

# WELCOME TO THE ONLINE CLASS

**SESSION NO: 6**

**CLASS: 4**

**SUBJECT: SCIENCE**

**CHAPTER NUMBER: 12**

**CHAPTER NAME: AIR, WATER AND WEATHER**

**SUB TOPIC: IMPURITIES IN WATER, PURIFICATION OF WATER :  
SEDIMENTATION AND DECANTATION**

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**CHANGING YOUR TOMORROW**

# LEARNING OBJECTIVE

**To enable the learner to:**

- **Know about different impurities of water**
- **Learn how water can be purified**

## RECAPITULATION

1. In which process does water vapour cools down and changes into drops of water?
2. What occurs when thick clouds of tiny drops of water form just above land or water?
3. The water droplets that we find in the morning on leaves are called as \_\_\_\_\_.
4. Soft, white flakes of ice that fall from the sky to the earth is known as \_\_\_\_\_.



# IMPURITIES

- **Impurities: the quality or state of being impure in liquid, gas or solid.**
- **The types of impurities in water can include dust, dirt, harmful chemicals etc.**



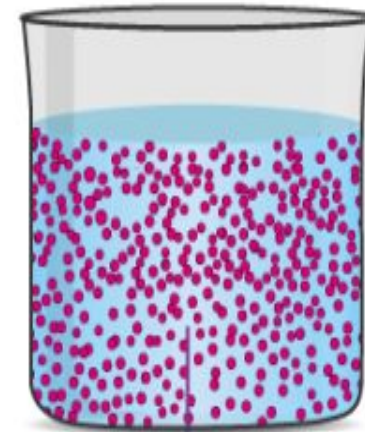
## IMPURITIES IN WELLS AND RIVERS

- The water in wells and rivers is impure due to the presence of
  - a. insoluble impurities
  - b. soluble impurities
  - c. disease-causing germs

