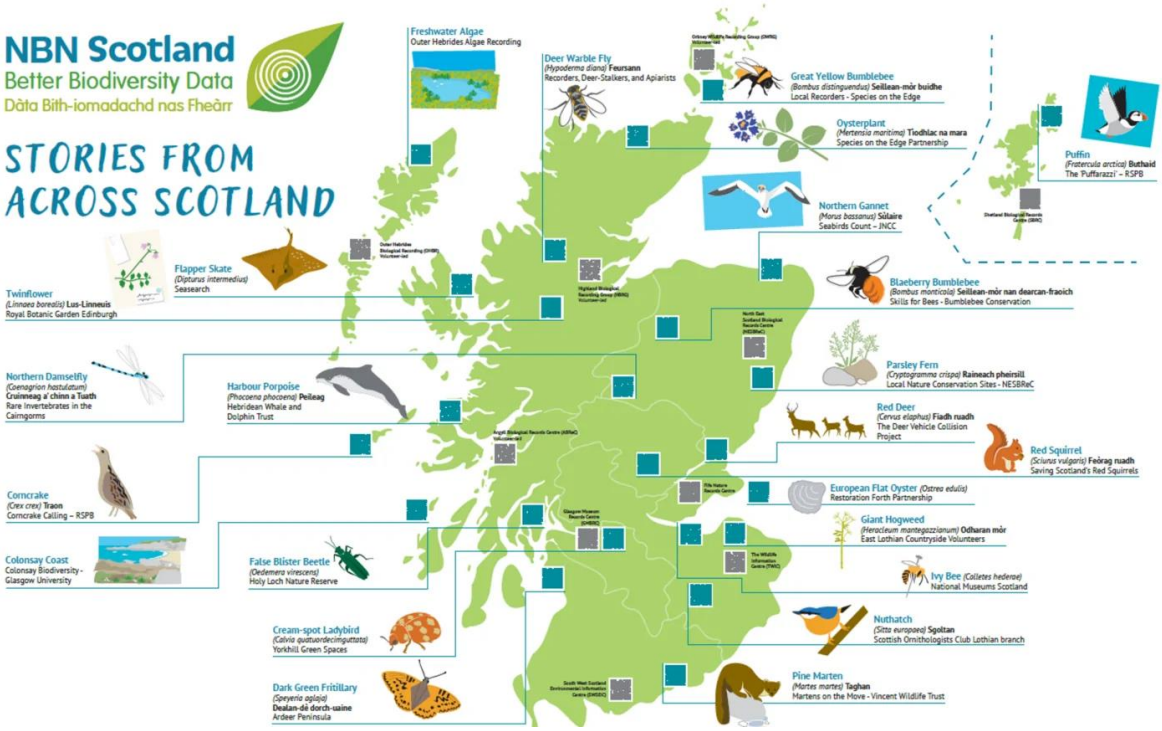
S1 Science
Biodivesity-Homework



Name …….

Class ……

PROGRESS LOG – Model of Matter

Homework	Due Date	What did I do well?	What do I need to improve upon?	Have I corrected my mistakes?	Parent signature
1. Biodiversity, Habitats and keys					
2. Sampling techniques, food chains/webs and abiotic factors					
3. Competition, photosynthesis and improving crop yield					

End of Unit Assessment percentage:

Where are my 'learning gaps'?

How will I 'fill' them?

Homework 1

1.What does the term biodiversity mean

_____ (1)

2.Give **two** reasons why animals may be threatened with extinction.

