

SCIENCE

YEAR 3

LEVELS 2 - 4



Teacher's Guide

1. (a) Award **ONE** mark for: **Give credit if crosses are given:** 1
- | | | | |
|--------|-------------------------------------|--------|-------------------------------------|
| light | <input checked="" type="checkbox"/> | light | <input checked="" type="checkbox"/> |
| bends | <input type="checkbox"/> | bends | <input checked="" type="checkbox"/> |
| floats | <input type="checkbox"/> | floats | <input checked="" type="checkbox"/> |

*Award **no** mark if more than one box is ticked.*

- (b) Award **ONE** mark for: **Give credit if crosses are given:** 1
- | | | | |
|--------|-------------------------------------|--------|-------------------------------------|
| floats | <input type="checkbox"/> | floats | <input checked="" type="checkbox"/> |
| snaps | <input type="checkbox"/> | snaps | <input checked="" type="checkbox"/> |
| burns | <input checked="" type="checkbox"/> | burns | <input checked="" type="checkbox"/> |

*Award **no** mark if more than one box is ticked.*

- (c) Award **ONE** mark for: **Give credit if crosses are given:** 1
- | | | | |
|----------------------|-------------------------------------|----------------------|-------------------------------------|
| does not bend easily | <input checked="" type="checkbox"/> | does not bend easily | <input checked="" type="checkbox"/> |
| rusts | <input type="checkbox"/> | rusts | <input checked="" type="checkbox"/> |
| is shiny | <input type="checkbox"/> | is shiny | <input checked="" type="checkbox"/> |

*Award **no** mark if more than one box is ticked.*

2. (a) Award **ONE** mark for: 1
- babies take liquid food/milk;
 - they do not need to bite or chew food;
 - they eat soft food.

- (b) Award **ONE** mark for: 1
- two.

- (c) (i),(ii) Award **ONE** mark for each of:
- | | | |
|------------------------|-------------------------------------|---|
| grind up food | <input checked="" type="checkbox"/> | 1 |
| tear off lumps of food | <input checked="" type="checkbox"/> | 1 |

Give credit for:

- any unambiguous mark other than a tick.

NOTE:
*if more than two boxes are ticked, deduct **ONE** mark for each incorrect answer.*

Do not award a negative number of marks.

- (d) Award **ONE** mark for: 1
- China.

- (e) Award **ONE** mark for: 1
- Hawaii.

- (f) Award **ONE** mark for: 1
- eat less sugar/sweets/sweets things.

Give credit for specific examples:

- eat less toffee, chocolate, lollipops;
- eat sugar free sweets;
- have the same diet as people in China

Do not give credit for:

- eat more fruit;
- clean your teeth;
- eat healthy food.

3. (a) Award **ONE** mark for an identification of the downward force as the force of gravity: 1
- gravity/gravitational force;
 - weight [the common expression for the force exerted by an object as a result of the Earth's gravitational pull].

Do not give credit for:

- 100g;
- pulling (given);
- tension;
- 1N;
- mass.

- (b) Award **ONE** mark for: 1
-

- (c) Award **ONE** mark for: 1
- (fabric) B.

- (d) (i),(ii) Award **ONE** mark each, up to a maximum of **TWO**, for comparing the properties of fabrics A and C given in the table: up to 2
- fabric C (it) stretches more/is more flexible;
 - fabric C (it) does not absorb/soak up as much water/it only absorbed 9cm^3 but A absorbed 35cm^3

Do not give credit for answers based on information not in the table.

4. (a) Award **ONE** mark for correctly attributing properties of the **TWO** metal objects: 1

- steel and copper both correct.

	is attracted	is not attracted
wooden pencil		✓
steel safety pin	✓	
copper wire		✓

[given]

- Award **ONE** mark for correctly attributing properties of the **TWO** non-metal objects: 1

- plastic and cardboard both correct.

	is attracted	is not attracted
wooden pencil		✓
plastic bead		✓
cardboard box		✓

[given]

- (b) (i) (ii) Award **ONE** mark for each of:

iron	<input checked="" type="checkbox"/>		<input type="checkbox"/>	1
	<input type="checkbox"/>	steel	<input checked="" type="checkbox"/>	1
	<input type="checkbox"/>		<input type="checkbox"/>	

Give credit for.

- any unambiguous mark other than a tick.

NOTE:

*If more than two boxes are ticked, deduct **ONE** mark for each incorrect answer.*

Do not award a negative

- (c) (i) Award **ONE** mark for: 1

- repel.

- (ii) Award **ONE** mark for: 1

- attract.

Do not give credit for.

