

Primary Science Year 3 End of Year Exam

Preparation: You should spend time looking over the example questions provided to prepare yourself for your Science exam. Make sure you read the questions carefully and practice interpreting what they mean. Further preparation can be used with the following websites:

http://www.bbc.co.uk/bitesize/ks2/science/living_things/plants/read/1/

http://www.bbc.co.uk/bitesize/ks2/science/materials/solids_liquids_gases/read/1/

http://www.bbc.co.uk/bitesize/ks2/maths/data/frequency_diagrams/read/1/

<http://resources.woodlands-junior.kent.sch.uk/revision/science/life.html>

<http://www.educationquizzes.com/ks2/science/life-processes/>

http://www.bbc.co.uk/bitesize/ks2/science/physical_processes/forces/read/1/

<http://www.bbc.co.uk/bitesize/quiz/q74052238>

http://www.bbc.co.uk/bitesize/ks2/science/physical_processes/friction/read/1/

http://www.bbc.co.uk/schools/scienceclips/ages/8_9/friction.shtml

<http://www.bbc.co.uk/bitesize/quiz/q83969509>

<http://www.theschoolrun.com/homework-help/friction-and-resistance>

<http://www.theschoolrun.com/what-is-a-fair-test>

http://www.bbc.co.uk/bitesize/ks2/science/physical_processes/magnets/read/1/

<http://www.theschoolrun.com/homework-help/magnets>

http://www.bbc.co.uk/bitesize/ks2/science/materials/material_properties/read/1/

<http://www.bbc.co.uk/education/clips/zmys34j>

<https://www.youtube.com/watch?v=G6dxBta7GTI>

Exam Materials - Include pencils and rubbers.

Topics to revise for the exams:

- Classifying solids, liquids and gasses.
- Plants – What they need to live, parts of a plant, testing plants.
- Reading and completing Bar Graphs and Tables.
- Sorting living things into groups e.g. carnivores / omnivores, lives on land, has no legs etc.
- Life processes of living things e.g. Movement, nutrition, growth, reproduction, respiration and excretion.
- Forces including: push, pull and friction and measuring with a force meter. Other words for forces e.g. squashed and stretched. Forces used to change shape of an object. Looking at how objects can change shape with force and what kind of objects would change shape. Streamlined shapes.
- Fair Testing (Idea that only one thing changes)
- Magnetic objects –iron, steel, cobalt, nickel
- Properties of materials e.g. hard, soft, rough, smooth, rigid, bendy, flexible, waterproof, absorbent, insulator etc.
- Senses – sight, sound, taste, smell, touch
- Using a ruler and measuring in cm
- Man-made vs natural objects

Answers:

When reading the question, make sure you read it properly. Re-read it, and make sure you've understood it. Pick out the **key words** and take a moment to think about your answer and make sure it is actually answering the question.

When you have written your answer **STOP!** Go back and re-read the question and ask yourself, "Does my answer actually answer all of that question?"

Sample Questions:

Watering plants

(a) David knows that plants need water to grow.

Name **TWO other** things that plants need to take in for healthy growth.

 and
.....

2 marks

(b) David grows some plants.

He wants to find out if the amount of water affects their growth.



Tick **ONE** box after **each** question to show the **best** way for David to carry out his test.

 Should David use the same type of soil in each pot?

yes

no

Should David put the plant pots in the same place?

yes

no

Should David put the same amount of water in each pot?

yes

no

How many plants should David use?

