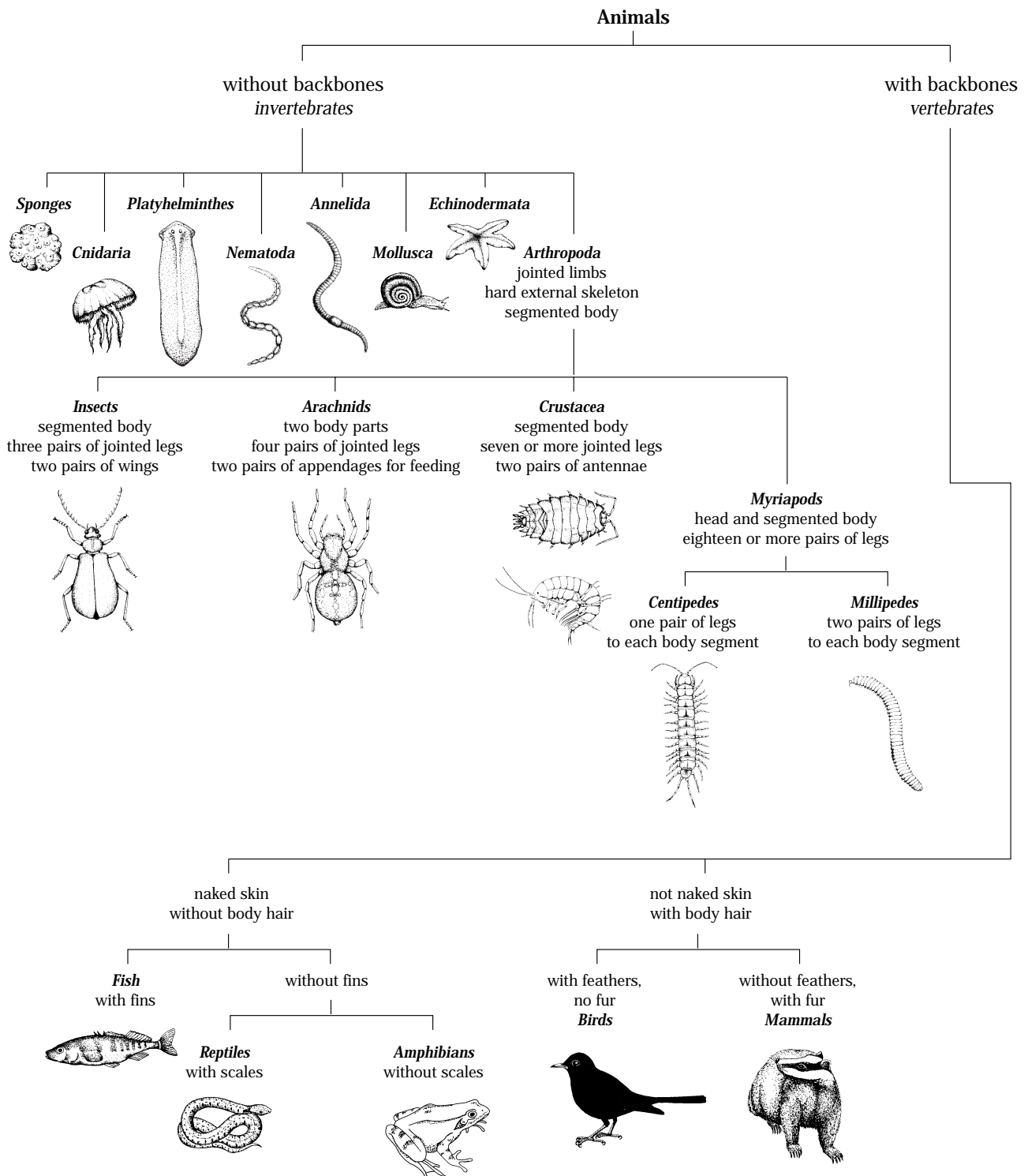


## Classification of animals by their observable features

Pupils can sort and classify native animals by their observable features as defined below:



This diagram shows how common native animals can be sorted and grouped and may be used as a first stage in the progression towards an understanding of the higher level of animal classification.

## Key questions for land invertebrate identification

Use the Identification Cards to help find out the name of your animal. Carry out the following steps and answer the questions. Use **Pupil sheet 2** to help pinpoint your animal.

