Name: Date:

/25
total marks

Science Assessment Year 3: Rocks

Types of Rock

1. There are **three** types of natural rock. Join up each rock to the correct rock type:

Rock	Rock Type
Sandstone	Igneous
Marble	Sedimentary
Granite	Metamorphic

2 marks

2. Choose one of the types of rocks above and describe how it is made:

My rock type is:
Description of how this type of rock is made:

1 mark

3. Brick is not a natural rock, what type of rock is it?

.....

1 mark

4. What are **Pulhamite** and **Coade Stone** examples of?

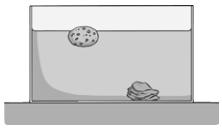
.....

1 mark

Total for this page

Properties of Rocks

5. What properties do these tests tell us about the rock we are testing?

Test	What property does this tell us about?
Put two rocks in water, one floats and one sinks. 	
Drop water onto the rock and see if it soaks into the rock. 	
Rub the rock with sandpaper and see if any of the rock comes off. 	
Try to cut or make a pattern in the rock by pressing it or trying to cut it with a tool. 	

3 marks

Fossils

6. Mary Anning was an expert fossil hunter, what is the correct word for her job studying fossils?

.....

1 mark

7. What is the only type of rock where you can find fossils?

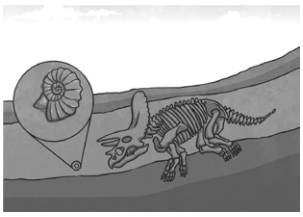
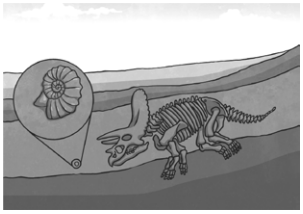
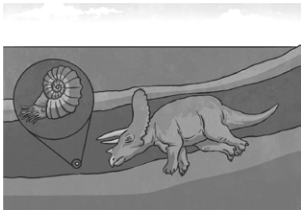
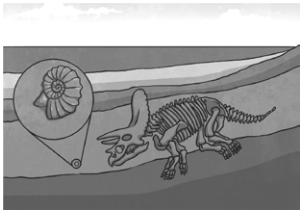
.....

1 mark

Total for this page

8. Here are the steps of how a fossil is formed, but they are in the wrong order:

Put the numbers 1,2,3,4,5 in the boxes next to them to show the correct order.

Part of the Process		Number
Over thousands of years the mould fossil might become a cast fossil with sediment entering the mould. Or it could become a replacement fossil.		
As erosion and weathering takes place, eventually the fossils become exposed.		
An animal dies and ends up in the sea. It gets covered by a layer of rock.		
Over a long period of time the sea will recede in certain places.		
Over time, more layers of rock cover it and by this time the only thing that remains is the bones.		

4 marks

9. There are three different types of fossils, join up these fossils to their correct type:

Fossil	Fossil Type
Coal	Trace
Remains of a dinosaur	Chemical
Footprints	Body

3 marks

Total for this page

10. Fossils can often tell us things about animals, such as dinosaurs that do not exist anymore. What is it called when a type of animal does not exist anymore?

.....

1 mark

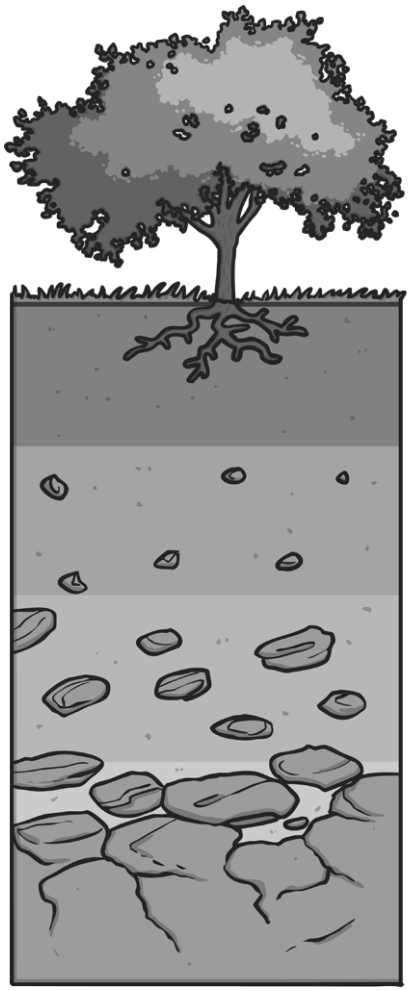
Soil

11. Soil is made from **four** different things, name **two** of these things:

_____ and _____

1 mark

12. Label the three different layers of soil on this diagram:



_____

_____

_____

2 marks

13. There are **four** main processes that happen with soil. Name **two** of them:

_____ and _____

1 mark

Total for this page

14. Choose **one** process in question 13 to describe here:

My process:
Describing the process:

2 marks

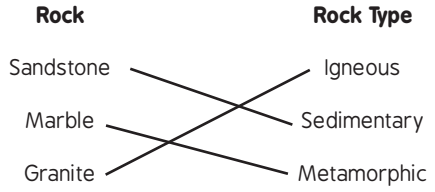
15. Which animal helps make compost?