2 plants

5 plants

2 marks

Q2. Living Things

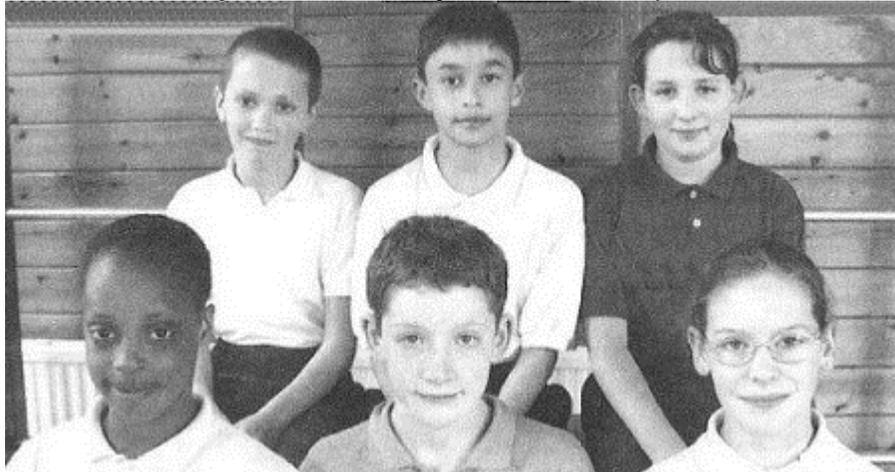
(c) Some children talk about their floor turtles.

All of their sentences are true.

They know that a floor turtle is not a living thing.

Which sentences show that a floor turtle is **not** a living thing?
Put a tick in **FOUR** boxes.

1 mark



A floor turtle does not need to feed.

A floor turtle can follow instructions.

A floor turtle cannot reproduce.

A floor turtle can repeat things again and again.

A floor turtle always stays the same size.

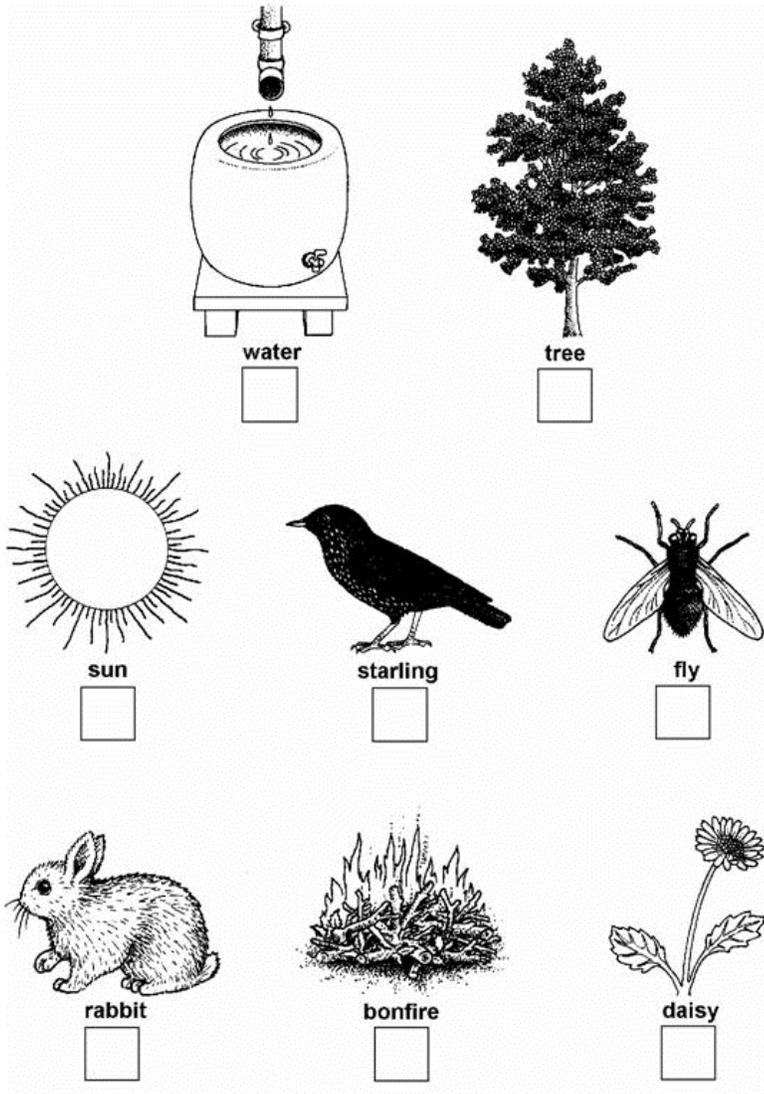
A floor turtle needs electricity to make it work.

