

BRIDGE COURSE PROGRAMME 2021-22

BANDHA _ 30 Days Learning Activities

Class :- 7

Subject :- Science

Expected learning outcomes	Learning points	Suggested activities	Instructions to carryout the activities
1. Classifies the plants and also able to explain the functions of different parts of the plant.	1. Identifies the categories of plants.	Day 1 1.1 Observation of plants. 1.2. Nature walk. 1.3 Game of categorizing the plants names.	1.1 Take the children out of the classroom to the park, vacant site, mini forest or school ground. Let us guide the children to classify the plants into herbs, shrubs and trees by observing them.
	2. Knows the functions of different parts of a plant.	Day 2 2.1 Drawing. 2.2 Sticking the parts of a plant. 2.3 Role play.	2.1 Let us ask the children to draw a plant, lable its parts and mention a function of each part.

		2.4 By identifying the parts of a real plant explains their functions.	
	3. observes the structure of leaves.	Day 3 3.1 Tracing leaves. 3.2 Demonstration. 3.3 Drawing leaf venation. 3.4 Making collage of leaves.	3.1 Keep a leaf beneath a white paper. Trace the leaf by rubbing the paper gently with a crayon or a pencil. Let us introduce leaf venation by asking the children to identify the difference in venation. 3.2 By rubbing leaves children are asked to identify the presence of chlorophyll in them.
2. Knows the components of air and its characteristics.	4. Identifies the components of air.	Day 4 4.1 Chart display. 4.2 Conducting experiments. 4.3 Video display of experiments.	4.1 Let us introduce each component of air by displaying chart. 4.2. Showing the presence of oxygen, water vapour and carbon dioxide in air by experiments.
	5. Explains the characteristics of air.	Day 5 5.1 Simple experiments- Air has no definite shape. 2. Air occupies space.	5.1 Collect plastic bags of different shapes. Ex: Broom stick packs, 1/2kg,1kg,2kg bags of different shapes. Put the pieces of chalk of same shapes in these bags. Then blow the air in the bags. Observe the shapes of pieces of chalks and shapes of air

		<p>3. Air has weight.</p> <p>4. Air exerts pressure.</p>	<p>blown bags. By discussion let us clarify the children that air has no definite shape.</p> <p>Let us help the children to do simple experiments like balloon experiment, rain-bottle experiment, firki experiment, magic tumbler experiment, hurricane of bottle etc.</p>
	6 Knows the air is a form of energy.	<p>Day 6</p> <p>6.1 Playing with kite.</p> <p>6.2 Model display.</p> <p>6.3 Video display.</p>	<p>6.1 Let the children make their own kite and fly it. Let us ask the children to find out the form of energy helping the kite to fly and clarify them that air is a form of energy.</p> <p>6.2 Let us explain the function of a windmill by displaying the model of it.</p>
3. By understanding the types of motion classifies the observed motion.	7. Identifies the types of motion.	<p>Day 7</p> <p>7.1 Experiments related to types of motion.</p> <p>7.2 Game related to types of motion.</p> <p>7.3 Video display.</p>	<p>7.1 Conduct simple experiments-</p> <p>Tie a pen to the one end of long string. Hold the other end of the string and move it left to right and right to left.</p> <p>Move the same string in circular path and observe the types of motion.</p> <p>7.2 Let the children move circularly, periodically and in rectilinear way and play the top and</p>

			<p>understand the types of motion. Let us help them to explain the types of motion.</p> <p>https://youtu.be/l6CvEphVZvY?t=64</p>
	8. Gives examples for different types of motion.	<p>Day 8</p> <p>8.1 Motion game.</p> <p>8.2 Arrangement of flash cards.</p> <p>8.3 Classification of pictures based on types of motion.</p>	<p>8.1 Make two groups of children.</p> <p>Let one group say the type of motion and other group show it by doing.</p>
4. By knowing the making of fabrics classifies them.	9 Identifies the yarn of the dress.	<p>Day 9</p> <p>9.1 Demonstration. Collection of different types of fabrics.</p> <p>9.2 Collection of information by interview.</p> <p>9.3 Album preparation of pieces of cloths.</p>	<p>9.1 Let the children collect different types of fabrics and identify the type of yarn with which they made (cotton, wool, jute, polyester, nylon, silk etc.).</p> <p>9.2 Let the children collect the information from their elders what the different fabrics made of and explain the same in the classroom.</p>
	10. Identifies the fibres as	<p>Day 10</p> <p>10.1 Pulling thread from a</p>	<p>10.1 Let the children collect the fabric pieces of wool, polyester, jute, nylon, cotton, silk etc.</p>

