>What is the internal structure of a plant – what will we see if we look under the microscope? Which cells from our bodies can be easily seen? Are all cells similar?</p> <p>How babies are formed</p> <p>How do babies develop inside the mother? Why does our body change when we reach our teens? How is the sex of the child determined? Who looks after the babies in your homes? Do all animals give birth to young ones?</p> <p>4. Moving things, People and Ideas</p> <p>Idea of force</p> <p>What happens when we push or pull anything? How can we change the speed, direction of a moving object?</p> <p>How can we shape the shape of an object?</p>	<p>All fuels release heat on burning. Fuels differ in efficiency, cost etc. Natural resources are limited. Burning of fuels leads to harmful by products.</p> <p>Conservation of biodiversity / wild life/ plants; zoos, sanctuaries, forest reserves etc. flora, fauna endangered species, red data book; endemic species, migration.</p> <p>Cell structure, plant and animal cells, use of stain to observe, cell organelles– nucleus, vacuole, chloroplast, cell membrane, cell wall.</p> <p>Sexual reproduction and endocrine system in animals, secondary sexual characters, reproductive health; internal and external fertilisation.</p> <p>Idea of force-push or pull; change in speed, direction of moving objects and shape of objects by applying force; contact and non-contact forces.</p>	<p>Collecting information from home and other sources.</p> <p>Films on wild life, TV programmes, visit to zoo / forest area / sanctuaries etc.; case study with information on dis-appearing tigers; data on endemic and endangered species from MEF, Govt. of India, NGOs.</p> <p>Microscope, onion peels, epidermal peels of any leaves, petals etc, buccal cavity cells, Spirogyra; permanent slides of animal cells.</p> <p>Counsellors, films, lectures.</p> <p>Daily-life experience, kit items.</p>	<p>Collecting information.</p> <p>Discussions involving whole class.</p> <p>(Periods - 44)</p> <p>Discussion on whether we find as many diverse plants/ animals in a 'well kept area' like a park or cultivated land, as compared to any area left alone. Discussion on depletion of wild life, why it happens, on poaching, economics.</p> <p>Use of a microscope, preparation of a slide, observation of onion peel and cheek cells, other cells from plants e.g. Hydrilla leaf, permanent slides showing different cells, tissues, blood smear; observation of T.S. stem to see tissues; observing diverse types of cells from plants and animals (some permanent slides).</p> <p>Discussion with counsellors on secondary sexual characters, on how sex of the child is determined, safe sex, reproductive health; observation on eggs, young ones, life cycles.</p> <p>Discussion on Gender issues and social taboo's.</p> <p>Observing and analysing the relation between force and motion in a variety of daily-life situations.</p> <p>Demonstrating change in speed of a moving object, its direction of motion and shape by applying force. Measuring the weight of an object, as a force (pull) by the earth using a spring balance.</p>