1 Sort the cards into sets by the 'number of legs' logos shown below:

				
0 legs or none visible	6 legs	8 legs	14 legs or more than 4 pairs	More than 14 legs

2 How many visible legs does the animal have?  
(Select the set of cards with the matching logo)

.....

3 Does it have wings?

- Yes
- No

4 What is its size? (approximately)

- 2 mm to 7 mm                      Tiny
- 8 mm to 30 mm                    Small
- 31 mm to 120 mm                Medium

5 What is its colour?

.....

Answer the following questions by looking at the Identification Card you have chosen as matching your animal.

6 Which feeding group does it belong to?

- Herbivore    Feeds on plants
- Carnivore    Kills and eats other animals
- Detritivore    Feeds on fragmented organic matter
- Omnivore    Feeds on both plants and animals
- Scavenger    Feeds on dead and decaying animals

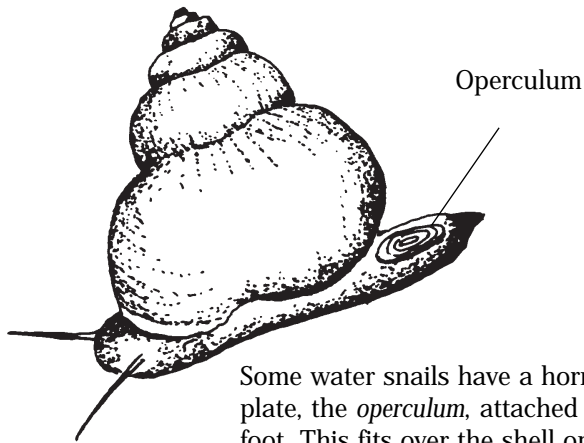
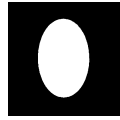
7 What is its habitat?

.....

My animal is a .....

## Water Snail

*Bithynia tentaculata*



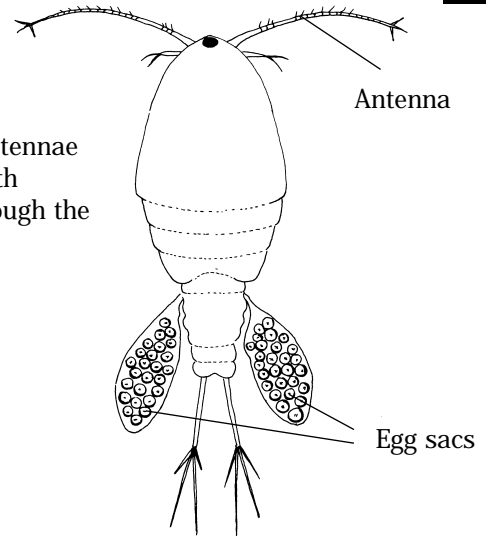
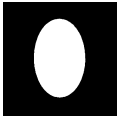
Some water snails have a horny plate, the *operculum*, attached to the foot. This fits over the shell opening when the snail has withdrawn itself.

<b>Number of legs</b>	0
<b>Wings</b>	No
<b>Size</b>	15 mm
<b>Colour</b>	Brown
<b>Food</b>	Herbivore
<b>Habitat</b>	In rivers, streams, ditches, canals

*Note: Eggs are attached to water plants or stones*

## Cyclops

*Cyclops sp. (female)*



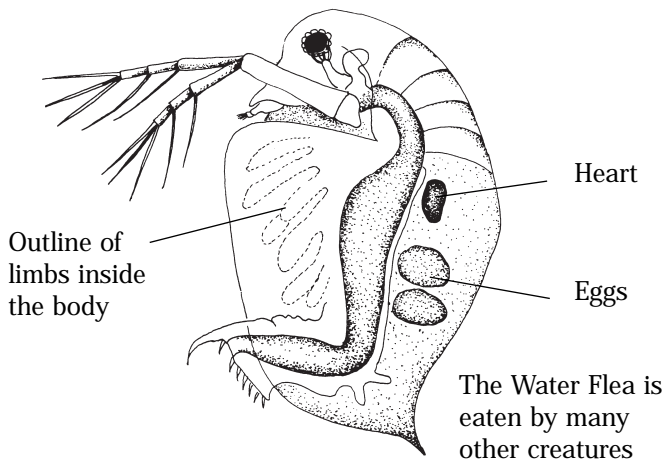
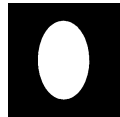
Uses the antennae to assist with moving through the water