	<p>natural and synthetic.</p>	<p>fabric. 10.2 Experiment. 10.3 Fibres in yarn. Activity. (Splitting yarns to get thin strands or fibres)</p>	<p>Let us guide the children to pull the yarn from the fabrics. 10.2 Let us ask the children to burn these yarns with the help of a candle and observe how they burn and what odour they give while burning. Based on this children are asked to classify the fibres as natural or synthetic. Note: On burning, synthetic fibres shrink or melts and gives out an odour similar to burning plastics. Natural fibres burn and gives an odour similar to burning paper.</p>
	<p>11. Knows spinning and weaving.</p>	<p>Day 11 11.1 Spinning cotton yarn. 11.2 Field visit. 11.3 Demonstration of knitting a sweater. 11.4 Displaying pictures of spinning and weaving.</p>	<p>11.1 Let us guide each child to spin cotton yarn by giving cotton. (For details see page number 21 of 6th standard science textbook.) 11.2 Let us take the children to nearby handloom and collect the information by observation.</p>

5. By knowing the types of natural resources understands the need of consevation and moderate use.	12. Classifies the resources into natural and manmade.	Day 12 12.1 Classification game. (Manmade / natural resource) 12.2 Group game. 12.3 Solving puzzles.	12.1 Give every child an empty flash card. Ask them to write the name of any one resource they know. Stick the charts with the title 'Natural resource' and 'Manmade resource' on the wall. Let each child stick their flash cards in suitable chart. After completion let the children read the charts. 12.2 In/out game for natural and manmade resources.
	13. Classifies the resources into renewable and non-renewable.	Day 13 13.1 Card in the box - game 13.2 Exhibition. 13.3 Note writing. 13.4 Discussion.	13.1 Make the children to understand renewable and non-renewable resources. Keep two boxes with lables renewable resource and non-renewable resource. Let us guide the children to choose the suitable resource box to put the given flash cards.
	14. Discusses the need of careful use of natural resources.	Day 14 14.1 Discussion. 14.2 Question-answers.	14.1 Are resources available to everyone? Why if not? What could be done that everyone can get the resources all time? By asking these questions let us discuss about

		14.3 Essay writing. 14.4 Video display.	conservation and careful use of natural resources.
6. Understands the characteristics of light.	15. Differentiates between luminous and non-luminous objects.	Day 15 15.1 Classification of objects. 15.2 Completing the table.	<ul style="list-style-type: none"> Let us facilitate to sort and interpret the given objects as self luminous and non-luminous.
	16. Identifies transparent, translucent and opaque objects.	Day 15 16.1 Fun with glass. 16.2 Discussion. 16.3 Listing. 16.4 Sorting.	<p>16.1 Give every child a piece of transparent glass and ask them to see the objects through it. Again ask the children to see through it after rubbing the glass in the sand. Again ask the children to rub the glass in the sand and see through it. Let us give opportunity to share their experiences and discuss about transparent and opaque objects.</p> <p>16.4 Let us instruct the children to classify the given objects as transparent, translucent and opaque by seeing through them.</p>
	17. Light travels along a straight	Day 16 17.1 Observe the	17.1 Spread a black coloured sheet of paper on the floor. Fix a comb at one end of the paper and fix a

