

## Class IX

### EXPERIMENT No: 7

**AIM:** To observe and draw the given specimens earthworm, cockroach, bony fish and bird. For each specimen record.

- One specific feature of its phylum.
- One adaptive feature with reference to its habitat.

**Materials Required :** Preserved specimens of earth worm, cockroach, bony fish and chart of birds and these organism, & hand lens.

**Procedure :**

- Observe the given specimens and charts for each animal and record one specific feature of the phylum/class to which it belongs.
- Write down the adaptive feature of each animal with reference to its habitat.
- Draw the diagrams of each specimens using charts.

**Observations :**

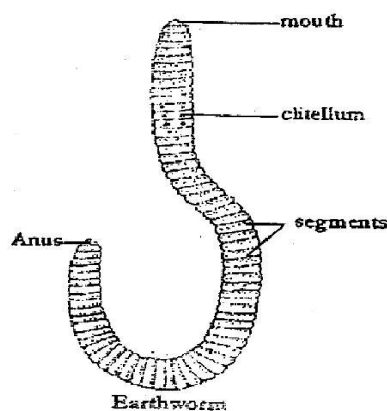
**1. Earthworm :**

Phylum : Annelida

**Characteristics of Phylum :** Body is elongated, cylindrical or flattened and divided into annular segments or metameres.

**Adaptive Features :**

- Moist and slimy skin.
- Presence of clitellum (14 - 17 segments merged together)
- The most anterior end has mouth which helps in sensing the soil during burrowing or digging.



## 2. Cockroach :

Phylum : Arthropoda

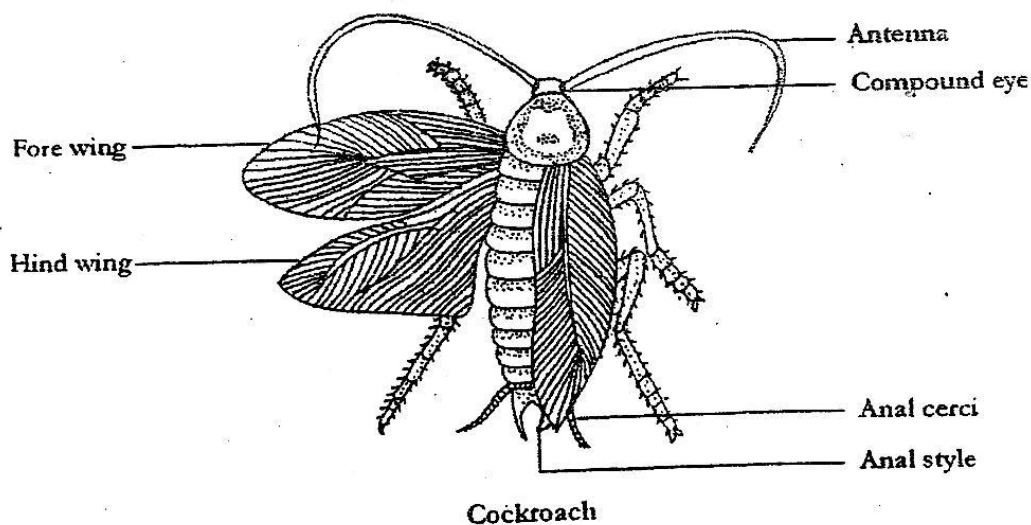
Class : Insecta

### Characteristics of Phylum Arthropoda and Class Insects :

1. Body is divided into segments with distinct head.
2. Jointed appendages with three pairs of legs.
3. They have compound eyes.

### Adaptive features :

- i. Nocturnal habit (active during night.)
- ii. Body is covered by chitinous cuticle which protects from injury, Chemicals and water.
- iii. Respiratory openings (spiracles) are present on the segments of thorax abdomen for respiration.



## 3. Bony Fish :

Phylum : Chordata

Class : Osteichthyes or Pisces

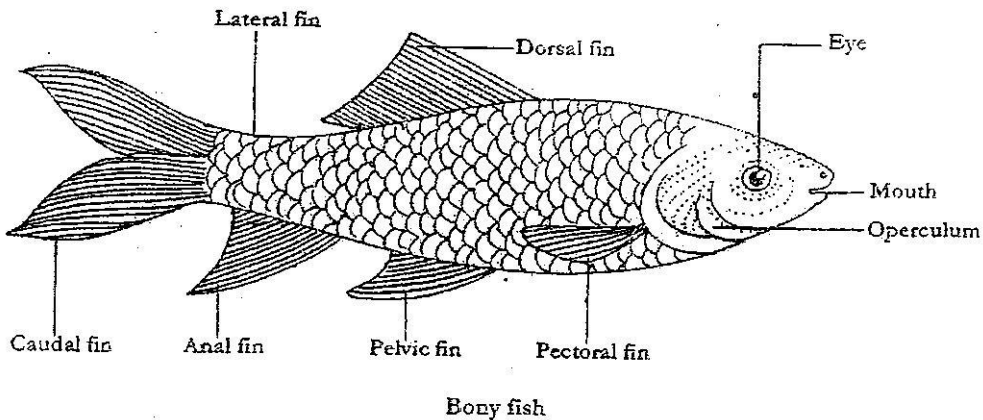
### Specific feature of the phylum and class :

1. Presence of notochord.
2. Presence of four pairs of gills covered by an operculum.
3. Presence of fins.

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## Adaptive features :

1. The body is streamlined which helps in swimming.
2. Respiration occurs with the help of gills.
3. Presence of air bladder which helps in buoyancy (floating)
4. They have fins for movement in water.



## 4. Bird :

Phylum : Chordata class : Aves

### Specific features of the Phylum and class :

1. Presence of noto chord
2. Fore limbs are modified into wings.
3. Egg laying (oviparous) animals.

### Adaptive features :

1. Boat shaped body.
2. Presence of feathers to provide insulation.
3. Bones are hollow with air cavities (to reduce the mass)