.....

1 mark

Total for this page

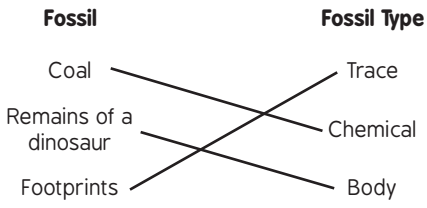
Answer Sheet: Science Assessment Year 3:
Rocks

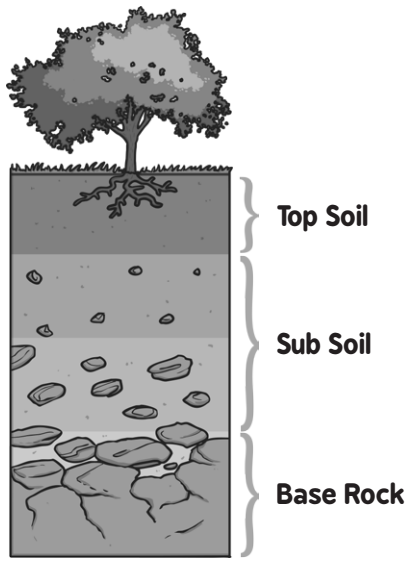
<table>
<tr><th>question</th><th>answer</th><th>marks</th><th>notes</th></tr>
<tr><td colspan="4">1. There are three types of natural rock. Join up each rock to the correct rock type.</td></tr>
<tr><td></td><td> 
</td><td>2</td><td>0 marks for 1 correct
1 mark for 2 correct
2 marks for 3 correct</td></tr>
<tr><td colspan="4">2. Choose one of the types of rocks and describe how it is made.</td></tr>
<tr><td></td><td>1 mark for the explanation that goes with any of these choices:
Words in bold must be mentioned for the mark.
Igenous: Formed from magma/lava
Sedimentary: Formed under the sea as a result of sedimentation, compaction and cementation.
Metamorphic: Igneous or sedimentary rocks that change chemically due to proximity to magma.</td><td>1</td><td>No set amount of detail needed for the mark, just enough to make a clear explanation and also must include the bold words.</td></tr>
<tr><td colspan="4">3. Brick is not a natural rock, what type of rock is it?</td></tr>
<tr><td></td><td>1 mark for:
• man-made rock</td><td>1</td><td>Accept ‘manmade’ and ‘man made’</td></tr>
<tr><td colspan="4">4. What are Pulhamite and Coade Stone examples of?</td></tr>
<tr><td></td><td>1 mark for:
• mock rock</td><td>1</td><td></td></tr>
<tr><td colspan="4">5. What properties do these tests tell us about the rock we are testing?</td></tr>
<tr><td></td><td><table>
<tr><th>Test</th><th>What property does this tell us about?</th></tr>
<tr><td>Put two rocks in water, one floats and one sinks.</td><td>Density</td></tr>
<tr><td>Drop water onto the rock and see if it soaks into the rock.</td><td>Permeable / Impermeable</td></tr>
<tr><td>Rub the rock with sandpaper and see if any of the rock comes off.</td><td>Durability</td></tr>
<tr><td>Try to cut or make a pattern in the rock by pressing it or trying to cut it with a tool.</td><td>Hardness / Softness</td></tr>
</table></td><td>3</td><td>0 marks for 1 correct
1 mark for 2 correct
2 marks for 3 correct
3 marks for 4 correct

Accept references to permeable or impermeable or both

Accept references to hard or soft or both

Do not accept ‘porous’ instead of permeable / impermeable. (permeable is a property of porous rock, porous is not the property).</td></tr>
</table>