Questions	Key Concepts	Resources	Activity/ Processes
<p>Friction</p> <p>What makes a ball rolling on the ground slow down?</p>	<p>Friction – factors affecting friction, sliding and rolling friction, moving; advantages and disadvantages of friction for the movement of automobiles, airplanes and boats/ships; increasing and reducing friction.</p>	<p>Various rough and smooth surfaces, ball bearings.</p>	<p>Demonstrating friction between rough/smooth surfaces of moving objects in contact, and wear and tear of moving objects by rubbing (eraser on paper, card board, sand paper).</p> <p>Activities on static, sliding and rolling friction. Studying ball bearings. Discussion on other methods of reducing friction and ways of increasing friction.</p>
<p>Pressure</p> <p>Why are needles made pointed? Why does a balloon burst if too much air is blown into it? Why does an inverted glass/ bottle/pitcher resist being pushed down into water? How can air/liquids exert pressure?</p>	<p>Idea of pressure; pressure exerted by air/liquid; atmospheric pressure.</p>	<p>Daily-life experiences; Experimentation-improvised manometer and improvised pressure detector.</p>	<p>Observing the dependence of pressure exerted by a force on surface area of an object.</p> <p>Demonstrating that air exerts pressure in a variety of situations.</p> <p>Demonstrating that liquids exert pressure.</p> <p>Designing an improvised manometer and measuring pressure exerted by liquids.</p> <p>Designing improvised pressure detector and demonstrating increase in pressure exerted by a liquid at greater depths.</p>
<p>Sound</p> <p>How do we communicate through sound? How is sound produced? What characterises different sounds?</p>	<p>Various types of sound; sources of sound; vibration as a cause of sound; frequency; medium for propagation of sound; idea of noise as unpleasant and unwanted sound and need to minimise noise.</p>	<p>Daily-life experiences; kit items; musical instruments.</p>	<p>Demonstrating and distinguishing different types (loud and feeble, pleasant/ musical and unpleasant/ noise, audible and inaudible) of sound.</p> <p>Producing different types of sounds. using the same source. Making a 'Jal Tarang'. Demonstrating that vibration is the cause of sound.</p> <p>Designing a toy telephone. Identifying various sources of noise. (unpleasant and unwanted sound) in the locality and thinking of measures to minimise noise and its hazards (noise-pollution).</p>
<p>5. How Things Work</p> <p>Electric current and circuits</p> <p>Why do we get a shock when we touch an electric appliance with wet hands ?</p>	<p>Water conducts electricity depending on presence/ absence of salt in it. Other liquids may or may not conduct electricity.</p>	<p>Rubber cap, pins, water, bulb or LED, cells, various liquids.</p>	<p>(Periods - 14)</p> <p>Activity to study whether current flows through various liquid samples (tap water, salt solution, lemon juice, kerosene, distilled water if available).</p>



Questions	Key Concepts	Resources	Activity/ Processes
<p>What happens to a conducting solution when electric current flows through it?</p> <p>How can we coat an object with a layer of metal?</p>	<p>Chemical effects of current.</p> <p>Basic idea of electroplating.</p>	<p>Carbon rods, beaker, water, bulb, battery.</p> <p>Improvised electrolytical cell, CuSO_4</p>	<p>Emission of gases from salt solution. Deposition of Cu from copper sulphate solution. Electric pen using KI and starch solution.</p> <p>Simple experiment to show electroplating.</p>
<p>6. Natural Phenomena</p> <p>Rain, thunder and lightning</p>	<p>Clouds carry electric charge. Positive and negative charges, attraction and repulsion. Principle of lightning conductor.</p>	<p>Articles on clouds and lightning; kit items.</p>	<p>(Periods - 26)</p> <p>Discussion on sparks. Experiments with comb and paper to show positive and negative charge. Discussion on lightning conductor.</p>
<p>Light</p> <p>What is lightning? What safety measures should we take against lightning strikes?</p>	<p>Laws of reflection.</p>	<p>Mirror, source of light, ray source (mirror covered with black paper with a thin slit).</p>	<p>Exploring laws of reflection using ray source and another mirror.</p>
<p>What are the differences between the images formed on a new utensil and an old one? Why is there this difference?</p> <p>When you see your image in the mirror it appears as if the left is on the right – why?</p> <p>Why don't we see images on all surfaces around us?</p> <p>What makes things visible?</p>	<p>Characteristics of image formed with a plane mirror.</p> <p>Regular and diffused reflection.</p> <p>Reflection of light from an object to the eye.</p>	<p>Plane glass, candle, scale.</p> <p>Experience.</p> <p>Mirrors and objects to be seen.</p>	<p>Locating the reflected image using glass sheet and candles.</p> <p>Discussion with various examples.</p> <p>Activity of observing an object through an object through a straight and bent tube; and discussion.</p>
<p>How do we see images of our back in a mirror?</p> <p>Why do we sometimes see colours on oil films on water?</p>	<p>Multiple reflection.</p> <p>Dispersion of light.]</p>	<p>Plane mirror, water.</p> <p>Model or chart of the human eye.</p>	<p>Observing multiple images formed by mirrors placed at angles to each other.</p> <p>Making a kaleidoscope.</p>
<p>What is inside our eye that enables us to see?</p> <p>Why are some people unable to see?</p>	<p>Structure of the eye.</p> <p>Lens becomes opaque, light not reaching the eye. Visually challenged use other senses to make sense of the world around. Alternative technology available. Role of nutrition in relation to blindness</p>	<p>Experiences of children; case histories.</p> <p>Samples of Braille sheets.</p>	<p>Observing spectrum obtained on a white sheet of paper/wall using a plane mirror inclined on a water surface at an angle of 45°.</p> <p>Observing reaction of pupil to a shining torch. Demonstration of blind spot.</p> <p>Description of case histories of visually challenged people who have been doing well in their studies and careers.</p> <p>Activities with Braille sheet.</p>

