

# **St. Andrews Scots Senior Secondary School**

**9<sup>th</sup>, Avenue, I.P Extension, Patparganj**

**Class-V**

**Sub-Science**

**Session- 2025- 2026**

## **Lesson -10 Air and Water**

- **Reading of the chapter**
- **Explanation (will be done in class)**

### **(Textbook exercise)**

- **A. Tick the correct answer.**

- 1. 78 %**
- 2. Troposphere**
- 3. Sedimentation**
- 4. Stratosphere**

- **B.Fill in the blanks.**

- 1. Mesosphere**
- 2. Troposphere**
- 3. Carbon dioxide, oxygen**
- 4. Evaporation , distillation**

- **C. True or False.**

- 1. True**
- 2. False**
- 3. False**
- 4. True**

- **D Guess and write.**
  - (a) Atmosphere
  - (b) Oxygen
  - (c) Mesosphere
  - (d) Distillation
  - (e) Chlorine
- **Define(Learn from Pg no- 110)**

### **(Notebook Work**

#### **New Words**

**Any 10 words**

#### **Short Question/Answer**

**1 Name the different layers of the atmosphere.**

**Ans. The atmosphere is divided into five layers- Troposphere, Stratosphere, Mesosphere, Thermosphere and Exosphere.**

**2. Define the terms:**

- (a) Sedimentation- The process of separating insoluble impurities from water by allowing them to settle down is known as sedimentation.**
- (b)Decantation- After sedimentation, the clean water in the upper layer is poured**

**into another beaker without disturbing the impurities. This is known as decantation.**

**3. List the properties of air.**

**Ans. The properties of air are---**

- **Air occupy space.**
- **Air has weight.**
- **Air exerts pressure.**

**4. What are the methods of purifying water at home?**

**Ans. At home, we may purify drinking water by boiling, using water purifiers and by chlorination.**

**5. What are the different components of air?**

**Ans. Air contains-**

- **Nitrogen – About 78%**
- **Oxygen – About 21%**
- **Carbon dioxide – 0.03%**
- **Other gases( helium, neon, hydrogen, argon, ozone etc.) – 0.97%**

**6. Why do mountaineers carry oxygen mask with them?**

**Ans. Mountaineers carry oxygen mask with them because amount of oxygen decreases as we go high up in the atmosphere.**

### **Long Question/Answer**

**1. Explain why atmosphere is important.**

**Ans. a. Atmosphere supports life on earth with its oxygen content.**

**b. It also contains carbon dioxide which plants use to make food for themselves.**

**c. It protects the earth from harsh heat of the sun.**

**d. The ozone layer absorbs the harmful ultraviolet rays and prevents them from reaching the surface of the earth.**

**2. How will you show that air occupies space?**

**Ans. Activity 1 (pg no- 106)**

**3. Mention the methods of removing soluble impurities present in water. Explain them .**

**Ans. The different ways to remove soluble impurities from water are:-**

**a) Evaporation – It is the process of changing a liquid into steam (water vapour) by heating. In this method, water with soluble impurities like as salt is taken in a vessel and heated. After some time, the water in the vessel turns into vapour and the impurities are left behind.**

**b) Distillation – It is the process of changing a liquid into its vapour and then condensing these vapour to get the purest form of that liquid.**

**4. Explain how water gets purified in water treatment plant.**

**Ans. The different steps involved in purification of water in a treatment plant are:-**

- Sedimentation – The heavier insoluble impurities settle down at the bottom of the tank.**
- Filtration – The water obtained from sedimentation is passed through filters made of sand, gravel, and charcoal to remove small floating suspended particles.**

- **Chlorination** – Chlorine gas is passed through the clear water or chlorine tablets are put into to kill the germs.

### **Give Reasons**

**1. Why is the depletion of ozone layer a matter of concern?**

**Ans.** The depletion of ozone layer is a matter of concern because it allows ultraviolet rays to enter the Earth's surface. These are highly penetrating rays which are harmful for us.

**2 All living things use oxygen but its percentage in the air does not decrease, why?**

**Ans.** All living things use oxygen but its percentage in the air does not decrease because plants maintain it by the process of photosynthesis.

