

CLASS VI

Science

<i>Learning Outcomes</i>	<i>Sources/Resources</i>	<i>Week-wise Suggestive Activities (to be guided by parents with the help of teachers)</i>
<p>The learner</p> <ul style="list-style-type: none"> • differentiates different varieties of fabrics • classifies fibres as natural and synthetic • relates processing of various natural plant fibres • explains processes related to manufacturing of fabric and clothing material • draws labelled diagrams/ flow charts related to production of fabric. • discusses and appreciates history of clothing material. • constructs model of <i>charkha</i> using materials from surroundings and explains its working. • applies learning of scientific concepts in day to-day life, e.g., uses of various fabrics in different climatic conditions. • discusses and appreciates stories of history of clothing, popularisation of <i>Khaadi</i> during the Indian Independence movement. 	<p>NCERT/State developed Science Textbook for Class VI</p> <ul style="list-style-type: none"> • E-Resources developed by NCERT, which are available on NROER and also attached as QR Code in textbooks of NCERT. • NCERT Science Laboratory Manual at Upper Primary Stage http://ncert.nic.in/ncerts/1/fhelm202.pdf • NCERT Science Exemplar Problems Class VI http://ncert.nic.in/ncerts/1/feep201.pdf • Live discussion on: <i>Ye Kitabe kya Kehana Chahti hai</i> https://www.youtube.com/watch?v=A0VWuz6zRes • Live telecast of various science concepts at Swayam Prabha Channel • (https://www.youtube.com/channel/UCT0s92hGjqLX6p7qY9BBrSA) • Laboratory Manual in Science for Classes VI-VIII http://www.ncert.nic.in/exemplar/labmanuals.html • Exemplar Problems in Science for Class VI http://www.ncert.nic.in/exemplar/exemplar.html 	<p>Theme— Material</p> <ul style="list-style-type: none"> • Variety of Fabrics • Fibres • Some Plant Fibres <p>WEEK 5</p> <p>Task 1</p> <p>Watch the video (Fabric) on the given link https://www.youtube.com/watch?v=kZUEovh84KE&feature=youtu.be</p> <p>Try to answer the following questions—</p> <ol style="list-style-type: none"> 1. Mention different uses of fabric. 2. What is the difference between fibre and fabric? 3. List the names of some natural sources of fibre. <p>Task 2</p> <ul style="list-style-type: none"> • Collect cuttings of different types of fabrics available at your home. Paste them in a scrap book and write your observations regarding their texture (you may take help of your elders). <p>Task 3</p> <ul style="list-style-type: none"> • Make a picture book of various plant sources of fibres. <p>WEEK 6</p> <p>Theme—Material</p> <ul style="list-style-type: none"> • Yarn to Fabric • History of Clothing Material <p>Task 1</p> <p>Watch the video (<i>tantu se vastratak</i>) on the given link—</p>