Questions	Key Concepts	Resources	Activity/ Processes
<p>Night sky</p> <p>What do we see in the sky at night? How can we identify stars and planets?</p>	<p>Idea about heavenly bodies/ celestial objects and their classification—moon, planets, stars, constellations. Motion of celestial objects in space; the solar system.</p>	<p>Observation of motion of objects in the sky during the day and at night; models, charts, role-play and games, planetarium.</p>	<p>Observing and identifying the objects moving in the sky during the day and at night. Observing and identifying some prominent stars and constellations. Observing and identifying some prominent planets, visible to the naked eye, (Venus, Mars, Jupiter) in the night sky and their movement. Design and preparing models and charts of the solar system, constellations, etc. Roleplay and games for understanding movement of planets, stars etc.</p>
<p>Earthquakes</p> <p>What happens during an earthquake? What can we do to minimise its effects?</p>	<p>Phenomena related to earthquakes.</p>	<p>Earthquake data; visit to seismographic centre.</p>	<p>Looking at structures/ large objects and guessing what will happen to them in the event of an earthquake; activities to explore stable and unstable structures.</p>
<p>7. Natural Resources</p> <p>Man's intervention in phenomena of nature</p> <p>What do we do with wood?</p> <p>What if we had no wood?</p> <p>What will happen if we go on cutting trees/grass without limit?</p> <p>What do we do with coal and petroleum?</p> <p>Can we create coal and petroleum artificially?</p> <p>Pollution of air and water</p> <p>What are the various activities by human beings that make air impure?</p> <p>Does clear, transparent water indicate purity?</p>	<p>Consequences of deforestation: scarcity of products for humans and other living beings, change in physical properties of soil, reduced rainfall. Reforestation; recycling of paper.</p> <p>Formation of coal and petroleum in nature. (fossil fuels?). Consequences of over extraction of coal and petroleum.</p> <p>Water and air are increasingly getting polluted and therefore become scarce for use. Biological and chemical contamination of water; effect of impure water on soil and living beings; effect of soil containing excess of fertilizers and insecticides on water resources. Potable water.</p>	<p>Data and narratives on deforestation and on movements to protect forests.</p> <p>Background materials, charts etc.</p> <p>Description of some specific examples of extremely polluted rivers.</p>	<p>Narration and discussions. Project- Recycling of paper.</p> <p>Discussion.</p> <p>Case study and discussion. Purification of water by physical and chemical methods including using sunlight. Discussion on other methods of water purification.</p>

CROP PRODUCTION AND MANAGEMENT

Quick Review

- To provide food for a large population, regular production, proper management and distribution of food is necessary.
- When nomadic people settled and cultivated lands, produced rice, wheat and other crops, then agriculture was born.
- **Crop** : When plants of same kind are grown and cultivated at one place on a large scale, it is called crop.
- In India, two cropping patterns are found :
 - **Kharif crops** : Grown from June to September (Rainy Season) *e.g.*, paddy, maize, soyabean, etc.
 - **Rabi crops** : Grown from October to March (Winter Season) *e.g.*, gram, pea, mustard, linseed etc.
- **Agricultural implements** : Tools used for the purpose of various agricultural activities.
- Main agricultural implements are :
 - Plough
 - Hoe
 - Cultivator
 - Tools used for sowing seeds :
 - (a) **Traditional tool** : It is shaped like a funnel passed down through pipes having sharp ends, which pierce into the soil and place seeds there.
 - (b) **Seed drill** : Seed drill tools sow seeds uniformly at proper distance and depth.
- **Agricultural practices** :

