

## CLASS -6

**Subject: Biology**

**Date:5/06/2020**

**Topic: Plant Life –Ch- 5(Adaptation)**

**Time Limit:40 minutes**

### *Worksheet No.:9*

Children today we are going to learn a new chapter **Adaptation**. So, here are some notes given below to help you understand some terms and definitions.

The video link provided below will help explain the adaptation of aquatic plants and animals

<https://youtu.be/hMxJvy4rsB0>

- **Adaptation**- The presence of features or certain habits which help an organism to live in particular habitat or environment is called adaptation. Different living organisms adapt to live in their surroundings in different ways.
- **Habitat**- The immediate or natural surroundings of an organism is called it's habitat.
- **Acclimitasation**- An adjustment in an organism for short changes over a short period of time is called acclimatization.
- **Environment**- Anything that surrounds and affects the life of an organism is called it's environment. An environment consists of **abiotic** or non-living components (e.g. air, water, light, soil and temperature) and living or **biotic** components such as plants, animals and microorganisms
- **Ecology**- The study of interaction and relationship between living things and their environment is called ecology.

#### **Types of habitat**

- *Terrestrial habitat e.g. Deserts. Mountains*
- *Aquatic habitat e.g . lakes rivers ponds and oceans.*
- *Aerial habitat*

#### **Adaptation in aquatic plants**

Plants that grow in water are called aquatic plants or **hydrophytes**. There are three types of aquatic plants. They are- **floating plants, fixed plants and submerged plants**.

**Floating plants:-** These plants such as **water hyacinth**(also called the terror of Bengal) and **pistia** float freely on the surface of water and as such show the following adaptations:-

- They have flat, floating leaves to collect maximum sunlight
- The leaves have waxy coating to make them waterproof.
- They have air spaces in their stems and leaves that make the plant light enough to float.

**Fixed aquatic plants:-** Some plants like **water lily** and **lotus** have roots that fix the plants in the mud at the bottom of the pond. They are known as fixed aquatic plants which show the following adaptations:-

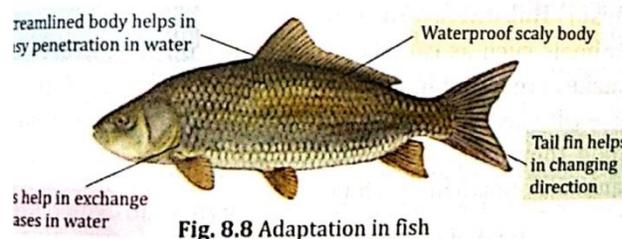
- Roots of such plants are fixed in the soil at the bottom of the pond.
- They have plate- like leaves that float over the surface of water.
- The stomata are present on the upper side of the leaf.
- The leaves have waxy coating to make them waterproof.
- The stems are hollow and light.
- The stems are also flexible so that they bend with the flow of water and prevent any damage by strong water currents.

**Submerged plants:-** Plants like **pondweed**, **tape-grass** and **hydrilla** live and grow under the water and hence they are called **underwater** or **submerged** plants. These plants show the following adaptations:-

- They have flat, thin, ribbon like leaves that can easily bend with the flowing water without getting damaged.
- The leaves are divided which allow water to flow without causing any damage.
- The stems are flexible and have air spaces.

**Aquatic Habitat for animals:-** Like variety of aquatic plants there is a large variety of aquatic animals, but here we will discuss about the adaptive features of fish for an aquatic habitat.

- They have streamlined body which offers minimum resistance against water.
- They have air bladder which help them to float in water.
- They breathe in dissolved oxygen through gills.
- The body is covered with scale and a layer of mucous which makes the body water-proof.



**Fig. 8.8** Adaptation in fish

*[Copy the questions and solve them on a sheet of paper datewise. Keep them ready in a file to be submitted on the opening day]Read the definitions and adaptive features of aquatic plants and fish given above before you attempt to answer the questions.*

**Q1) Give one word answer for the following:-**

1. The living component of the environment.-----
2. The natural environment of a living organism-----.
3. The favourable conditions that help an organism to survive in a particular habitat-----
4. A body part of a fish used for exchange of gases in water.-----
5. Habitats located on land are called.-----

**Q2)Answer the following questions:-**

1. What is habitat? What are the benefits of it for the living organisms?
2. Why the leaves of submerged plants are ribbon- shaped?
3. State the adaptive features of a fish for aquatic habitat .
4. Write the adaptive features of fixed plants.
5. Differentiate between floating plant and submerged plant