<ul style="list-style-type: none"> • makes efforts to protect environment, e.g., using resources judiciously; suggesting ways to cope with environmental hazards. • exhibits creativity in designing, planning, making use of available resources. • exhibits values of honesty, objectivity, cooperation, freedom from fear and prejudices. • identifies flowers on the basis of observable features, i.e., appearance, texture, function, aroma, etc. • differentiates tap and fibrous roots. • classifies organisms based on observable properties, e.g. plants as herbs, shrubs, trees, creeper, climbers. • draws labelled diagrams / flow charts of organisms, e.g., parts of flowers • makes efforts to protect environment, e.g., care for plants. • exhibits creativity in designing, planning, making use of available resources. 	<ul style="list-style-type: none"> • Fibre to Fabric http://ncert.nic.in/ncerts/1/feep203.pdf • Learning Outcomes at Elementary Stage http://www.ncert.nic.in/publication/Miscellaneous/pdf_files/tilops101.pdf <p>Theme</p> <p>Fibre to Fabric</p> <ul style="list-style-type: none"> • Variety of fabrics • Fibre • Some plant fibres • Spinning cotton yarn • Yarn to fabric • History of clothing material <p>Theme</p> <ul style="list-style-type: none"> • Getting to Know Plants • Herbs, Shrubs and Trees • Stem • Leaf • Root • Flower <p>LINK 1</p> <p>https://nroer.gov.in/55ab34ff81fccb4f1d806025/page/56cd7aa981fcb54223df310 transpiration</p> <p>Link 2</p> <p>https://nroer.gov.in/55ab34ff81fccb4f1d806025/page/56cd7ab781fccb54223df3f4 types of roots</p> <p>Link 3</p> <p>https://nroer.gov.in/55ab34ff81fccb4f1d806025/page/56cd7ac481fccb54223df46e root and rootless plant</p>	<p>https://www.youtube.com/watch?v=u4O89TqFUzY&feature=youtu.be</p> <p>Try to do the following—</p> <ol style="list-style-type: none"> 1. Locate the states where cotton is grown in the map of India. 2. Explain the difference between yarn and fibre. 3. Prepare yarn with the help of cotton by spinning and make a piece of cloth as shown in the video. 4. Make a piece of woolen cloth by knitting. <p>Task 2</p> <ul style="list-style-type: none"> • Collect information about use of <i>charkha</i> as a part of the Indian Independence movement and create a piece of audio on it with the help of mobile handset and share it in the group created by your teacher. <p>Task 3</p> <p>Explore about history of clothing material and make a small power point presentation on it. Share it in the school group.</p> <p>Task 4</p> <p>Create out of waste—</p> <p>Any item from discarded/old cloth material available with you.</p> <p>Theme— The World of the Living</p> <p>WEEK 7</p> <p>https://diksha.gov.in/play/collection/0312726109119234048124638?contentId=do312580363494047744211627 (types of plants)</p> <p>https://www.youtube.com/embed/X6TLFZUC9gI (parts of plants) (kindly check copyright)</p> <ol style="list-style-type: none"> 1. Students can watch the given links and answer the following questions— <ul style="list-style-type: none"> • What are the characteristics of herbs, shrubs and trees? • Give five examples of each. • Draw a labelled diagram each for herb, shrub and tree.
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<ul style="list-style-type: none"> exhibits values of honesty, objectivity, cooperation, freedom from fear and prejudices. 		<ul style="list-style-type: none"> What are the structure and function of various parts of the plants—stem, leaf and roots? <p>2. Students can also discuss about creepers and climbers with their parents, peers and teachers.</p> <p>https://diksha.gov.in/play/collection/o_312726109119234048124638?contentType=TextBook&contentId=do_312580363527962624111874 (stem)</p> <p>https://nroer.gov.in/55ab34ff81fccb4f1d806025/page/56cd7a7b81fccb54223df1c6 (transportation of colour liquid)</p> <p>While watching the above videos, students can answer the following questions—</p> <ul style="list-style-type: none"> What are the functions of stem? What is the difference between shoot and stem? How does water move through stem? <p>https://diksha.gov.in/play/collection/do_312726109119234048124638?contentType=TextBook&contentId=do_312580363551465472111876 (leaf)</p> <p>https://nroer.gov.in/55ab34ff81fccb4f1d806025/page/56cd7a8981fccb54223df282 (leaf venation)</p> <p>While watching the above links, the learner can understand the</p> <ul style="list-style-type: none"> structure of leaves function of leaves leaf venation draw various parts of a leaf <p>WEEK 8</p> <p>https://diksha.gov.in/play/collection/do_312726109119234048124638?contentType=TextBook&contentId=do_312580363576410112211630 (roots)</p> <p>While watching the above link, the learner can do the following—</p> <ul style="list-style-type: none"> Draw various types of roots. Difference between Tap root and Fibrous root? Give five examples each.
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<ul style="list-style-type: none"> identifies internal and external organs, types of Bones, Joints, etc. differentiates between bone and cartilage, movements of different animals draws labelled diagrams/ flow charts of organisms and processes, e.g. joints constructs models using materials from surroundings and explains their working, e.g., ball and socket joint, hinge joint exhibits creativity in designing, planning, making use of available resources. exhibits values of honesty, objectivity, cooperation, freedom from fear and prejudices. 	<p>Theme</p> <p>Body Movements</p> <ul style="list-style-type: none"> Human body and its Movement Ball and Socket Joints Pivotal Joint Hinge Joints Fixed Joints Gait of Animals <ul style="list-style-type: none"> ✓ Earthworm, Snail, Cockroach, Birds, Fish, Snakes <p>http://ncert.nic.in/textbook/textbook.htm?fesc1=8-16</p> <p>Exemplar Problems</p> <p>http://ncert.nic.in/ncerts/1/feep208.pdf</p> <p>Link to find out the answers to the questions</p> <p>http://ncert.nic.in/ncerts/1/feep2an.pdf</p>	<p>https://diksha.gov.in/play/collection/do_312726109119234048124638?contentId=do_312580363617189888211632 (flower)</p> <p>while watching the above video, students can—</p> <ul style="list-style-type: none"> identify different parts of flowers draw different parts of flowers different functions of flower parts <p>https://nroer.gov.in/55ab34ff81fccb4f1d806025/page/569a04b581fccb15fb21d355</p> <ul style="list-style-type: none"> students can watch the video and make different coloured paper flowers. <p>WEEK 9</p> <p>https://diksha.gov.in/play/collection/do_312726109119234048124638?contentType=TextBook&contentId=do_312580363689975808211635 (human body and its movement)</p> <p>students can watch the video and answer the following questions—</p> <ul style="list-style-type: none"> What is the importance of the skeletal system in our body? Which organs are protected by the rib cage? What are the function of limb bones, back bones and pelvic bones? Draw a human skeleton. <p>https://diksha.gov.in/play/collection/do_31298104195012198411?contentType=TextBook&contentId=do_3129789294767144961800 (acrobat skeleton)</p> <ul style="list-style-type: none"> Students can watch the video and make their own paper skeleton. <p>https://diksha.gov.in/play/collection/do_312726109119234048124638?contentId=do_312580363715674112111882 (ball and socket joints)</p> <ul style="list-style-type: none"> Prepare a model of ball and socket joint as mentioned under the chapter <i>Body Movement</i>, page no. 68 (NCERT Textbook).