	line.	<p>propagation of light.</p> <p>17.2 Experiment with three cardboard sheets.</p> <p>17.3 Observe the light through a piece of pipe.</p> <p>17.4 Preparation of pinhole camera.</p>	<p>mirror opposite to the comb at the other end of the paper. Send a beam of light from a torch through the comb and let it fall on the mirror.</p> <p>Let us make the children to understand the phenomenon taking place and discuss about the rectilinear propagation of light.</p>
7. Explains the properties of magnet.	18. Gets to know about magnetic and non-magnetic materials.	<p>Day 17.</p> <p>18.1 Playing with a magnet.</p> <p>18.2 Pick iron from sand.</p> <p>18.3 List out magnetic and non-magnetic materials.</p> <p>18.4 Tabulation.</p>	<p>18.1 By giving a magnet let us ask the children to classify the given objects as magnetic or non-magnetic materials.</p> <p>18.4 Let us do the activity 13.1 of 6th standard science textbook.</p>
	19. Knows the types of	<p>Day 18</p> <p>19.1 Exhibiting magnets.</p>	<p>19.1 By exhibiting different types of magnets let us introduce them based on their shapes. Also let us</p>

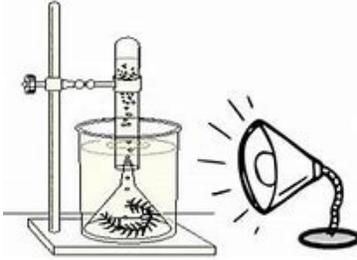
	<p>magnets and their uses.</p>	<p>19.2 Drawing. 19.3 Stick the picture. 19.4 Video display.</p>	<p>show the uses of magnets through videos.</p>
	<p>20. Explains the properties of magnet.</p>	<p>Day 19. 20.1 Experimental activities: 1. A freely suspended magnet always aligns in North-South direction. 2. Poles of a magnet are said to be near the ends. 3. Opposite poles of two magnets attracts each other whereas similar poles repel one another. 20.2 Video display. 20.3 Chart preparation.</p>	<p>20.1 By suspending a bar magnet let us ask the children to observe the position of the ends of the magnet when it comes to rest. Let us make the children to understand why the magnet always aligns in North-South direction. Also we can give opportunity for children to conduct simple magnetic experiments. 20.2 Use the below link to watch videos related to activities.</p> <ul style="list-style-type: none"> • https://youtu.be/KOIPqYfmFF4

<p>8. Performs simple experiments using electric cells.</p>	<p>21. Efficiently uses an electric cell by knowing its function.</p>	<p>Day 20. 21.1 Observation of a dry cell. 21.2 Diagram of dry cell. 21.3 Listing out the uses of dry cell. 21.4 Arrangement of electric cells in a torch.</p>	<p>21.1 Guiding each child to get a dry cell and observe its parts by cutting it carefully. Let us explain the parts of dry cell and their structure. Let us facilitate the children to make arrangements of positive and negative terminals based on their experiences. 21.3 Let us help the children to list out the devices which uses dry cell.</p>
	<p>22. Develops skill to construct simple electric circuits.</p>	<p>Day 21. 22.1 preparation of simple electric circuit. 22.2 Project. 22.3 Circuit diagram. 22.4 Writing symbols for circuit components.</p>	<p>22.1 Let us help each child to construct a simple circuit by using switch, dry cell, bulb and connecting wires. 22.2 Give a project to prepare a toy motor , toy fan etc. by using simple circuit components. 22.4</p> <div data-bbox="1249 1019 1929 1232" style="border: 1px solid black; padding: 5px; text-align: center;">  <p>Cell Bulb Switch on Switch off Battery</p> </div>
	<p>23. Identifies electric</p>	<p>Day 22. 23.1 Experimental</p>	<p>23.1 Let us help the children to test the conductivity of different materials such as copper, iron, plastic, rubber, graphite, wood</p>

	conductors and insulators.	<p>activity.</p> <p>23.2 Group discussion.</p> <p>23.3 Listing out conductors and insulators.</p> <p>23.4. Album preparation of conductors and insulators.</p> <p>23.5 How steady is your hand? -Activity.</p>	<p>piece, glass etc. by keeping them between the free ends of circuit wires. Also let us discuss about glowing of bulb.</p> <p>23.5 Let us ask the children to do suggested activity 2 in page no 124 of 6th standard science textbook.</p>
9. Identifies reversible and non-reversible changes.	24. Identifies the changes taking place around.	<p>Day 23</p> <p>24.1 Group discussion</p> <p>24.2 Identify the change-game.</p> <p>24.3 Listing out.</p> <p>24.4 Observation.</p>	<p>24.1 By making three groups of children, let us ask each group to list out the changes they have noticed daily.</p> <p>Also let us help them to share the list in the classroom.</p> <p>24.2 Tell them a change and let the children say the type of change.</p>

