REGULAR CHANGES IN NATURE

- Tidal (4 times a day) – Animals most affected by the varying or lack of oxygen are those in the intertidal zone (e.g. mangrove which 'breathe' through pneumatophore roots, crabs with gills)
- Daily – Some organisms such as koalas are more active at night (nocturnal). Other organisms such as dogs are more active during the day (diurnal).
- Monthly – The Lunar Cycle affects Spring and Neap tides which, in turn, affect organisms in coastal areas.
- Seasonal – Plants are most affected by the change of seasons (spring, summer, autumn and winter).
- Yearly – Flowering plants are most affected as the time of flowering for many plants such as chrysanthemums ('Mother's Day plants') is stimulated by the increasing number of hours of continuous darkness in a day. Deciduous plants lose their leaves in autumn. Hibernating animals (e.g. bears) and those with changing body temperatures (e.g. insects) become less active in the colder months.
- Biennial or Perennial – Many smaller plants that are herbaceous have a life cycle of 2 to 3 years.

*Did You Know That…?*Roosters don't just crow at dawn. They crow all day, but are more active at dawn and dusk.

IRREGULAR CHANGES IN NATURE

- Sudden Changes (e.g. fire, flood, volcano, land clearing)

These catastrophes may occur without warning, causing damage to ecosystems. On the other hand, many Australian native plants will not germinate unless exposed to a few minutes of intense heat such as that of a bushfire.

- Gradual Change (e.g. Succession)

After a catastrophe either natural or man-made, land is often laid bare with no vegetation. Over time, there is a gradual increase in biotic diversity beginning with plants that have a high tolerance to environmental extremes, and eventually building up to a complex ecosystem.

The bare rock is first covered by lichens which weather the rock into particles. Small vegetation begins to grow. When this plant growth dies, the soil becomes rich in humus, and larger plants and small animals live there. Eventually, larger plants and animals inhabit the area.

- Gradual Change (e.g. Eutrophication)

If fertilisers or phosphate-rich detergents find their way into waterways, they encourage the growth of water plants to the extent that the plants take up much of the oxygen in the water. Aquatic animals can die from suffocation. This problem is called eutrophication.

- Gradual Change (e.g. Greenhouse Effect and Global Warming)

The increase of carbon dioxide and methane in the atmosphere causes higher temperatures. This will result in a change in the types of plants with the ability to photosynthesise in the changed environment.