1 mark

Q3. Vegetable Patch

(a) Kami sees all of the things below while he is working in his vegetable patch.

Tick **FIVE** boxes to show which of these things are living.



2 marks

(c) A cabbage has many leaves.

Tick **ONE** box to show why leaves are important to a cabbage plant.

 The leaves...

attract insects.

anchor the plant in
the ground.

collect pollen.

produce new
material for growth.

1 mark

(d) Kami cuts a cabbage in half. The leaves on the outside of the cabbage are dark. The leaves on the inside are a pale yellow colour.

Which statement best explains why the leaves on the inside are paler?

Tick **ONE** box.

 The leaves on the inside of the cabbage get...

less light.

less water.

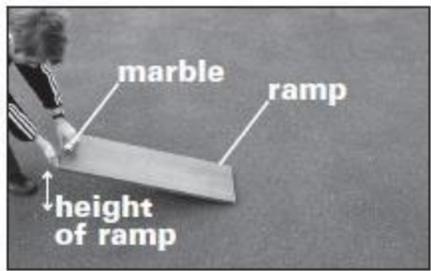
more minerals.

more air.

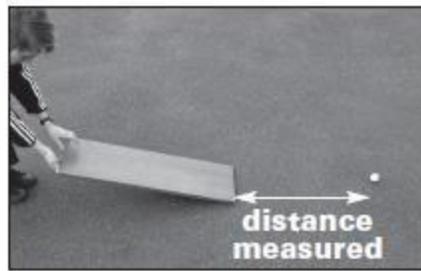
1 mark

Q4. Rolling marble

(a) John and Ravinder are investigating a marble rolling down a ramp.



Photograph A



Photograph B

They change the height of the ramp.

They measure **how far** the marble rolls from the bottom of the ramp.

They repeat their test with the ramp at different heights.

What equipment could be used to measure the height of the ramp?



1 mark

(b) Tick **ONE** box in each row of the table to show how they should do their investigation to make sure their test is **fair**.



| Variable | Must be the same | Must be different | Makes no difference |
|---------------------|------------------|-------------------|---------------------|
| surface of the ramp | | | |
| height of the ramp | | | |
| size of the marble | | | |
| mass of the marble | | | |

2 marks

(c) John and Ravinder must decide what heights they should put the ramp at.

Look at this photograph.

John says, 'This ramp is too steep. It will **not** give good results.'



raph C

Photog

Explain why the ramp in photograph C is too steep to get good results.



.....

.....

Q5. Forces

(a) Sarah is exploring forces.

She uses a forcemeter to lift or pull several objects.



She records her findings in a table.

Sarah has not written the name of the units in her table.

Write the **name** of the units used to measure force.

| Activity | Force needed to make it start to move  |
|--------------------------------|--|
| Pulling a door open | 3 |
| Lifting a pencil case | 1 |
| Lifting a bucket of sand | 5 |
| Pulling a box across the floor | 2 |

(b) Look at the table of results.

Which of these objects was easiest to move?

.....
.....

1 mark

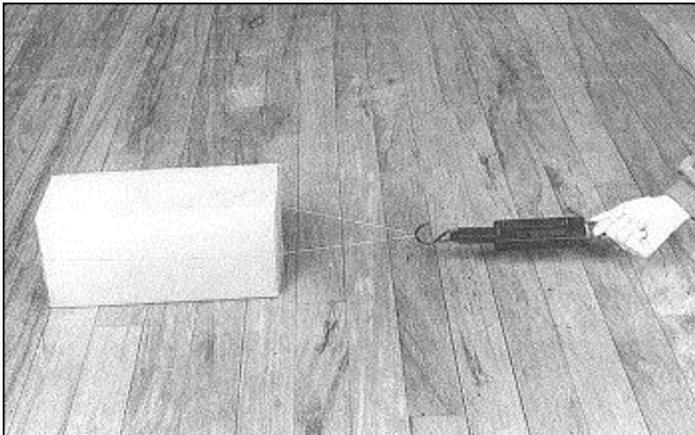
(c) The forcemeter is pulling the bucket **up**.