### **Activity**

**Write in detail about the method which you use at your home for purification of water in your notebook.**

### **Dictation**

**Any 10 words**

### **Diagrams**

exosphere

10000 km

thermosphere

690 km

mesosphere

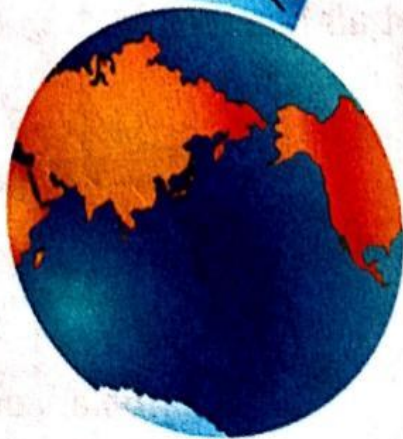
85 km

stratosphere

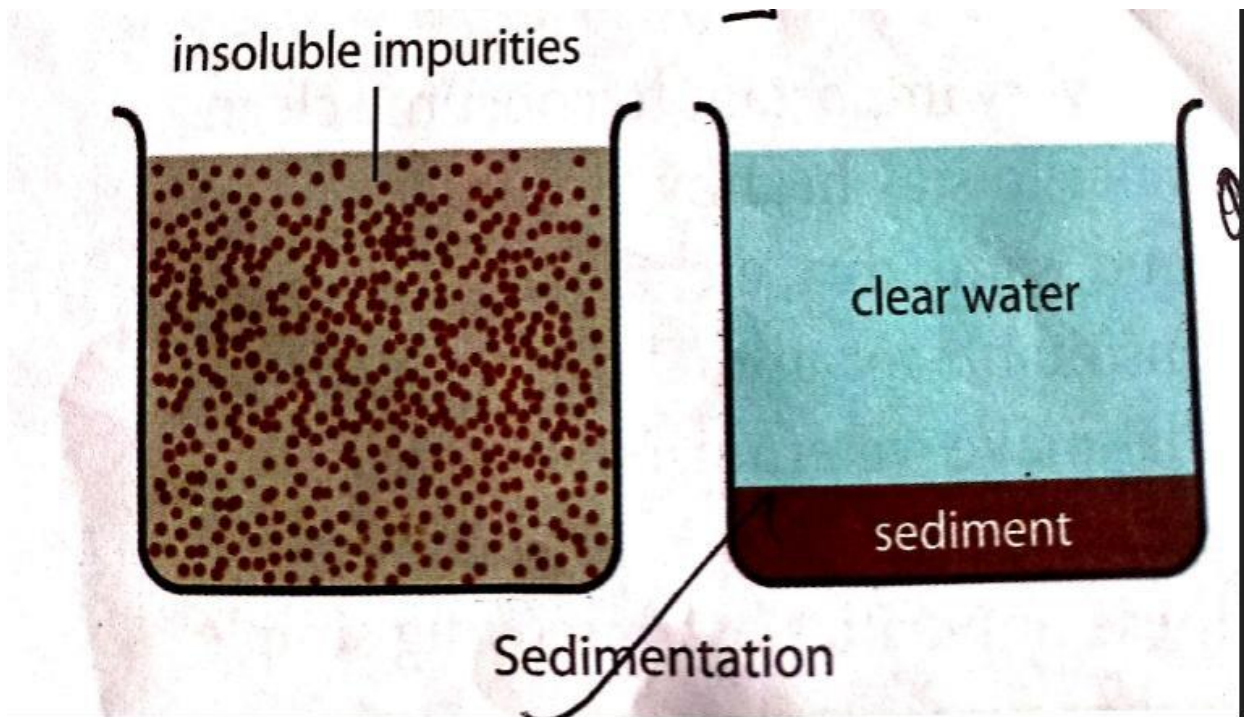
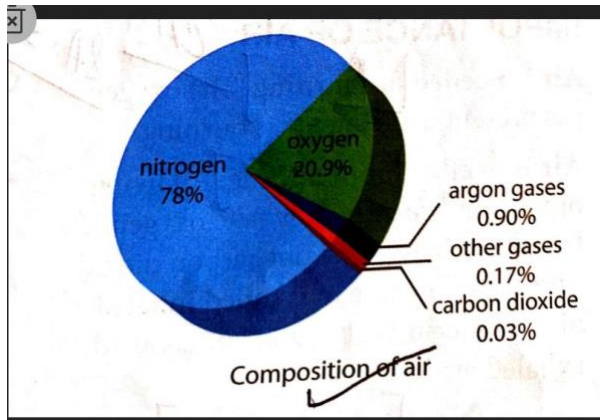
50 km

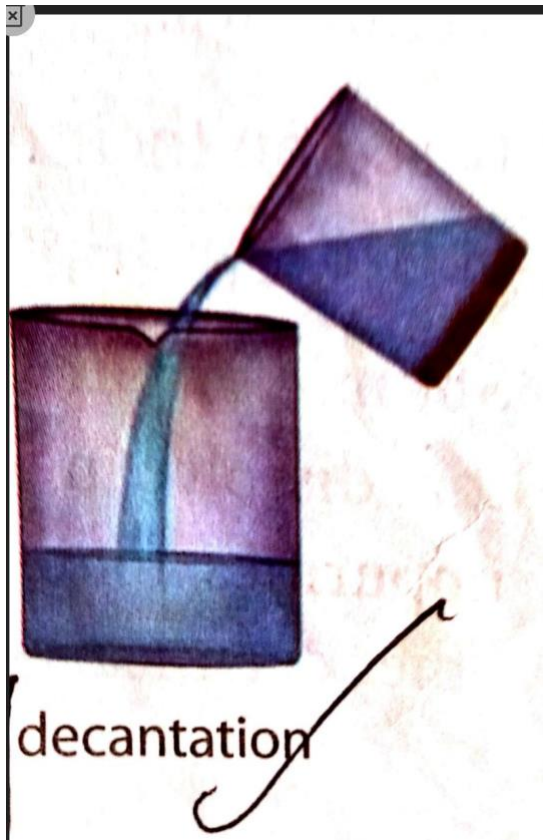
troposphere

20 km



Different layers of atmosphere









filtration