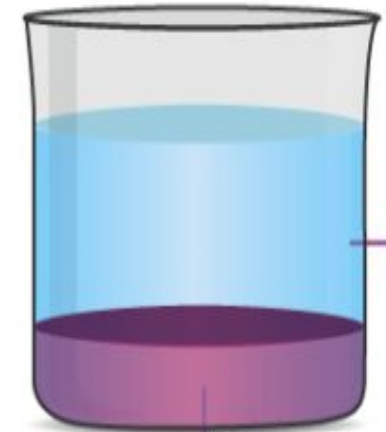


# SEDIMENTATION

- **SEDIMENTATION: Settling down of heavy insoluble impurities in a liquid.**



Water containing Insoluble impurities

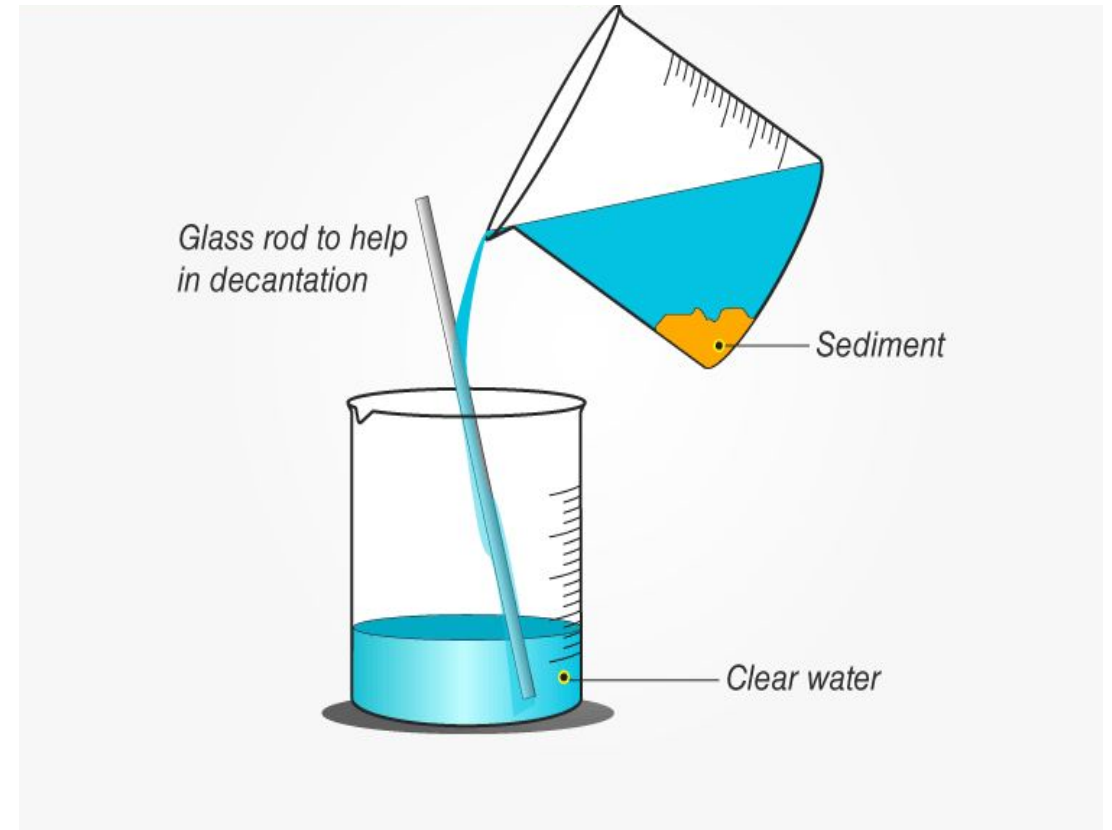


Clear water

Insoluble impurities

# DECANTATION

- Gently pour liquid into another vessel after sedimentation.
- Decantation is a process for the separation of mixtures of immiscible liquids.

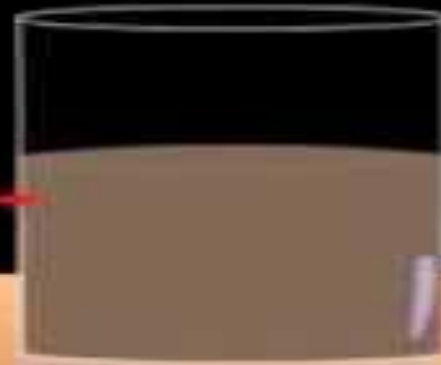


# PURIFYING OF WATER

**Separation of insoluble substances from water**  
**Sedimentation and decantation**



Muddy water



If we allow such a mixture to stand for sometime, the solids tend to settle down.



## ANSWER THESE QUESTIONS

**1. What do you mean by weather?**

**Ans:** Weather is the state of the atmosphere at a particular place and time related to heat, cloudiness, dryness, sunshine, cold, wind, rain, etc.

**2. How is condensation different from evaporation?**

**Ans:** Condensation is the change from a gas to a liquid state on cooling whereas evaporation is the change of a liquid to a gas on heating.

**3. What are the two types of impurities in water?**

**Ans:** The two types of impurities in water are soluble and insoluble impurities.

# SUMMARY

- **Impurities in water can include dust, dirt and harmful chemicals.**
- **The types of impurities in water can contain soluble, insoluble and disease causing germs.**
- **SEDIMENTATION: Settling down of heavy insoluble impurities in a liquid.**
- **DECANTATION: Process in which you will gently pour liquid into another vessel after sedimentation.**

QUIZ!



**1. Process of settling down of heavy insoluble impurities in a liquid.**

**Ans: Sedimentation**

## **2. Process for the separation of mixtures of immiscible liquids.**

**Ans: Decantation**

**3. Impurities in water can include dust, dirt and \_\_\_\_\_  
chemicals.**

**Ans: harmful**

# **HOMework**

- **Draw the pictures by showing different methods of removing impurities from water in your notebook.**

# LEARNING OUTCOME

**The learner will be able to :**

- **Know about different impurities of water**
- **Learn how water can be purified**



**THANKING YOU**  
**ODM EDUCATIONAL GROUP**