Vision Empower & XRCVC

Teacher Instruction KIT

Water

Syllabus: Karnataka State Board Subject: Environmental Studies Grade: 5 Textbook Name: Environmental Studies- Text cum work book-English medium- Fifth standard Chapter Number & Name: 7. Water

1. OVERVIEW

1.1. OBJECTIVE & PREREQUISITES

Objective

- To know about the sources of water.
- To understand the physical characteristics of water.
- To know the importance of water and conservation methods of water.

Prerequisite Concept

• EVS, Grade 4, Chapter 6: Each Drop

Content Index

Kindly Note: Activities marked with * are mandatory

1. OVERVIEW

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Interest generation activity

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2. LEARN

2.1 KEY POINTS

- Water is also called life liquid. 71% of the earth surface is covered by water.
- Sources of water:
 - Rivers: rain is the source of river water also. Melted snow from mountains reaches the river during summer. So rivers overflow. All the rivers flow in their definite route and finally reach the ocean
 - Springs: water that is stored under the earth's crust and comes out due to the pressure through an opening is called spring. Rain water which enters the earth through its loose portions will be collected as underground water and this comes out in the form of a spring.
 - Wells: Underground water obtained by digging the earth's crust to a certain depth is called well water.
 - Ponds: an artificially man-made low level portion of land, to store water is called a pond. Its capacity for water storage is less. It is constructed in such a way that rain water which drains from high level will be stored here.
 - Reservoirs: dams are constructed across the rivers to store water throughout the year and to supply water to places where there is scarcity and also for multipurpose projects. These are capable of storing water on a large scale.
- Water pollution: it is the contamination of water bodies (like oceans, seas, lakes, rivers, aquifers, and groundwater) usually caused due to human activities. Water pollution is

any change in the physical, chemical or biological properties of water that will have a detrimental consequence on any living organism.

- Sources of Water Pollution:
 - o Domestic Waste
 - Industrial effluents
 - Insecticides and pesticides
 - Detergents and Fertilizer

2.1 LEARN MORE None

3. ENGAGE

3.1. INTEREST GENERATION ACTIVITY

Interest generation activity

Activity 1: Water Materials Required: None Prerequisites: None

Activity Flow

• Ask the students what they do when they feel thirsty. Ask them to describe water in their own words and share what they know about water.

3.2. CONCEPT INTRODUCTION ACTIVITIES

Role of water

Activity 2: Role of water Materials Required: None Prerequisites: None

Activity Flow

Ask students the following question:

- Uses of water in their daily lives?
- Is it only us (humans) who use water?
- What are the other activities in which water is being used?
- Do they think water is essential? And why?

After discussing these questions, introduce the theme of water and its importance by covering the following points:

- Water is a basic need for all, it is very essential for the life of plants and animals.
- It is called life water.

• 71% of the earth's surface is covered by water.

After telling them about water, ask them about the sources of water.

They can start by sharing the source of water in their houses/hostels and then forming a larger picture of sources. After discussing about the sources tell them about the following:

- Rain water is the main source of water.
- Rain is the source of river water also.
- Oceans are the biggest source of water on earth.

Sources of water

Activity 3: Sources of water

Materials Required: 2 litres of water and containers of different sizes (from big to small) *Prerequisites: None*

Activity Flow

- Explain to the students about different sources of water that are ocean, rivers, springs, wells, ponds, reservoirs from the textbook itself.
- Teacher should explain the size of each of them and should use materials to show the comparison between each other. For example, a pond is smaller than a reservoir.
- For this activity, the teacher can bring 2 litre of water in a container and then divide the water in various sections by representing it as different sources of water. For example, if this 2 litre represents ocean water then ¼ of it in a small container will represent a reservoir, similarly other sources can be represented in comparison to each other.

Water Conservation

Activity 4: Conserving water

Materials Required: None Prerequisites: None

Activity Flow

- Ask the students to imagine their favourite place with extremely low or non-existent water supply?
- After that ask them how they will feel about it?
- So if this happens (water scarcity) what they would do differently?
- At the end of the activity, ask the students to observe themselves in their homes/hostels/ surroundings to make them aware about practices of saving water.

Physical properties of water

Activity 5: Physical properties of water

Materials Required: 2 same size container, water, bottle *Prerequisites: None*

Activity Flow

Water has weight:

- Ask the students to hold one empty container in one hand and a container of the same size filled with water in the other hand.
- Ask them which container is heavy? And then lead the discussion that water has weight.

Water evaporates when it boils

- Boil water in a small vessel and close it with the lid, after that let the students touch the lid where the water droplets are formed. Make sure it is not too hot while touching.
- Discuss with them that these droplets are formed because water evaporates when it boils.

Water takes the shape of the container

- Ask the students to pour water from one container to another bottle.
- Discuss with them water takes the shape of the container.

Water pollution

Activity 6: Water pollution and its prevention

Materials Required: None Prerequisites: None

Activity Flow

- Ask the student is it possible to drink water which is polluted?
- Then discuss with the students that due to various human activities the water is being polluted such as directly releasing waste and harmful by products of industries into the nearest water sources which affects our health as well as other living bodies.
- Some of the steps to prevent water pollution:
 - Save water.
 - Better treatment of sewage
 - Using environmentally friendly products

3.3. LET'S DISCUSS: RELATE TO DAILY LIFE*

- Field trips to fresh water bodies and salt water bodies (and compare the difference of how the water feels on the skin, how easy it is to float, etc.)
- Visit to a salt farm.
- Collect the information about the tank/pond/wells/etc which is nearby.

4. EXERCISES & REINFORCEMENT

4.1 EXERCISES & REINFORCEMENT

Difference between ponds and reservoir

Activity 6: Difference between ponds and reservoir

Materials Required: None Prerequisites: ponds, reservoir

Activity Flow

• Ask the students to discuss among themselves, first the uses of ponds and reservoirs and second the difference between both.

4.2 IMPORTANT GUIDELINES*

Exercise Reading

It is very important that the children practice their learnings as well as their reading. Hence have the children read out the newly learned concepts from their textbooks or other available resources.

Perform Textbook Activity

It is good practice to have the children perform the textbook activities. Your textbook activities might not be accessible hence go through this resource to learn how to make textbook content accessible

Provide Homework

To evaluate their understanding and to help the student revise and implement the new learnt concept ensure to provide them with homework. Students should perform one or two of the questions mentioned above or from the textbook exercises with the teacher in Class and the remaining may be given for homework. Also, ensure that the student knows their special skills linked to independently using their accessible books as it will be critical to doing homework independently

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