Phylum Arthropoda

1. Most biologically successful and abundant animal group on earth.
2. There are more arthropod species than all other species combined.
3. There are 1 million known species.
4. Symmetry is bilateral.
5. Small coelom.

7. Exoskeleton that provides:
   (a) protection of internal organs
   (b) waterproof covering allowing many to live on dry land (so they do not dry out)

8. Segmented body with parts modified and fused to form specific body regions:
   (a) head - anterior
   (b) thorax - middle
   (c) abdomen - posterior
9. Possess a variety of well developed systems:

- a) Digestive
- b) Respiratory
- c) Excretory
- d) Reproductive
- e) Skeletal
- f) Circulatory - open system
- g) Nervous - well developed with the following features:

  (i) distinct brain
  (ii) ventral nerve cord
  (iii) sense organs such as eyes, auditory organs, sensory bristles, and antennae that touch and sense chemicals

10. The most successful class is class Insecta with 900,000 known species.

- Nearly all are terrestrial with a few freshwater and saltwater forms
- Size range is broad; from 0.25 mm for some species of beetles and up to 30 cm for some tropical moths
The success of insects is credited to the following reasons:

- (1) They are the only invertebrates capable of flying. This allows them to move over great distances to find food, escape predators, and spread to new environments.

- (2) There is tremendous variation in how they are adapted for feeding and reproduction, so they can exist in all kinds of environments and obtain nourishment from many sources.

More Reasons

- (3) High rate of reproduction and short life cycle. This increases the ability of insects to adapt.

- (4) Small in size. This means they don’t need large areas to live.

- (5) Social insects

- (6) Variations in body form