_____ (2)

_____

3. The place where an animal or plant lives is call its?

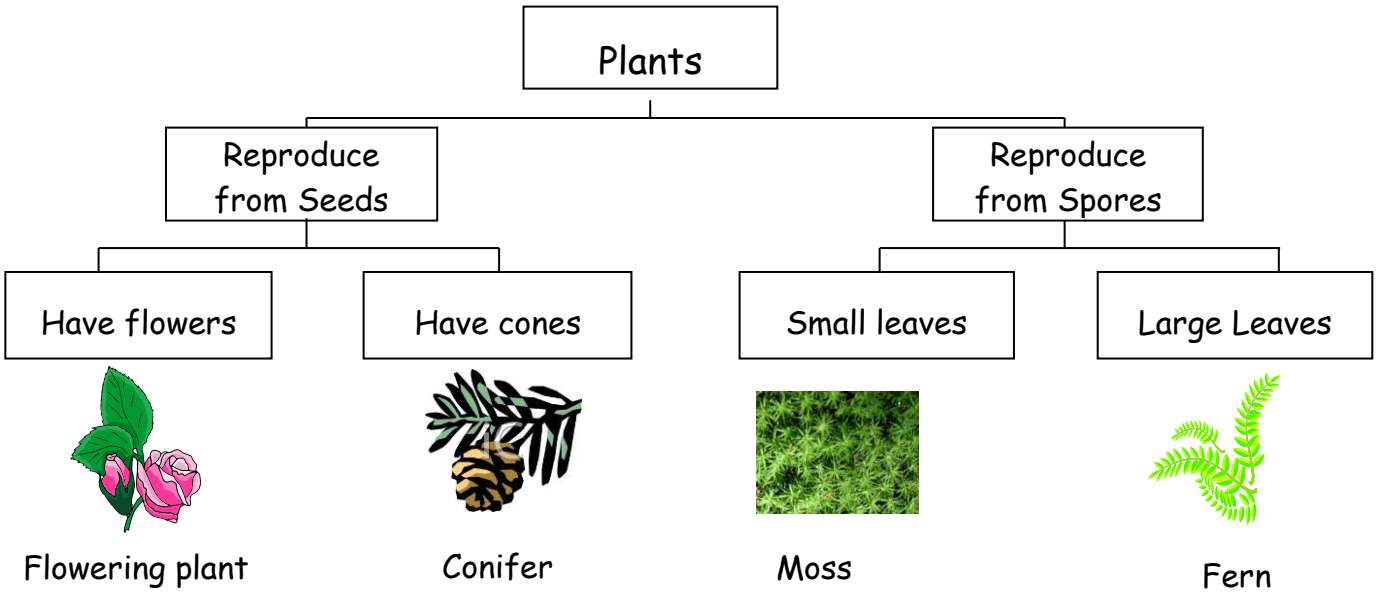
_____ (1)

3. Describe the area where you are most likely to see a camel in the wild.

_____ (1)

_____

4.You can use keys to identify plants and animals. An example of a key.



What would you identify the following plants as from the key?

(a) A small spongy plant with very small leaves and spores?

_____ (1)

(b) A plant with seeds but no flowers?

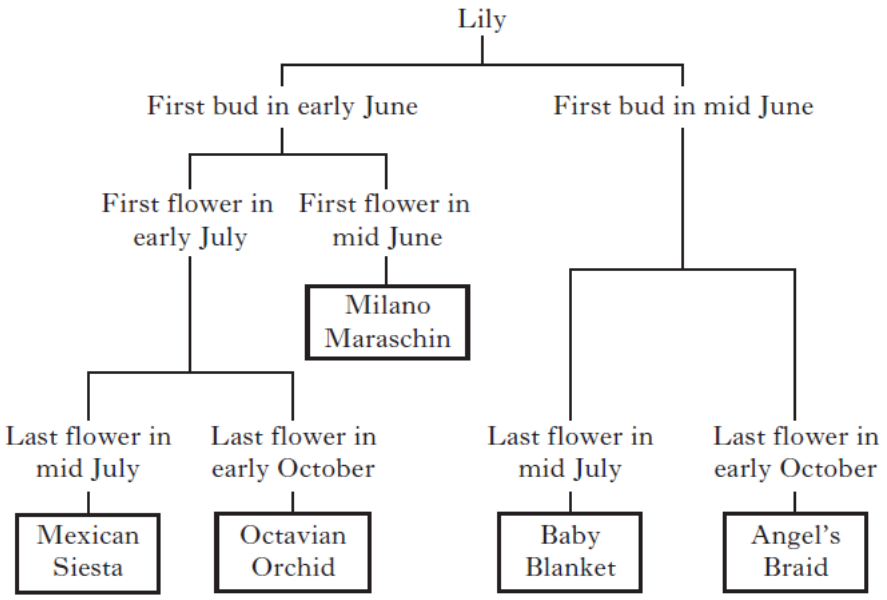
_____ (1)

(d) Which two feature would help you identify a fern

_____

_____ (2)

5.The key below shows information about five varieties of lily.



