

Name:

Class:

Date:

Raw Score (42):

Criteria Score (24):

Level Awarded:

A Working scientifically

(Teacher assessed during practical, experimental and investigational work: up to a maximum of 6 points)

B Plants

1a. Number the different parts of the plant on the diagram below to match the names.

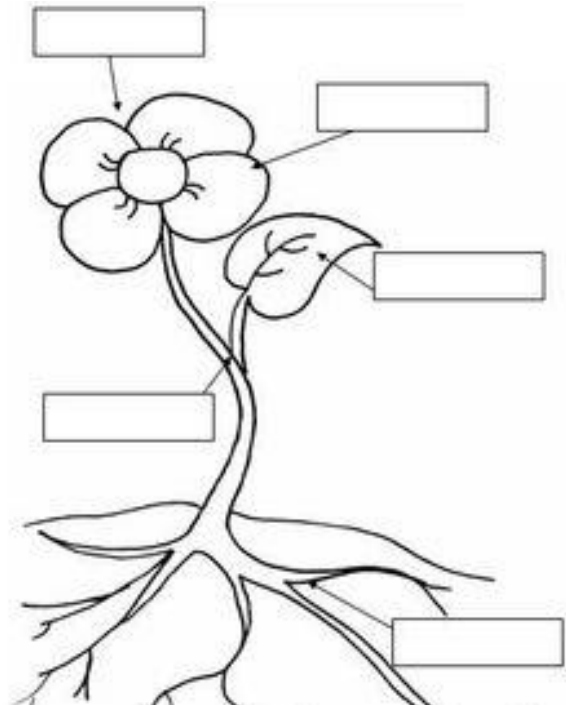
1. stem

2. flower

3. root

4. leaf

5. petal



1b. Show what job each part of a plant does. One has been done for you.



petal

root

leaf

stem

attracts insects

makes food from sunlight

supports the plant

takes up water and nutrients

2. A plant **must have** certain things in order to live and grow healthily. Some of them are listed below and one has been circled. Find and circle another **FOUR (4)**.



wind	light	room to grow	a pot
sand	air	nutrients	water

2 marks (3:8)

3. Explain how a plant gets **water** from the **soil** to its **leaves**.



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2 marks (3:9)

- 4a. Circle the part of a plant that is used mostly for **reproduction**.


 flower

 root

 leaf

 stem

- 4b. Which part, in the **life cycle** of a tree, could the squirrel help with? Tick **ONE** box.


 pollination

 seed formation

 seed dispersal

 germination

2 marks (3:10)

C Animals, including humans

5. **Balanced Diets**

Plants can make their own food but animals cannot. They must eat.

5a. In a balanced diet, each food group has a special function in the body.
 Each food below is a good source of something the body needs.
 Draw **THREE** lines below to match each food to its special function.



oranges, apples, carrots

Carbohydrates (fuel for energy).

bread, potatoes, rice

Vitamins (for health).

chicken, eggs, fish

Protein (for growth and repair).

5b. Tick **TWO** boxes to show the best ideas for having a healthy, balanced diet.

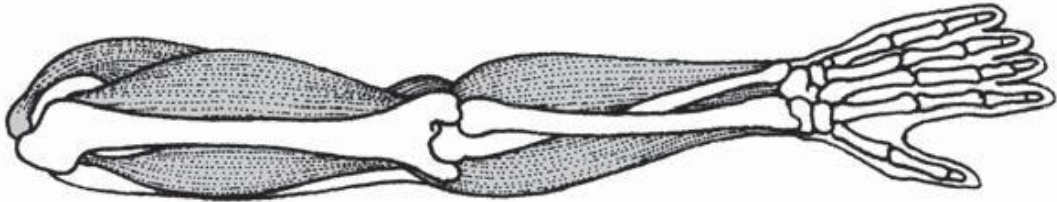
For a healthy, balanced diet you should:

- eat lots of fried food.
- eat different kinds of food.
- eat mainly meat.
- eat fruit and vegetables regularly.



2 marks (3:11)

6. The diagram shows the **muscles** and **bones** in an arm.



6a. What do the **muscles** allow the arm to do?



.....

6b. Name one job that the **bones** perform?



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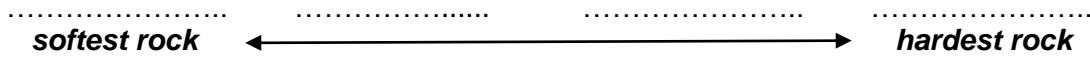
2 marks (3:12)

D Rocks

7. Four rocks were tested to see which was the **hardest**. Four objects were used to try to scratch each rock and the table shows which ones did.

