



**General Certificate of Secondary Education**  
**2013**

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**Geography**  
**Unit 1:**  
**Understanding Our Natural World**  
**Foundation Tier**  
**[GGG11]**  
**TUESDAY 4 JUNE, AFTERNOON**

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**MARK  
SCHEME**

## General Marking Instructions

### ***Introduction***

Mark schemes are intended to ensure that the GCSE examinations are marked consistently and fairly. The mark schemes provide markers with an indication of the nature and range of candidates' responses likely to be worthy of credit. They also set out the criteria which they should apply in allocating marks to candidates' responses. The mark schemes should be read in conjunction with these general marking instructions.

### ***Assessment objectives***

Below are the assessment objectives for GCSE Geography.

Candidates must show they are able to:

- recall, select and communicate their knowledge and understanding of places, environments and concepts (AO1);
- apply their knowledge and understanding in familiar and unfamiliar contexts (AO2); and
- select and use a variety of skills, techniques and technologies to investigate, analyse and evaluate questions and issues (AO3).

### ***Quality of candidates' responses***

In marking the examination papers, examiners should be looking for a quality of response reflecting the level of maturity which may reasonably be expected of a 15- or 16-year-old which is the age at which the majority of candidates sit their GCSE examinations.

### ***Flexibility in marking***

Mark schemes are not intended to be totally prescriptive. No mark scheme can cover all the responses which candidates may produce. In the event of unanticipated answers, examiners are expected to use their professional judgement to assess the validity of answers. If the answer is particularly problematic, then examiners should seek the guidance of the Supervising Examiner.

### ***Positive marking***

Examiners are encouraged to be positive in their marking, giving appropriate credit for what candidates know, understand and can do rather than penalising candidates for errors or omissions. Examiners should make use of the whole of the available mark range of any particular question and be prepared to award full marks for a response which is as good as might reasonably be expected of a 15- or 16-year-old GCSE candidate.

### ***Awarding zero marks***

Marks should only be awarded for valid responses and no marks should be awarded for an answer which is completely incorrect or inappropriate.

### ***Types of mark schemes***

Mark schemes for tasks or questions which require candidates to respond in extended written form are marked on the basis of levels of response which take account of the quality of written communication.

Other questions which require only short answers are marked on a point for point basis with marks awarded for each valid piece of information provided.

### **Levels of response**

Tasks and questions requiring candidates to respond in extended writing are marked in terms of levels of response. In deciding which level of response to award, examiners should look for the 'best fit' bearing in mind that weakness in one area may be compensated for by strength in another. In deciding which mark within a particular level to award to any response, examiners are expected to use their professional judgement. The following guidance is provided to assist examiners.

- **Threshold performance:** Response which just merits inclusion in the level and should be awarded a mark at or near the bottom of the range.
- **Intermediate performance:** Response which clearly merits inclusion in the level and should be awarded a mark at or near the middle of the range.
- **High performance:** Response which fully satisfies the level description and should be awarded a mark at or near the top of the range.

### **Marking calculations**

In marking answers involving calculations, examiners should apply the 'own figure rule' so that candidates are not penalised more than once for a computational error.

### **Quality of written communication**

Quality of written communication is taken into account in assessing candidates' responses to all tasks and questions that require them to respond in extended written form. These tasks and questions are marked on the basis of levels of response. The description for each level of response includes reference to the quality of written communication.

For conciseness, quality of written communication is distinguished within levels of response as follows:

Level 1: Quality of written communication is limited

Level 2: Quality of written communication is satisfactory

Level 3: Quality of written communication is of a high standard.

In interpreting these level descriptions, examiners should refer to the more detailed guidance provided below.

**Level 1 (Limited):** Candidates present some relevant information in a form and using a style of writing which suits its purpose. The text is reasonably legible. Spelling, punctuation and the rules of grammar are used with some accuracy so that meaning is reasonably clear. A limited range of specialist terms is used appropriately.

**Level 2 (Satisfactory):** Candidates present relevant information in a form and using a style of writing which suits its purpose. The text is legible. Spelling, punctuation and the rules of grammar are used with considerable accuracy so that meaning is clear. A good range of specialist terms is used appropriately.

**Level 3 (High Standard):** Candidates present, and organise effectively, relevant information in a form and style of writing which suits its purpose. The text is fluent and legible. Spelling, punctuation and the rules of grammar are used with almost faultless accuracy so that meaning is clear. A wide range of specialist terms is used skillfully and with precision.