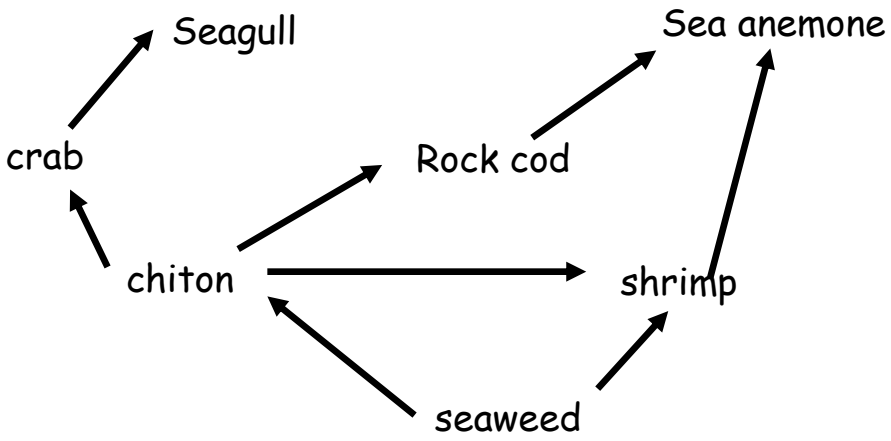
Which variety of lily has its last flower appearing in mid July and its first bud appearing in early June?

A Milano Maraschin
B Octavian Orchid
C Mexican Siesta
D Baby Blanket

Homework 2

1.Name a technique which can be used for sampling **organisms,** and describe how to use it.
Name_____
Description_____
_____ (2)

2. A food web from a rocky shore is shown below.



a) From the food web, draw a food chain showing four organisms. (1)

(b) Complete the following sentences by **underlining** the correct answer.

(i) The sea anemone is a **producer/consumer** because it eats other organisms. (1)

(ii) The crab is the **predator /prey** of the seagull. (1)

(iii) The energy from the sun is used by the **seaweed/chiton** to make food (1)

(iv) If the number of predators in an area decrease, the number of prey will?

Increase/stay the same /decrease (1)

3. Name two abiotic factors.

_____
_____ (2)

4. Name a technique which can be used to measure an abiotic factor and describe how it is used.

Name_____

Description_____
_____ (2)

Homework 3

1. An investigation was carried out to compare the germination of four different types of seeds.
The results are shown in the table below.

Type of seed	*Number of seeds sown*	*Number of seeds germinated*
sunflower	32	17
barley	20	17
geranium	22	11
mustard	26	12

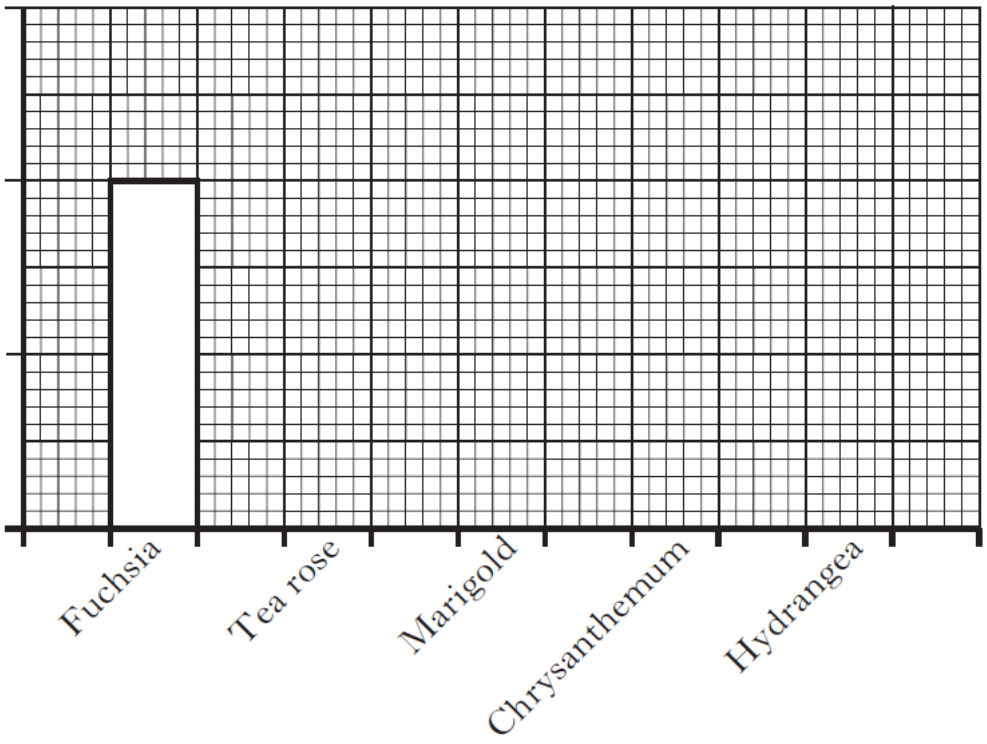
Which type of seed had **less than** 50% seed germination? (1)

A Sunflower
B Barley
C Geranium
D Mustard

2. During an investigation, a student deadheaded five different types of plant in a garden.
He then counted the number of new flowers produced by each of the plants two weeks later.
The results are shown in the table below.