- words other than 'repel', 'attract'.

5. (a) Award **ONE** mark for an understanding that light cannot pass through opaque objects. 1m

The response **must** make reference to **light** or **opacity**:

- the chair blocks (some of) the light (from the lamp);

- light cannot pass through the chair;
- the chair is opaque.

Allow:

- the light is blocked.

Do not give credit for a response that includes incorrect science:

- light goes around the chair.

Do not give credit for an insufficient response that does not explain shadow formation:

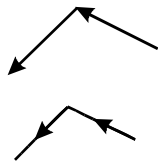
- light cannot get past the chair [it passes on either side];
- light travels in straight lines [does not explain];
- the light cannot bend around the chair.

(b) Award **ONE** mark for: 1m

shiny

-

(c) Award **ONE** mark for arrowheads drawn in the following directions: 1m



Do not give credit if only one arrowhead is drawn correctly.

6. (a) Award **ONE** mark for: 1

- chalk

Do not give credit for:

- names of rocks which are not in the table.

(b) Award **ONE** mark for: 1

yes no maybe can't tell

Give credit for:

- any unambiguous mark other than a tick.

Do not give credit for:

- more than one box ticked.

(c) Award **ONE** mark for: 1

- steel did not scratch flint.

Do not give credit for:

- *by looking at the table;*
- *steel is very hard.*

- (d) Award **ONE** mark for: 1
- flint;
 - granite.

Do not give credit for:

- *names of rocks which are not in the table.*

7. (a) Award **ONE** mark for: 1
- water

- (b) Award **ONE** mark for an understanding that the seedlings under the black paper are yellow because of lack of light: 1
- they did not get any light/sunlight;
 - there was no light/sunlight on them.

Give credit for a correct response that goes beyond the key stage 2 programme of study, which refers to a lack of chlorophyll.

Do not give credit for an insufficient response that does not explain the colour of the leaves:

- *they had no food;*
- *they had no water;*
- *they had no soil.*

- (c) Award **ONE** mark for an understanding of the function of the leaves: 1
- leaves take in light/air;
 - they provide/give/make/produce food.

Allow:

- the leaves feed the plant;
- the leaves store food for the plant;
- the leaves let water escape.

Give credit for a correct response that goes beyond the key stage 2 programme of study:

- the leaves carry out photosynthesis/respiration;
- the leaves collect/get energy from the Sun/sunlight;
- the leaves produce/contain chlorophyll;
- the leaves let gases in and out;
- leaves rot down/decay and recycle nutrients.

Do not give credit for an insufficient response:

- *they get the Sun;*
- *they store water;*
- *they protect the plant;*

- they take in water;
- they help the plant to grow.

Do not give credit for a response that includes incorrect science:

- they make energy;
- they breathe [plants respire; breathing is the action of the lungs moving air in and out].

(d) Award **ONE** mark for:

day 8 to day 12

1

8. (a) Award **ONE** mark for:

- an observation.

1

(b) Award **ONE** mark for identifying both the independent variable [the (kind of) paper towel] and the dependent variable [how much water it holds]:

1

- how much water is soaked up by each paper towel?
- how much water does each paper towel hold?
- how much water was absorbed in each paper towel?

Allow:

- which towel soaked up most water?
- what type of paper soaks up most water?
- the amount of water soaked up by each paper towel.

Allow:

statements which are not framed as questions:

- the amount of water different kinds of paper towels hold.

Do not give credit for an insufficient response:

- which paper towel is best?

Do not give credit for questions which identify an incorrect independent variable or dependent variable:

- which size of towel soaks up most water?
- which towel will not tear?

Do not give credit for an insufficient response that gives a conclusion:

- thicker paper towels hold more water.

Do not give credit for an insufficient response that suggests that causal factors are being investigated:

- why do different paper towels soak up different amounts of water?

(c) Award **ONE** mark for a recognition of the independent variable as the paper towel:

- the (type of) paper towel.

Allow:

- towel;
- paper;
- tissue;
- material.

Do not give credit for an insufficient response that indicates an investigation of a factor not mentioned in the table:

- strength of towels;
- thickness of towels;
- softness of towels.

Do not give credit for an insufficient response that gives the dependent variable:

- how much water was soaked up.

FINDING THE LEVEL

Maximum marks: **35**

0 – 5 No level awarded

6 – 9 Level 2C

10 – 13 Level 2B

14 – 17 Level 2A

18 – 21 Level 3C

22 – 26 Level 3B

27 – 31 Level 3A

31 – 35 Level 4

A single test score should be taken as indicative and the teacher assessment should be strongly incorporated into any reporting level.