Mineral salts

1) What additional substances does a plant need to make amino acids and proteins?

2) Where do these substances in question 1 come from?

3) What ions must a plant obtain from the soil in order to make (a) Protein, (b) chlorophyll?

4) Name an artificial fertiliser or fertilisers which farmers can use to increase the supply of nitrate, phosphate and potassium to their crops.

5) Compare between organic and inorganic fertilisers

Plants and water

Water evaporates from leaves to cool down the plant

Draw a flow chart showing all parts of the plant where water passes by to reach air

List down four uses of water for the plant in details

Photosynthesis Revision

a) Can you write the word equation for photosynthesis?

……

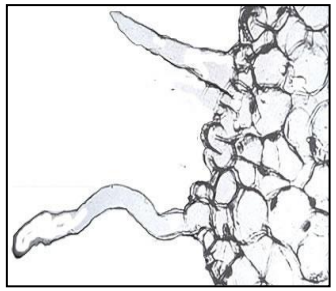
b) Which part of a plant cell absorbs light energy? _____

c) The ends of roots are normally covered in tiny root hair cells. What is their function?

_____

_____

_____



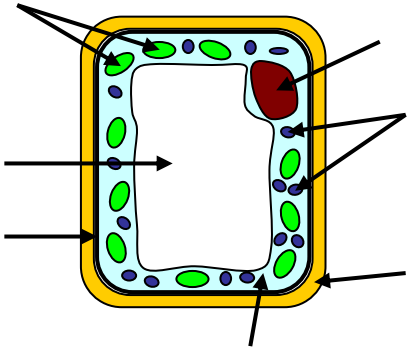
d) Can you number these sentences to explain how to test a leaf for starch?

	Cover the leaf with iodine – the areas with starch in will stain black
	Take the leaf out of the ethanol carefully as it will be brittle – then wash it in the water bath to soften it.
	Place the leaf in boiling water for 1 minute to stop it photosynthesising
	Spread the leaf out on a white tile
	Place a test tube full of ethanol into the hot water and place the leaf into the ethanol – this will remove the chlorophyll

e) What is the purpose of the small holes on the underside of the leaves? _____

f) *Label the diagram of the plant cell below with the following terms:*

cell wall nucleus vacuole cytoplasm
chloroplasts cell membrane



g) How is a leaf designed for photosynthesis?

i) _____

ii) _____

iii) _____

h) Why does the plant have to convert the glucose it makes in photosynthesis into starch? _____

_____

i) How does the plant use the glucose it makes in photosynthesis?

i) _____

ii) _____

SEED DISPERSAL WORKSHEET

1. **The given picture shows the fruit of a plant. It is covered with stiff, hooked spines.**

a. What is the use of hook in this seed?

……

……

b. Name the agent which disperses this kind of seeds?

c. ……

……

2. Seeds are not able to grow properly near the parent plant.

   a. How does seed dispersal help plants?

   ……

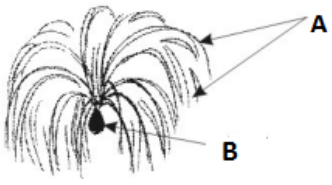
   ……

   b. List the disadvantages, if the seeds are not dispersed away from the parent plant.

   ……

   ……

3. Seeds have special features that help them to be spread far and wide. Here is a drawing of a seed.



   a. How these kinds of seeds are dispersed?
   b. What is the special feature present in the seed?
   c. Describe how B is formed.
   d. How does A help the seed in dispersal?

a. ……

……

b. ……

……

c. ……

……

d. ……

……