Name of plant	*Number of new flowers*
Fuchsia	10
Tea rose	4
Marigold	13
Chrysanthemum	6
Hydrangea	9

On the grid below, complete the **bar graph** by
1 providing a label and scale on the vertical axis; (1)
2 plotting the remaining results. (1)



3. Which line in the table below correctly shows the parts of a plant for which nitrogen, phosphorus and potassium are important for growth? (1)

	Nitrogen	*Phosphorus*	*Potassium*
A	leaves	roots	flowers and fruits
B	roots	leaves	flowers and fruits
C	flowers and fruits	roots	leaves
D	leaves	flowers and fruits	roots

4.Complete the following sentences by **underlining** the correct answer

Green plants use **chemical/light** energy to make their own food.
This food is stored as **starch/protein** (1)

1. Write down the word equation for Photosynthesis

→ (2)

2. One of the products of photosynthesis may be converted into a storage carbohydrate in the plant.
   Name this storage carbohydrate.

_____ (1)

4.What substance in green leaves absorbs the light energy for photosynthesis?

_____ (1)

5. Name one method of controlling insect pests in plants.

_____ (1)

Homework 4

1.A group of students counted the caterpillars on the cabbages in five vegetable plots.
Their results are shown below.

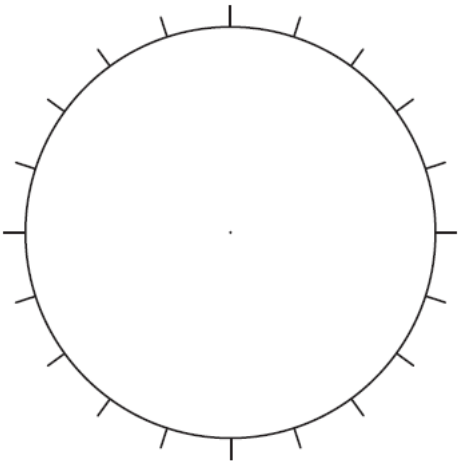
Vegetable plot	Number of caterpillars
A	27
B	42
C	31
D	25
E	30

(*a*) Calculate the average number of caterpillars in the vegetable plots.
(1)

a) The table below shows information about the health condition of plants in a garden.

Health condition	*% plants*
Healthy	25
Insect infection	20
Fungal infection	15
Both insect and fungal infection	40

(i) Use the information in the table to complete and label the pie chart below. (2)



I(ii)n a study of 200 plants, calculate the number which would have any type of infection.
Space for calculation

Number of plants with any type of infection _____ (1)

(ii) Name one method of controlling insect pests in plants.
_____ (1)

3.Read the passage and then answer the questions below.
Ladybirds are small, brightly-coloured insects. They are often seen on green plants eating aphids, which are their main prey. Aphids are slow-moving and have no defences so they are easily caught by ladybirds. There are eighty-eight species of ladybird found in Europe. Only forty-three of these species are found in Britain.

A ladybird's brightly coloured body acts as a warning to animals which might eat it. If attacked, a ladybird defends itself by "reflex bleeding". This means that blood containing an unpleasant substance called coccinelline oozes from its leg joints. This substance tastes so bad that predators soon learn not to eat ladybirds.

Aphids damage plants, so gardeners use ladybirds as a natural way of controlling the number of aphids. An advantage of using ladybirds to kill aphids is that gardeners do not have to use toxic pesticides. In many European countries, ladybird farms have been set up to provide a supply of ladybirds.

(a) Give two reasons why aphids are easily caught by ladybirds.
(2)

(b)Why does coccinelline stop predators eating ladybirds? (1)

(c)What is the advantage of using ladybirds to kill aphids? (1)

(4) Name two other methods of biological control (1)

(5) Name two potential use of genetic engineering in Agriculture(2)