			<p>Example: When a balloon is blown- Change in shape and size.</p> <p>When a piece of paper is folded-Change in shape.</p>						
	<p>25. Classifies the changes into reversible and non-reversible.</p>	<p>Day 24.</p> <p>25.1 Simple activities.</p> <p>25.2 Discussion.</p> <p>25.3 Tabulation.</p> <table border="1" data-bbox="743 626 1094 886"> <tr> <td>Reversible change.</td> <td>Non-reversible change.</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </table>	Reversible change.	Non-reversible change.					<p>25.1 Make two groups of children.</p> <p>Let one group cut the paper and make paper craft such as boat, aeroplane, flower etc. and second group make different shapes with clay. Ask the second group to get back the original shape of clay. Can we get back the original shape of paper? By asking such questions let us help children to understand reversible and non-reversible changes. Let us ask the children to classify the changes taking place around us as reversible and non-reversible changes.</p>
Reversible change.	Non-reversible change.								
<p>10. Gets awareness about the need of conservation</p>	<p>26. Knows the compulsory of careful use of water.</p>	<p>Day 25.</p> <p>26.1 How much water do I use?</p> <p>-Survey.</p> <p>26.2 Discussion.</p> <p>26.3 What happens if a</p>	<p>26.1 Let all the children write the amount of water required for different household work in their home by guessing.</p> <p>Let them know who is using the water carefully and who is not. Let them find the average use of water in</p>						

and careful use of water.		day goes without water? - Skit. 26.4 Interview.	each house per day. By discussion let us make the children to understand the bad effects of over usage of water.
	27. Analyses the effects of floods and drought.	Day 26. 27.1 Video display and discussion. 27.2 Debate. 27.3 Essay writing. 27.4 Drawing.	27.1 Let us show the pictures or videos related to the effects of floods and drought. Let us facilitate the children to analyze the effects of floods and droughts discussing themselves.
	28. Knows the importance of collection of rainwater.	Day 27. 28.1 Group discussion. 28.2 Survey. 28.3 Street play. 28.4 Poster preparation. 28.5 Field visit. 28.6 Lecture.	28.1 By discussion let us find the ways to overcome the scarcity of water. Let us help the children to understand rainwater harvesting is the only way to overcome scarcity of water. 28.2 Let us help the children to do survey and consolidate about whether people are collecting rainwater? If yes how?
11. Appreciates the compatibility of	29. Understands the adaptations of organisms in	Day 28. 29.1 A journey through different habitats.	29.1 Let us discuss about adaptations by showing videos of different habitats. <ul style="list-style-type: none"> • https://youtu.be/243nm-SNes0

<p>plants and animals with environment.</p>	<p>their habitats.</p>	<p>29.2 Observation and discussion about different habitats in the local environment.</p> <p>29.3 Preparation of models of different habitats.</p> <p>29.4 Picture collection of organisms living in different habitats.</p> <p>29.4 Matching the flashcards of habitats and organisms.</p>	
	<p>30. Understands the process of photosynthesis.</p>	<p>Day 29.</p> <p>30.1 Experimental activity.</p> <p>30.2 Drawing.</p> <p>30.3 Chart display.</p>	<p>30.1 Simple experiment to understand the process of photosynthesis: Fill a beaker with water and put an aquatic plant in it. Put a funnel inversely on the aquatic plant and fix a test tube to the edge of the</p> 

			<p>funnel. Put little baking soda to water and keep the set up in the sunlight. By this experiment we can explain the process of photosynthesis.</p> <p>http://youtu.be/3RBI3xqnCrc</p>
	<p>31. Knows the interdependence of plants and animals.</p>	<p>Day 30</p> <p>31.1 Discussion.</p> <p>31.2 Observation of plants and animals.</p> <p>31.3 Role play.</p> <p>31.4 Skit.</p>	<p>Let us discuss how plants and animals are interdependent in the exchange of carbon dioxide and oxygen gases.</p>