Rock	finger nail	coin	matchstick	plastic knife
granite	X	X	X	X
chalk	✓	✓	✓	✓
sandstone	X	✓	X	✓
marble	X	✓	X	X

Put the rocks in order from softest to hardest.



2 marks (3:13)

8. Here is a **fossil** of an ammonite.

It was a sea creature that died a very long time ago.



Describe how the fossil was formed.



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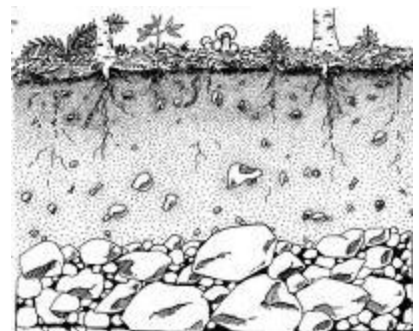
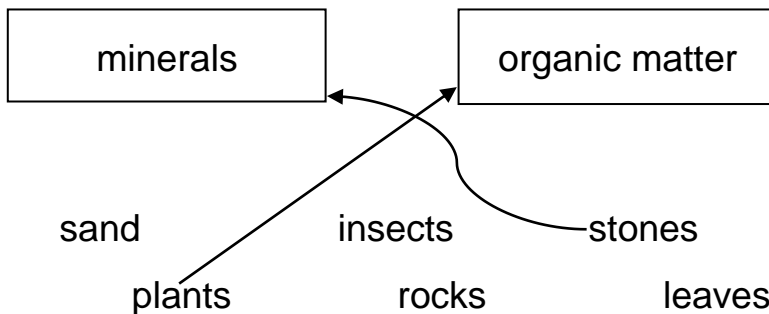
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2 marks (3:14)

9. Here is a drawing of a section of soil. It is made up of different materials.

Group the materials below. Two have been done for you.



2 marks (3:15)

E Light

10a. Torches are very useful to fire fighters.

When might a fire fighter need to use a torch and how would it help?

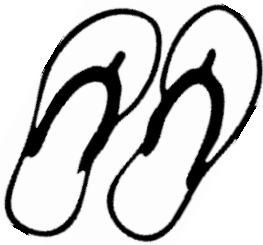


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10b. Tick **TWO** boxes to show what could help protect your **eyes** from the sun.



flip flops



sun glasses



ice cream



sun cream



cap

2 marks (3:16)

11. Tick **TWO** boxes to show which objects are the **best** reflectors of light.



rubber boots



wooden spoon



woolly hat



metal kettle



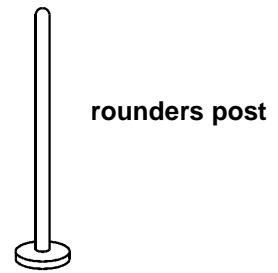
foil dish

2 marks (3:17)

12. On a sunny day, some children use a rounders post to make shadows on the playground.

When light shines on the rounders post, a shadow forms.

Explain how the shadow is formed?



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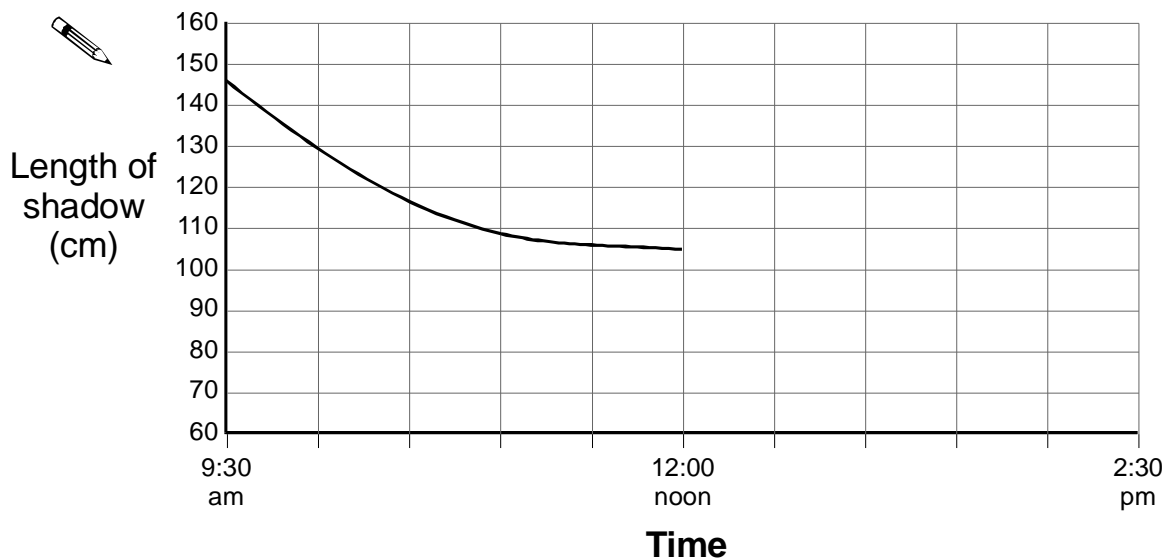
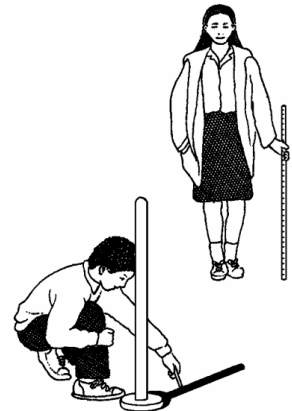


