Biology 0871 **Seed Plants**

1. List 3 adaptations that allow for seed plants to reproduce without water.

1. Flowers or cones.
2. Transfer of sperm by pollination
3. Protection of embryos in seeds.

2. Explain **how** each adaptation allows for seed plants to reproduce without water.

1. Flowers and Cones

-they are sporophytes structures in which the gametophyte grows within.

1. Transfer of sperm by pollination

-In seed plants the entire male gametophyte is contained in structures called a **pollen grain.**

-the pollen grain is carried to the female reproductive structure by wind, insects or small animals.

-the transfer of pollen from the male reproductive structure to the female reproductive structure is called **pollination.**

1. Protection of embryos in seeds

-**a seed is an embryo** of a plant that is encased in a protective covering and surrounded by a food supply.

-embryo can remain dormant until conditions are favorable for the embryo to develop.

-seed coat can contain special structures so that the seed will stick to the fur of animals.

-seed coat prevents embryo from drying out.

3. What adaptations allow conifers to live in dry habitats?

 -long, thin needles to reduce the surface area of their leaves.

 -the leaves waxy outer covering.

 -the placement of leaf openings on the underside of the leaf to reduce water

 loss by evaporation.

4. Based on what we have studied so far list 2 ways in which you can distinguish a

 monocot from a dicot.

1. vein structure of a leaf. Monocot-parallel veins –, dicot-branched veins
2. number of floral parts . Monocot – multiples of 3, dicot – multiples of 4 or 5