<b>Number of legs</b>	0. Not visible
<b>Wings</b>	No
<b>Size</b>	3 mm
<b>Colour</b>	Transparent
<b>Food</b>	Seizes small animal and plant particles from the water
<b>Habitat</b>	Ponds, rivers, streams

*Note: Becomes the prey of many other water creatures*

## Water Flea

*Daphnia sp.*



<b>Number of legs</b>	0. Not visible
<b>Wings</b>	No
<b>Size</b>	2 mm
<b>Colour</b>	Transparent
<b>Food</b>	Filter feeder. Filters particles of food from the water into the mouth
<b>Habitat</b>	Ponds, shallow pools, lake edges

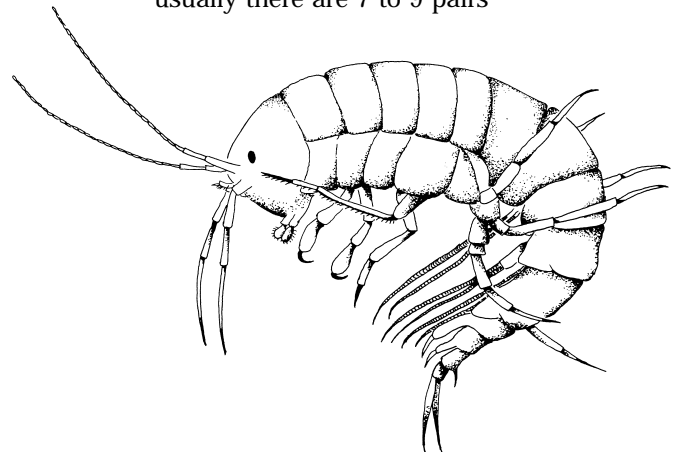
*Note: Water fleas can live from a few weeks to six months*

## Fresh-water Shrimp

*Gammarus pulex*



The number of legs vary but usually there are 7 to 9 pairs



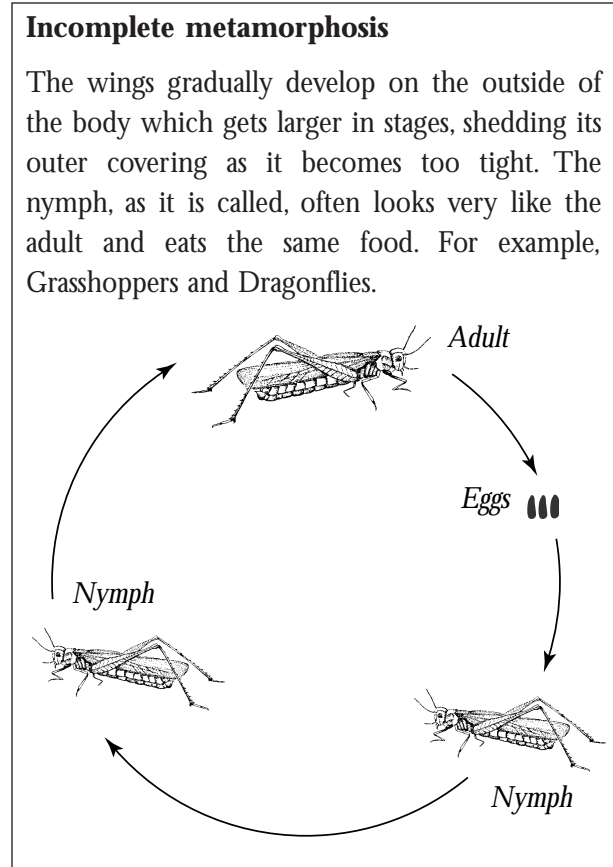
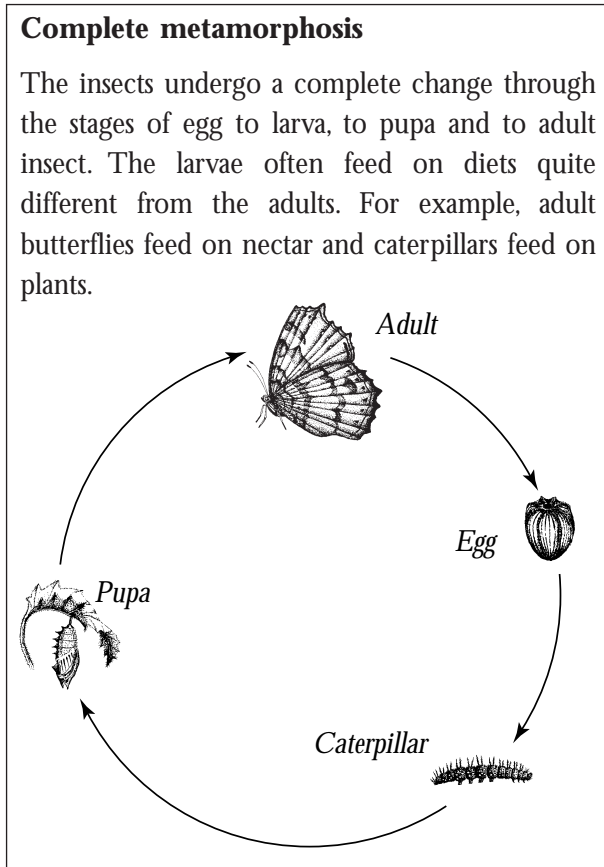
<b>Number of legs</b>	14. Sometimes more
<b>Wings</b>	No
<b>Size</b>	16 mm
<b>Colour</b>	Grey-brown or reddish-brown
<b>Food</b>	Feeds on organic particles
<b>Habitat</b>	Running water, rivers, streams