2 marks (3:18)

13. The children draw round the shadow of the rounders post every half hour from 9:30 am until 12:00 noon.

They measure the length of each shadow and make a line graph to show the results.

Continue the line on the graph to show how the length of the shadow would change between 12 noon and 2:30pm.



2 marks (3:19)

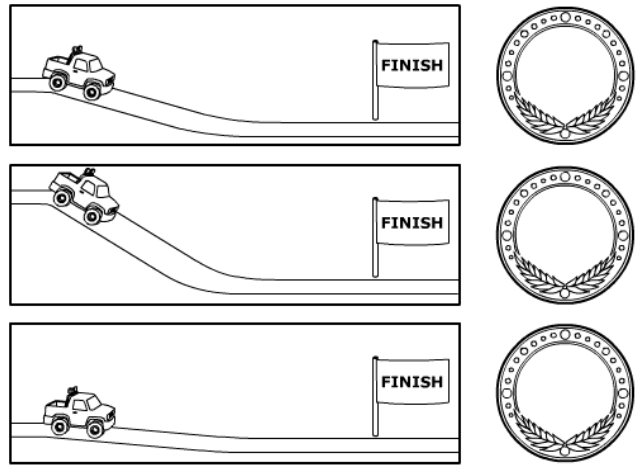
F Forces and magnets

14a. David races three **identical** toy cars. They travel down three **different** ramps.

They are all released at the same time.

Which car will finish first, second and third?

Write 1st (first), 2nd (second) and 3rd (third) on the medals to show this.



14b. Give a reason why you thought the winning car went the fastest.



2 marks (3:20)

Magnets

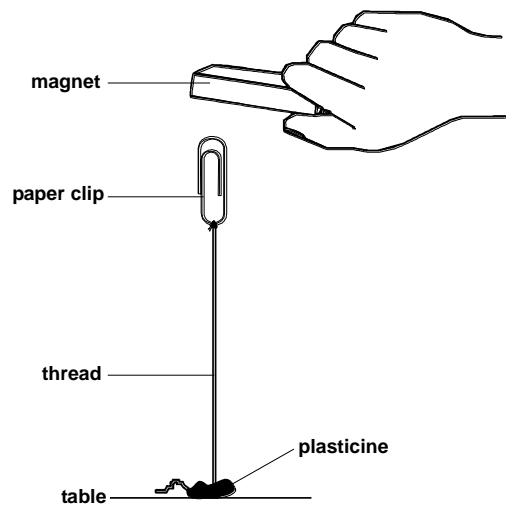
Sarah is investigating magnetism.

She ties a paper clip to a piece of thread.

She sticks the thread to the table.

She holds a magnet above the paper clip.

This is what happens.



15. In the picture there is a gap between the magnet and the paper clip.

What does this tell you about magnetism?



2 marks (3:21)

16. What is the magnet attracting? Put a tick (✓) for **Yes** and a cross (✗) for **No**.

the table? the thread? the paper clip? the plasticine?



2 marks (3:22)

17. Sarah repeats her experiment using different objects instead of the paper clip.

Which of the following will act in the same way as the paper clip?

Tick **TWO** boxes.



plastic pen aluminium foil iron nail

wooden lolly stick steel spoon rubber band

2 marks (3:23)

18a. Look at the magnets below. What do the **N** and **S** stand for at the end of the magnets?



N =

S =

18b. Tick the correct box to say whether the magnets shown above will attract or repel each other.



attract

repel

2 marks (3:22/24)