General activities undertaken by the farmers over a period of time to cultivate crops are called agricultural practices. They are as follow :

 1. **Preparation of soils** :
 - It is the first step before growing a crop. Soil has to be loosened (The process of loosening and turning of the soil in called tilling or ploughing).
 - This also helps in growth of earthworms and microbes that add humus to it.
 - The ploughed field have big pieces of soil called crumbs.
 2. **Sowing** : Before sowing, good quality seeds are selected. Farmers are advised to use good, healthy and high yielding seeds.

3. **Adding manures and fertilizers** : The substances that are added to the soil in the form of nutrients for the healthy growth of plants are called manures and fertilizers.

Manure : Is an organic substance obtained from the decomposition of plant or animal wastes.

Fertilizers : Are chemical substances which are rich in a particular nutrient. *e.g.*, urea, ammonium sulphate, super phosphate, Potash, NPK.

4. **Irrigation** : The supply of water to crops at different intervals is called irrigation. Sources of irrigation are—wells, tubewells, ponds, lakes, rivers, dams and canals.

● **Methods of irrigation.**

(A) **Traditional methods** : Water available in wells, lakes and canal is lifted up by different methods.

(i) Moat (Pulley system)

(ii) Chain pump

(iii) Dhekli and

(iv) Rahat (Lever system)

(B) **Modern methods** :

(i) **Sprinkler system** : Rotating nozzles sprinkle water as if it is raining. (Useful for sandy soil)

(ii) **Drip irrigation** : Water falls drop by drop. (Best for fruits and vegetables).

5. **Protection from weeds** :

(i) Undesirable plants that naturally grow with plants are called **weeds**.

(ii) Removal of weeds is called **weeding**. It can be done by different methods as follows :

(a) Manually (Uprooting or cutting them close to ground).

(b) Using weedicide, *e.g.*, 2, 4 – D.

6. **Harvesting** : The cutting of crop after its maturity is called **harvesting**.

In the harvested crop, the grain seeds are separated from the chaff. This process is called **threshing** : (It is done by machine called **Combine**).

7. **Storage** : Before storing, grains are properly dried in the Sun to reduce the moisture in them. This prevents the attack by pests, bacteria and fungi.

(i) Farmers store grains in jute bags or metallic bins.

(ii) Large scale storage of grain is done in **silos** and **granaries**.

➤ **Animal husbandry** : Animals, reared at home or in farms, have to be provided with proper food, shelter and care. When it is done on large scale, it is called animal husbandry.

Objective Type Questions (1 mark)

(A) Multiple Choice Questions

1. Which is not a Kharif crop ?

- (a) Paddy (b) Gram
(c) Maize (d) Soya bean

2. Sometimes, manure is added to the soil before filling because :

- (a) less manure is used.
(b) it helps in proper mixing of manure with soil.
(c) save labour and time.
(d) none of above.

3. Process of separating grain seeds from the chaff is called :
 (a) threshing (b) harvesting
 (c) weeding (d) sowing.
4. Which of the following is not a traditional method of irrigation ?
 (a) Moat (b) Chain pump
 (c) Drip system (d) Rahat.
5. An agricultural implement used since ancient times for tilling the soil, adding fertilizers, removing weeds etc. is :
 (a) hoe (b) combine
 (c) plough (d) seed drill.
6. The use of manure (which is not correct) :
 (a) Enhances the water-holding capacity of the soil.
 (b) Improves soil texture.
 (c) Increases the number of friendly microbes
 (d) Also becomes a source of water pollution.

Ans. 1. (b) Gram.

2. (b) it helps in proper mixing of manure with soil.
3. (a) threshing.
4. (c) drip system.
5. (c) plough.
6. (d) also becomes the source of water pollution.

