**B8 - REPRODUCTION**

**8.1 - Asexual and sexual reproduction**

**1. Define asexual reproduction.**

The process resulting in the production of genetically identical offspring from one parent.

**2. Discuss the advantages and disadvantages to a species of asexual reproduction.**

*Advantages*

* The process is quick;
* Only one parent is needed;
* No gametes are needed;
* All the good characteristics of the parent are passed on to the offspring;
* They usually store large amounts of food that allow rapid growth when conditions are suitable

*Disadvantages*

* There is little variation created, so adaptation to a changing environment (evolution) is unlikely;
* If the parent has no resistance to a particular disease, none of the offspring will have resistance;
* Lack of dispersal (e.g. potato tubers) can lead to competition for nutrients, water and light.

**3. Define sexual reproduction.**

The process involving the fusion of haploid nuclei to form a diploid zygote and the production of genetically different offspring.

**4. Discuss the advantages and disadvantages to a species of sexual reproduction.**

*Advantages*

* There is variation in the offspring so adaptation to a changing or new environment is likely, enabling survival of the species;
* New varieties may be created which may have resistance to disease;
* In plants, seeds are produced, which allow dispersal away from the parent plant, reducing competition;

*Disadvantages*

* Two parents are usually needed (although not always- some plants can self-pollinate);
* Growth of a new plant to maturity from a seed is slow.