What is the name of the force pulling the bucket **down**?

.....
.....

1 mark

(d) Sarah tries pulling the box across different kinds of floors.



Sarah finds it harder to pull the box on the carpet than on the wooden floor.

Name the force that **increases** when Sarah pulls the box on the carpet.

.....

1 mark

Q6. Magnets

Vicky has a magnet in her hand.

There are some objects in the box.



Vicky is going to find out which objects are attracted by her magnet.

Compare the table of results by putting **ONE** tick so show the correct result for each object.

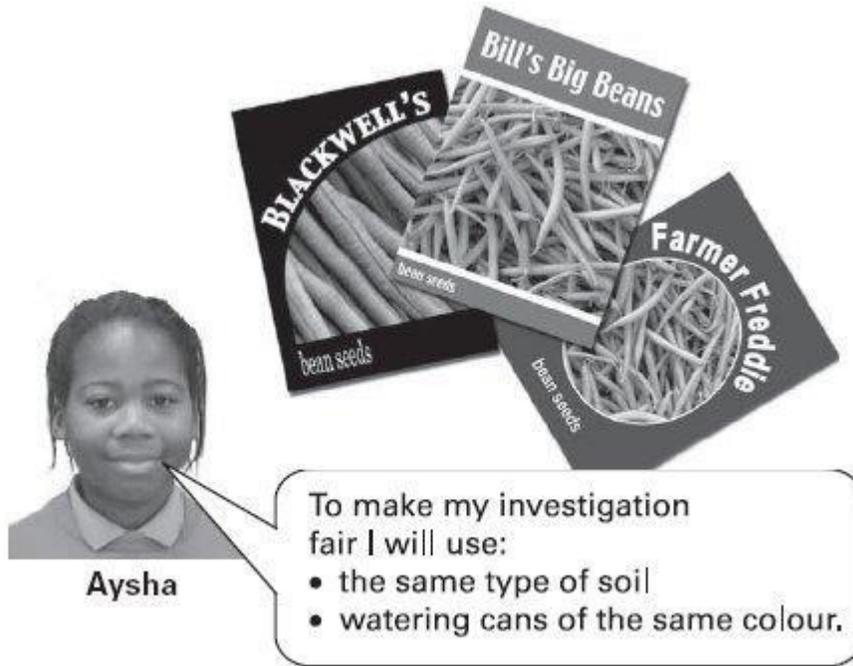
One has been done for you.

| | is attached | is not attached |
|------------------|-------------|-----------------|
| wooden pencil | | ✓ |
| steel safety pin | | |
| plastic bead | | |
| cardboard box | | |
| copper wire | | |

Q7. Bean seeds

(a) Aysha has three different types of bean seed.

She wants to find out which bean seed germinates most quickly.



(i) Does using the same type of soil for each bean seed help to make Aysha's test fair?

Tick **ONE** box.

Handwritten mark yes no

(ii) Give a reason for your answer.

Handwritten mark
...
.....
...

1 mark

(b) (i) Does using watering cans of the same colour for each bean seed help to make Aysha's test fair?

Tick **ONE** box.



yes

no

(ii) Give a reason for your answer.



.....
...

1 mark

(c) The table shows some of the factors in Aysha's investigation.

Complete the table to show how Aysha should carry out her investigation. Tick **ONE** box in each row.



| Factor | Factor to be changed | Factor to be kept the same | Result to be measured |
|--|----------------------|----------------------------|-----------------------|
| the type of bean seed | | | |
| the time taken for the seed to germinate | | | |
| the place where the seeds are left | | | |
| the type of pot the seed is grown in | | | |

2 marks

(d) Sarah thought it would be better if Aysha used more than one of each type of bean.

How could using more than one of each type of bean improve Aysha's investigation?



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...

1 mark