(B) Fill in the blanks :

1. and are the examples of Rabi crops.
2. The ploughed field may have big pieces of soil called

3. The main part of the plough is a long log of wood, which is called a
4. Now-a-days ploughing is done by
5. Seed drill sows the seeds uniformly at proper and
6. The decomposed matter is used as
7. are the chemical substances that are rich in a particular nutrient.
8. is a weedicide.
9. and are storage of grains in large scale.
10. Food is also obtained from reared animals, called

Ans. 1. Wheat, gram.

2. crumbs.
3. plough shaft.
4. tractor driver cultivator.
5. distance, depth.
6. organic manure.
7. fertilizers.
8. 2, 4 – D.
9. Silos, granaries.
10. animal husbandry.

(C) Match the Columns :

- | | |
|-------------------------------------|----------------|
| 1. Granaries | A. NPK |
| 2. Kharif crop | B. 2, 4 – D |
| 3. Weedicide | C. Dhekli |
| 4. Traditional method of Irrigation | D. Silos |
| 5. Fertilizers. | E. Ground nut. |

- Ans. 1.** → (D), **2.** → (E), **3.** → (B), **4.** → (C),
5. → (A).

Very Short Answer Type Questions (1 mark)

Q. 1. Write full form of NPK.

Ans. Nitrogen, Phosphorus, Potassium.

Q. 2. What is winnowing ?

Ans. Winnowing is a process by which small farmers do the separation of grains by chaff.

Q. 3. When was agriculture born ?

Ans. When nomadic people cultivated land and

produced rice, wheat and other food crops, agriculture was born.

Q. 4. What are the crops grown generally from June to September called ?

Ans. Crops grown generally from June to September are called Kharif crops. e.g., maize, groundnut, soyabean.

Q. 5. What is the first step before growing a crop ?

Ans. The first step before growing a crop is the preparation of soil.

Q. 6. What are the main tools used for agriculture practices ?

Ans. The main tools are plough, hoe and cultivator.

Q. 7. What will happen if freshly harvested grains are stored without drying ?

Ans. Grains should be properly dried to reduce the moisture and this prevents the attack by insects pests, bacteria and fungi.

Q. 8. Where is the sprinkler water system useful ?

Ans. Sprinkle water system is useful on the uneven land and at the land where water is not available. It is good for sandy soil.

Q. 9. Why traditional irrigation methods are cheaper ?

Ans. Cattle or human labour is used in these methods so they are cheaper.

Q. 10. Name two harvest festivals celebrated in India.

Ans. Pongal, Baisakhi.

Q. 11. What is the process of loosening and turning of the soil called ?

Ans. Tilling or ploughing.

Q. 12. What is a strong triangular iron strip of plough called ?

Ans. Plough share.

Q. 13. Who increases the number of friendly microbes ?

Ans. The loosened soil.

Q. 14. The irrigation system that sprinkles water on the crops as if it is raining ?

Ans. Sprinkle water system.

Short Answer Type Questions—I (2 marks)

Q. 1. Why is the process of loosening and turning of the soil an important task in agriculture ?

Ans. This allows the roots to penetrate deep into soil. The loose soil allows the roots to breathe easily deep into the soil and also helps in the growth of earthworms and microbes present in soil as they add humus to it.

Q. 2. Why is levelling of soil essential ?

Ans. The field is levelled for sowing and for irrigation purposes.

Q. 3. What are the advantages of using seed drill ?

Ans. Seed drill sows the seeds uniformly at proper distance and depth.

Q. 4. Why fields have to be watered regularly ?

Ans. Water is essential because germination of seeds does not take place under dry

conditions.

Q. 5. How can a farmer increase the fertility of the soil ?

Ans. Farmers can increase the fertility of the soil by :

— adding manure and fertilizers.

— crop rotation.

— leaving the field uncultivated in between two crops.

Q. 6. Why is weeding necessary ?

Ans. Weeding is necessary since weeds compete with the crops plants for water, nutrients, space and light. They affect growth of the crop. Some weeds may be poisonous for animals and human beings.

Short Answer Type Questions–II (3 marks)

Q.1. Differentiate between fertilizer and manure.

Ans. Differences between fertilizer and manure.