### ***Assessment of spelling, punctuation and the accurate use of grammar.***

Marks for spelling, punctuation and the accurate use of grammar will be allocated to specific questions where there is a requirement for sufficient extended writing to enable the accurate application of Performance descriptions (see below). These marks will be identified to candidates on the question papers.

#### **Performance descriptions**

##### **(i) Threshold performance**

Candidates spell, punctuate and use the rules of grammar with reasonable accuracy in the context of the demands of the question. Any errors do not hinder meaning in the response. Where required, they use a limited range of specialist terms appropriately.

##### **(ii) Intermediate performance**

Candidates spell, punctuate and use the rules of grammar with considerable accuracy and general control of meaning in the context of the demands of the question. Where required, they use a good range of specialist terms with facility.

##### **(iii) High performance**

Candidates spell, punctuate and use the rules of grammar with consistent accuracy and effective control of meaning in the context of the demands of the question. Where required, they use a wide range of specialist terms adeptly and with precision.

As shown by the performance descriptions, SPaG marks are awarded in the context of the demands of the question. If the candidate's response does not address the question then no SPaG marks are available. However, if the candidate has attempted to answer the question but produced nothing of credit, SPaG marks may still be awarded.

## Theme A: The Dynamic Landscape

AVAILABLE MARKS

1 (a) (i) Complete the key for **Fig. 1** by labelling features A–D.

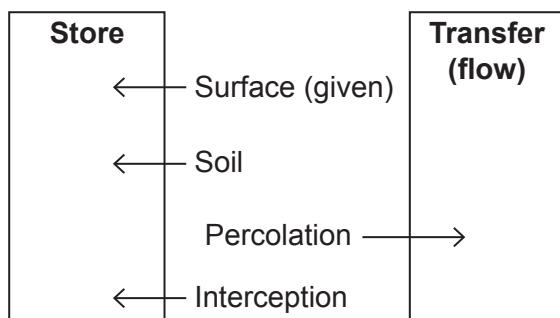
A = mouth, B = source, C = watershed, D = confluence

Do **not** accept tributary for D.

(4 × [1])

[4]

(ii) Sort the following parts of a drainage basin as stores or transfers (flows).



(3 × [1])

[3]

(iii) State the meaning of the term **infiltration**.

**Award [1]** for a partially correct answer, e.g. water making it into the ground.

**Award [2]** for a correct definition, e.g. the movement of water from the surface into soil. [2]

(b) (i) State **two** reasons why a river might deposit material.

Award [1] per correct reason such as:

River slows down, slope becomes flatter, load of river has suddenly increased. [2]

(ii) Name **any two** features which are made by rivers.

Award [1] for a correct feature – meander, slip-off slope, floodplain, ox-bow lake etc. [2]

(c) (i) Underline the correct word in each sentence below which describes how load size varies along the Colin River.

- The load is the material carried by a river given.
- As distance increases from the source load size decreases.
- The largest load in this river is 58 cm.
- The smallest load measured was found at 6 km from the source.
- Load size reduces rapidly between 4–5 km from the source. [4]

(ii) Underline the **two** types of erosion in the list below which could explain the variation seen in **Fig. 2**.

Abrasion

(2 × [1])

Hydraulic Pressure

Weathering

Attrition

[2]

(d) With reference to a river in the British Isles, describe and explain one physical and one human cause of a flood on your named river.

AVAILABLE MARKS

Award [1] for the name of an appropriate river in the British Isles.

If river is outside the British Isles award [0]

[1]

If name of river left blank, mark explanation only to maximum Level 2 i.e. maximum 4 marks

Award [0] for a response not worthy of credit.

**Level 1 ([1]–[2])**

Cause/s of a river flooding are stated or described, but without explanation, e.g. It flooded in England due to heavy rain, building and peat extraction.

**Level 2 ([3]–[4])**

The cause/s of flooding are described and some explanation is included, but no specific facts or figures are included relating to a river in the British Isles, e.g. [4] (For Derwent flood of 1999):

Physical – It rained heavily for several days making the ground wet and there was no infiltration.

Human – people had built on the land near the river and water could not infiltrate.

**Level 3 ([5]–[6])**

One physical and one human cause of flooding are described in detail with full explanations for the full [6], including two facts or figures relating to a river within the British Isles, e.g. (for Derwent flood of 1999):

Physical – The heavy rainfall at the time of the flood; over 250 mm of rain fell on the North York Moors, causing a lack of infiltration as this rainfall fell onto ground that was almost saturated from previous rainfall events.

Human – Areas of the flood plain were being urbanized, such as the new estate built at Malton; this reduced infiltration and increased surface run-off.

