Spring Term 1

B6 - Non Communicable Diseases

& B7 - Photosynthesis

Aiming for Grade 4

Extended Homework Assignment

Name: _____

Set: _____

Instructions

A printed copy should be handed into your teacher.

The knowledge required to complete this assignment will be supported in class in lessons of the half term.

Aiming for Grade 4

Aims

The aim of this lesson is to help you revise the main topics in B6 – Non Communicable Diseases & B7 - Photosynthesis

Learning outcomes

After completing this activity, you should be able to:

- State some examples of non-communicable diseases.
- State some of the risk factors for some non-communicable diseases.
- State some methods of prevention of some non-communicable diseases.

- State the word equation for photosynthesis.
- State how a leaf is adapted for photosynthesis.
- State the uses of glucose in a plant.
- State and describe the factors that affect photosynthesis.

B6 – Non-Communicable Diseases

Task

You will be taking on the role of a GP and reviewing the profiles of six of your patients and giving them advice.

There are six profiles one for each of your six patients on page 4. You will need to give advice to each patient.

Complete the tables below for each patient.

Paul	Mary
Tick the risk factors that apply: smoking drinking age family history obese lack of exercise gender	**Tick the risk factors that apply:** smoking drinking age family history obese lack of exercise gender
At risk from what diseases:	**At risk from what diseases:**
Advice on prevention of these diseases: • • •	**Advice on prevention of these diseases:** • • •

Ali	Yasmin
Tick the risk factors that apply: smoking drinking age family history obese lack of exercise gender	**Tick the risk factors that apply:** smoking drinking age family history obese lack of exercise gender
At risk from what diseases:	**At risk from what diseases:**
Advice on prevention of these diseases: • • • • •	**Advice on prevention of these diseases:** • • • • •

Patient profiles:

Paul: • Age 70 • Male • Enjoys walking and gardening • Has a meat-heavy diet • Has the occasional pint of beer • BMI in normal range	**Mary:** • Age 40 • Female • Fitness instructor • Vegan • Has a glass of wine every day • BMI is less than normal • Mother has type 2 diabetes
Ali: • Age 30 • Male • Rugby player • BMI above average • Drinks heavily after a match • Has a meat heavy diet	**Yasmin:** • Age 19 • Female • Student who cycles to college • Smokes 3–5 cigarettes a day • Rarely drinks • BMI in normal range
Juan: • Age 25 • Male • Enjoys clubbing and pubbing • BMI is less than normal • Smokes 10 cigarettes a day • Drinks heavily at the weekends	**Emma:** • Age 60 • Female • Works in an office • Loves junk food • BMI is above average • Does not drink any alcohol • Parents had cardiovascular disease

B7 - Photosynthesis

Task

Question 1 You will be identifying how the leaf is adapted for photosynthesis.

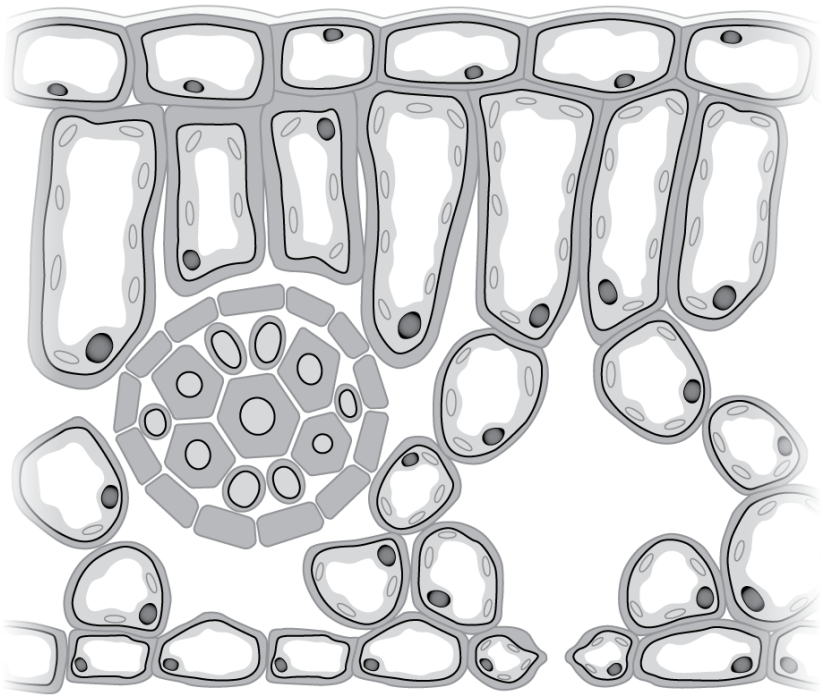
Question 2 You will be advising a horticulturalist on how to improve the yield of their crops.

Questions:

1 a View the diagram of a cross-section through a leaf.

Label your drawing with the parts of the leaf. Use the labels given below:

air space	guard cell	palisade layer	phloem
spongy mesophyll layer	stomata	upper cuticle	
vascular bundle	xylem		



b Match the part of the leaf with how it is adapted for photosynthesis.

palisade layer	cells tightly packed and contain lots of chloroplasts
spongy mesophyll layer	contains xylem and phloem for transport of water and sugars
stomata	pores in lower epidermis to allow gaseous exchange
vascular bundle	lots of air spaces for diffusion of gases

2 You are advising someone on how to improve the yield of their plants in their greenhouse. Answer the questions below to provide a checklist for them. You can use your notes and the digital textbook to help you.

a What raw materials do plants need to photosynthesise?

1 .....

2 .....

b What factors affect the rate of photosynthesis in plants?

1 .....

2 .....

3 .....

c What happens if the temperature is increased too much?

.....

.....

e Sketch two graphs in the space below to show how light intensity and carbon dioxide affect the rate of photosynthesis.

f Write a list of the ideal conditions a plant would need for maximum growth.

1 .....

2 .....

3 .....

4 .....

5 .....