S. No.	Fertilizer	Manure
1.	A fertilizer is an inorganic salt.	Manure is a natural substance obtained by the decomposition of cattle dung, human waste and plant residues.
2.	A fertilizer is prepared in factories.	Manure can be prepared in the fields.
3.	A fertilizer does not provide any humus to the soil.	Manure provides a lot of humus to the soil.
4.	Fertilizers are very rich in plant nutrients such as nitrogen, phosphorus and potassium.	Manure is relatively less rich in plant nutrients.

Q.2. List all the activities practiced during cultivation of crops.

Ans. The activities practiced during cultivation of crops are :

- (1) preparation of soil, (2) sowing,
- (3) adding manure and fertilizers,
- (4) Irrigation, (5) protecting from weeds,
- (6) harvesting, (7) storage.

Q.3. Explain the structure of plough.

Ans. Plough is a tool used since ancient times for

tilling soil, adding manure etc. This implement is made of wood. It contains a strong triangular iron strip called ploughshare.

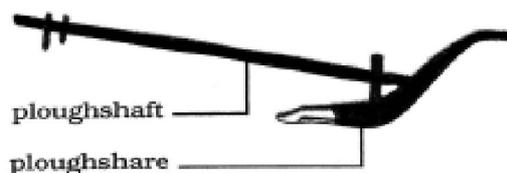


Fig. Plough

The main part of the plough is a long wood called ploughshaft. There is a handle at one end. Other end is attached to beam, placed on the bullock's neck.

Q.4. What are the advantages of manure ?

Ans. Advantages of manure :

- (i) It enhances the waterholding capacity of the soil.
- (ii) It makes the soil porous due to which exchange of gases becomes easy.
- (iii) It increases the number of friendly microbes.
- (iv) It improves the texture of the soil.

Q.5. What are the disadvantages of fertilizers ?

Ans. Disadvantages of using fertilizers :

- (i) They become source of water pollution.
- (ii) They make soil less fertile.
- (iii) They do not provide any humus to the soil.

Long Answer Type Questions (5 marks)

Q.1. Discuss various systems of irrigation.

Ans. The supply of water to crops at different intervals is called irrigation.

Various systems of irrigation are :

- (i) **Traditional methods :** The water available in wells, lakes and canals is lifted up by :
 - (a) Moat (Pulley system);
 - (b) Chain pump

(c) Dhekli and;

(d) Rahat (Lever system)

Pumps are commonly used for lifting water.

(ii) **Modern methods :**

- (a) **Sprinkler system :** This system is more useful on uneven land. The perpendicular pipes, having rotating nozzles on top, are jointed to the main pipeline at regular intervals. When

water flows through main pipes, it gets sprinkled on the crop as if it is raining.

- (b) **Drip system** : In this system water falls drop by drop just at the position of the roots. It is the best technique for watering fruit plants, garden and trees.

Q. 2. Explain the main tools used to prepare soil.

Ans. Main tools used to prepare soil are as follows :

- (a) **Plough** : This implement is made of

wood and is drawn by a pair of bulls or other animals. It is used for tilling the soil, adding manure, removing the weeds, scraping of soil etc.

- (b) **Hoe** : It is a simple tool that is used for removing weeds and for loosening the soil.

- (c) **Cultivator** : Ploughing is done by tractor-driver cultivator. It uses same labour and time.

Value Based Questions (5 marks)

Q. 1. What is the importance of using manure and fertilizers as an agricultural practice ?

Ans. Using manure and fertilizers as an agriculture practice is important as continuous growth of crops makes the soil poorer in certain nutrients. These both are added to the soil in the form of nutrients for the healthy growth of

plants. Manure replenishes the soil with nutrients and also improves water retaining capacity whereas fertilizers make soil rich in a particular nutrient. They also help farmers to get better yield of crops.



Oswaal CBSE Question Banks Science For Class 8



Publisher : Oswaal Books

ISBN : 9789386681614

Author : Panel Of Experts

Type the URL : <http://www.kopykitab.com/product/11513>



Get this eBook