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		<p>https://diksha.gov.in/play/collection/do_312726109119234048124638?contentId=do_312580363734851584111883 (pivot joint)</p> <ul style="list-style-type: none"> • While watching the video move your head forward and backward and turn the head to your right or left. https://diksha.gov.in/play/collection/do_312726109119234048124638?contentId=do_312580363749154816211637 (Hing joints) • Watch the video and try to move your elbow and knee. • Construct a model of hinge joint as mentioned in the NCERT textbook, Chapter 8 <i>Body Movement</i>, page no. 69. https://diksha.gov.in/play/collection/do_312726109119234048124638?contentId=do_312580363775918080211638 (fixed joints) • While watching the link, the learner can understand what are fixed joints and why are they important? <p>WEEK 10</p> <p>https://diksha.gov.in/play/collection/do_312726109119234048124638?contentId=do_312580363799937024211639 (movement in earthworm)</p> <ul style="list-style-type: none"> • Watch the above video and understand the movement of an earthworm https://diksha.gov.in/play/collection/do_312726109119234048124638?contentId=do_312580363824488448211641 (movement in snail) • Watch the above video and understand the structure and body movement of a snail https://diksha.gov.in/play/collection/do_312726109119234048124638?contentId=do_31258036384947404811887 (movement in cockroaches) • Watch the above video and understand the structure and movement of cockroaches https://diksha.gov.in/play/collection/do_312726109119234048124638?contentId=do_312580363876687872111889 (movement in birds) • Watch the above video and understand the structure and movement of a bird
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<p>The learner</p> <ul style="list-style-type: none"> identifies objects in rest and motion, etc. differentiates between different types of motion on the basis of their properties, etc. conducts simple investigations to seek answers to queries, e.g., what is the need of standard measuring units? measures length, breadth, height of different objects and expresses it in SI units. draws diagrams of different means of transportation. discusses and appreciates stories of scientific discoveries. applies learning of scientific concepts in day-to-day life, e.g. in measuring perimeter or thickness of a coin or bangle etc. 	<p>Theme</p> <p>Motion and Measurement of Distance</p> <ul style="list-style-type: none"> Story of Transport Some Measurements Standard Units of Measurements Correct Measurements of Length Measuring the length of a curved line Moving things around us Types of Motion <p>http://ncert.nic.in/textbook/textbook.htm?fesc1=10-16</p> <ul style="list-style-type: none"> Laboratory Manual in Science for Class VI-VIII http://www.ncert.nic.in/exemplar/labmanuals.html E-Resources developed by NCERT, which are available on NROER and also attached as QR Code in textbooks of NCERT. Exemplar Problems in Science for Class VI, Chapter 10 	<p>https://diksha.gov.in/play/collection/do_312726109119234048124638?contentId=do_312580363914387456211643 (movement in fish)</p> <ul style="list-style-type: none"> Watch the above video and understand the structure and movement of a fish https://diksha.gov.in/play/collection/do_312726109119234048124638?contentId=do_312580363935735808211644 (movement in snake) Watch the above video and understand the movement of a snake Students can make a table showing different animals and their moving patterns and share with their parents, peers and teachers. <p>Theme: Moving Things, People and Ideas</p> <p>WEEK 11</p> <ol style="list-style-type: none"> Read Chapter 10, Class VI of the NCERT textbook. If the physical book is not available with you, you can read/download the digital book from ePathshala or the NCERT website. http://ncert.nic.in/textbook/textbook.htm?fesc1=10-16 Search the internet about means of transport used in ancient times before the invention of wheels (links should not be provided everywhere because we want our children to become independent learners). Discuss with your grandfather and grandmother and parents and ask them which of the means of transport available today was not available when they were kids. Prepare a list of different means of transportation through land, water and air. Draw their diagrams also. Why is the invention of wheel considered as one of the greatest inventions? Discuss with your friends, siblings, parents or teachers. Imagine if the wheel was not invented till date, what changes, do you expect in our lives? Write your thoughts about it and share with your friends, teachers or parents. Take their help in improving your thoughts.
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<ul style="list-style-type: none"> • creativity in designing, planning, making use of available resources, etc. e.g., Measuring distance in the absence of standard scales by using objects of known lengths, etc. • constructs model of a scale using materials from surroundings. • exhibits values of honesty, objectivity, cooperation, freedom from fear and prejudices etc such as reporting the findings honestly, supporting other friends in need etc. 	<ul style="list-style-type: none"> • http://ncert.nic.in/ncerts/1/feep210.pdf • Link to find out answers to the questions http://ncert.nic.in/ncerts/1/feep2an.pdf 	<p>6. Why are measurements required? Discuss with your friends and family members.</p> <ul style="list-style-type: none"> • Make a list of routine activities done by you and your family members which require measurement of any object. It will help you in understanding the need of measurement in our lives. • Perform Activities 1 and 2 of the NCERT textbook for Class VI and record your observations. These activities are suggested to be performed in a group. You can form a group by taking help of your family members. • Study the observations recorded in the tables. Do you get same readings with handspan/foot of your parents as with your handspan/foot. Think whether lengths of foot/handspan can be considered as standard measuring units? Why or why not? • You can also visit the following link for getting details for performing Activity http://ncert.nic.in/ncerts/1/fhelm205.pdf • After performing the activity try to answer the questions given after the activity. • Discuss with your family members/friends about standard units of measurement and their importance in our daily lives. • Search for different length measuring devices (scale, measuring tape, etc.) at your home and observe them carefully. Read the units marked on them, discuss whether these are marked in SI units or not. If it is not given in SI units, then convert them. • Use the measuring device available at your home and measure length, breadth and height of objects available around you. Note: always take readings as discussed in your textbook for correct measurement of length. Record your observations in a table as given in Table 10.3 of the NCERT textbook.
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WEEK 12