<table>
<tr><th>question</th><th>answer</th><th>marks</th><th>notes</th></tr>
<tr><td colspan="4">6. Mary Anning was an expert fossil hunter, what is the correct word for her job studying fossils?</td></tr>
<tr><td></td><td>1 mark for either of:
• palaeontologist
• palaeontology</td><td>1</td><td>Accept errors in spelling where the intention of the word is clear.</td></tr>
<tr><td colspan="4">7. What is the only type of rock where you can find fossils?</td></tr>
<tr><td></td><td>1 mark for:
• Sedimentary</td><td>1</td><td></td></tr>
<tr><td colspan="4">8. Here are the steps of how a fossil is formed, but they are I the wrong order. Put the numbers 1,2,3,4,5 in the boxes next to them to show the correct order.</td></tr>
<tr><td></td><td><table><tr><th>Part of the Process</th><th>Number</th></tr><tr><td>Over thousands of years the mould fossil might become a cast fossil with sediment entering the mould. Or it could become a replacement fossil.</td><td>3</td></tr><tr><td>As erosion and weathering takes place, eventually the fossils become exposed.</td><td>5</td></tr><tr><td>An animal dies and ends up in the sea. It gets covered by a layer of rock.</td><td>1</td></tr><tr><td>Over a long period of time the sea will recede in certain places.</td><td>4</td></tr><tr><td>Over time, more layers of rock cover it and by this time the only thing that remains is the bones.</td><td>2</td></tr></table></td><td>4</td><td>0 marks for 1 correct
1 mark for 2 correct
2 marks for 3 correct
3 marks for 4 correct
4 marks for 5 correct</td></tr>
<tr><td colspan="4">9. There are three different types of fossils, join up these fossils to their correct type.</td></tr>
<tr><td></td><td> 
</td><td>3</td><td></td></tr>
<tr><td colspan="4">10. Fossils can often tell us things about animals, such as dinosaurs that do not exist anymore. What is it called when a type of animal does not exist anymore?</td></tr>
<tr><td></td><td>1 mark for:
• Answers that include ‘extinct’.</td><td>1</td><td></td></tr>
<tr><td colspan="4">11. Soil is made from four different things, name two of these things.</td></tr>
<tr><td></td><td>1 mark for any two from:
• Air
• Water
• Minerals
• Organic matter</td><td>1</td><td></td></tr>
</table>

<table>
<tr><th>question</th><th>answer</th><th>marks</th><th>notes</th></tr>
<tr><td colspan="4">12. Label the three different layers of soil on this diagram.</td></tr>
<tr><td></td><td> 
</td><td>2</td><td>0 marks for 1 correct
1 marks for 2 correct
2 marks for 3 correct

Also accept:
'Top' and 'Sub' without the word 'soil'.</td></tr>
<tr><td colspan="4">13. There are four main processes that happen with soil. Name two of them.</td></tr>
<tr><td></td><td>1 mark for any two from:
• Addition/s
• Loss/es
• Translocation/s
• Transformation/s</td><td>1</td><td></td></tr>
<tr><td colspan="4">14. Choose one process in question 13 to describe here:</td></tr>
<tr><td></td><td><table>
<tr><th>Process Chosen</th><th>Explanation</th></tr>
<tr><td>Addition/s</td><td>Element 1: An example of something added MUST be included (e.g.water, organic matter OR minerals).
Element 2: Along with the thing that has done the adding (e.g.rainfall, dust,animal waste,decaying plants, animals, humans, fertiliser, animal waste). Rainfall adds water. Dust adds minerals. Animal waste adds organic matter and nutrients. Decaying plants and animals add organic matter. Humans add fertiliser. Fertilisers contain minerals and nutrients. Natural fertilisers are made from animal waste and organic matter. Man-made fertilisers are made from chemicals.</td></tr>
<tr><td>Loss/es</td><td>Element 1: An example of something lost MUST be included (e.g.water, air, soil particles, minerals OR organic matter).
Element 2: Along with the thing that has done the removing (e.g.warmth, storms wash away, turns into gas, taken up by plants, drains away).
Water evaporates (turns into gas when hot) into the air. Soil particles can wash away in storms. Organic matter can turn into the gas carbon dioxide. Nutrients and Minerals are taken up by plants and can drain into groundwater.</td></tr>
</table></td><td></td><td>2 marks for a correct explanation for their chosen process.
Answers need to include the elements in bold.
1 mark for each element of the answer as shown.</td></tr>
</table>

question	answer	marks	notes
	Translocation/s: **Element 1**: An example of something that has been translocated MUST be included (e.g.water, soil particles OR minerals). **Element 2**: Along with the thing that has done the translocating (e.g. gravity, evaporating water, animals). Translocations are movements within the soil. Gravity pulls water down from top to bottom. Evaporating water draws the minerals up from the bottom to the top. Animals living in the soil move the soil around in every direction. **Transformation/s**: **Element 1**: Answers must refer to something CHANGING into something else. **Element 2**: An example of something that shows what it was before and after: Humus is what is left when dead leaves decompose. Weathering causes hard rock to erode and turn into smaller and smaller pieces of rock. Oxygen reacts with the minerals such as iron which can make the soil look a reddish, 'rusty' colour.	2	2 marks for a correct explanation for their chosen process. Answers need to include the elements in bold. 1 mark for each element of the answer as shown.
15. Which animal helps make compost?			
	1 mark for: • Worm/s	1	
		total 25	