*Note: They hide under stones in areas of running water*

## Metamorphosis and identifying larvae

### 1 Metamorphosis

Metamorphosis is a marked structural transformation during the development of an organism, as seen in the change from larva to adult insect. There is **complete metamorphosis** and **incomplete metamorphosis**.



### 2 Identifying larvae

Many different types of insect larvae and pupae can be found when looking for invertebrates, particularly among soil, logs, leaves and leaf litter.

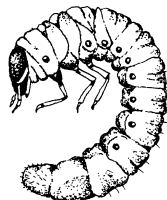
**There are four basic types of insect larvae:**



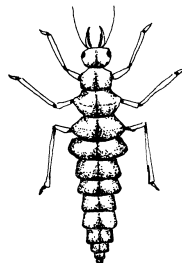
Butterfly and moth larva



Two-winged fly larva

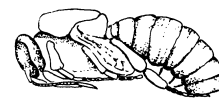


Beetle larva



Ladybird larva

**There are two main types of pupa:**



Exarate, where the appendages are free, such as in dragonflies



Obtect, where the appendages are fixed in a case, such as in butterflies

### Mammals, what they eat and their adaptations

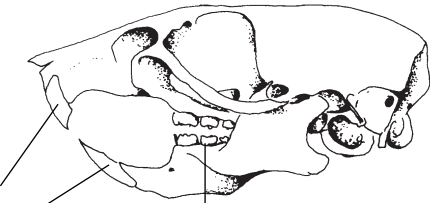
Name: ..... Date: ..... Weather: .....

The teeth of mammals are specifically adapted to suit their type of food.

- Identify the animal
- Define its food
- Pinpoint its adaptation, **A**, **B** or **C**

**Adaptations for feeding**  
Teeth of mammals

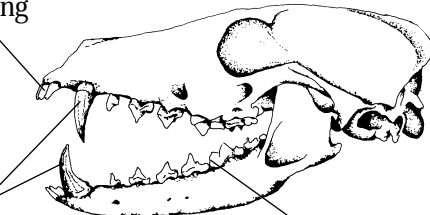
**A Herbivore such as a bank vole**  
Dominant incisors



Incisor teeth for cutting plants

Molar teeth for chewing

**B Carnivore, such as a fox**  
Dominant canines

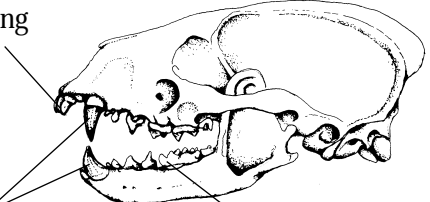


Incisor teeth for cutting

Canine teeth for tearing flesh

Molar teeth for chewing

**C Omnivore such as a badger**  
Incisors, canines and molars



Incisor teeth for cutting

Canine teeth for tearing flesh

Molar teeth for chewing

Name	Food	Adaptation A, B, C or D

**Results:** Which type are most often seen in school grounds, parks, etc and why is this?