1. Open the following link
<https://www.youtube.com/watch?v=Dpze5TQoC5s&feature=youtu.be>

Use the method discussed in the video and in Activity 4 of the NCERT textbook. Accordingly, find the perimeter of circular objects around you, such as, bangles, flying discs, coins, etc, using the method of Activity 4 given in the NCERT textbook.

2. Observe your surroundings and classify them as objects in motion and objects in rest. Record your observations as in Table 10.4 of the NCERT textbook.

Write justifications for each of the entry made by you in the table, i.e., the reason behind keeping an entry in a particular column.

3. Observe/imagine from objects of your surroundings and find objects in different types of motions. Classify them in linear motion, circular motion and periodic motion.

Visit the following link for related video

- <https://nroer.gov.in/55ab34ff81fccb4f1d806025/page/588723f1472d4a1fef811680>

Open the link given below

- <https://nroer.gov.in/55ab34ff81fccb4f1d806025/page/58871739472d4a1fef810fc8>

Watch the video carefully and relate it with your understanding developed so far.

Things—to do

- Measure the thickness of a page or a coin. Discuss with your friends and find out by using the methods learnt under this theme.
- Make a measuring scale of some other length than your existing scale, using any hard paper/card board.

Note: Since everyone is supposed to stay at home, therefore all the communications with friends and teachers should be done through call or chat. Students may take pictures or videos of their circuits/devices and can share with their friends and teachers.