[6]

**Assessment of spelling, punctuation and the accurate use of grammar.**

If the answer does not address the question then no SPaG marks available.

If the candidate has attempted to answer the question but produced nothing of credit, SPaG marks may still be awarded.

**Threshold performance ([1])**

Candidates spell, punctuate and use the rules of grammar with reasonable accuracy in the context of the demands of the question. Any errors do not hinder meaning in the response. Where required, they use a limited range of specialist terms appropriately.

**Intermediate performance ([2]–[3])**

Candidates spell, punctuate and use the rules of grammar with considerable accuracy and general control of meaning in the context of the demands of the question. Where required, they use a good range of specialist terms with facility.

**High performance ([4])**

Candidates spell, punctuate and use the rules of grammar with consistent accuracy and effective control of meaning in the context of the demands of the question. Where required, they use a wide range of specialist terms adeptly and with precision.

[4]

(e) Underline the **two** main types of wave in the list below.

Open (2 × [1])	<u>Destructive</u>	<u>Constructive</u>	Flat	[2]
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(f) (i) Identify three land uses, (X, Y and Z) shown in Fig. 3.

X = Transport

Y = Industrial/Industry

Z = Tourism  
(3 × [1])

[3]

(ii) Explain how longshore drift forms a spit.

Award [0] for a response not worthy of credit.

**Level 1 ([1])**

Candidates make reference to the movement of sand, e.g.

A spit is formed when sand moves along a beach [1] forming a ridge [2].

**Level 2 ([2]–[3])**

Reference is made to waves and the movement of sand but lacks detail, e.g. Sand is moved along the beach by longshore drift caused by waves; this sand or shingle builds up to form a ridge.

**Level 3 ([4]–[5])**

Reference is made to waves and the movement of sand with detail, e.g. Sand is moved along the beach by longshore drift, by waves hitting the coastline at an angle. Sand or shingle accumulates and forms a narrow ridge where the direction of the coastline changes.

All spits need a good supply of sand or they will be washed away. [5]

**Assessment of spelling, punctuation and the accurate use of grammar.**

If the answer does not address the question then no SPaG marks available. If the candidate has attempted to answer the question but produced nothing of credit, SPaG marks may still be awarded.

**Threshold performance ([1])**

Candidates spell, punctuate and use the rules of grammar with reasonable accuracy in the context of the demands of the question. Any errors do not hinder meaning in the response. Where required, they use a limited range of specialist terms appropriately.

**Intermediate performance ([2]–[3])**

Candidates spell, punctuate and use the rules of grammar with considerable accuracy and general control of meaning in the context of the demands of the question. Where required, they use a good range of specialist terms with facility.

**High performance ([4])**

Candidates spell, punctuate and use the rules of grammar with consistent accuracy and effective control of meaning in the context of the demands of the question. Where required, they use a wide range of specialist terms adeptly and with precision. [4]

AVAILABLE  
MARKS

(g) (i) Choose **two** of the coastal defences named in **Fig. 4** and explain how each works.

[3] per chosen strategy.

If a correct idea is discussed that was not named in **Fig. 4**, award [0].

e.g. for sea walls:

**Award [1]** for a simple correct statement relating to sea walls – it may be only descriptive, e.g.

They stop waves reaching the coastline

**or** They are walls built along the coast.

**Award [2]** for a correct statement about sea walls with some elaboration, e.g.

They are often long concrete walls built along the coast to keep waves out.

**Award [3]** for a clear explanation that covers the idea that they either absorb or deflect the energy of a wave, thus help to protect the coastline from erosion, e.g.

They are often concrete walls with a curved top which deflect the strength of a wave back out to sea and so protect the land against erosion.

(2 × [3])

[6]

(ii) State **two** reasons why an area might need coastal defences.

Answers may include:

- the protection of a large number of houses (town or village built near the sea is threatened);
- the protection of an important road/rail connection;
- the protection of a power station needed to supply a region's electricity;
- the need to protect an historic building etc.

(2 × [1])

[2]

(iii) Suggest why beach nourishment might encourage tourism.

**Award [1]** for a simple statement which correctly gives a reason, e.g.

People like to visit sandy beaches.

**Award [2]** for a statement which correctly gives a reason with some detail, such as a specific tourism use of the beach, e.g.

People like to sunbathe on sandy beaches.

[2]

AVAILABLE  
MARKS

(h) Name an area in the British Isles that has a coastal management strategy and explain how well one method used to protect the coast there could last in the long term.

Award [1] for a correctly named coastal area in the British Isles with a management strategy, e.g. Mappleton, England. [1]

Award [0] for a response not worthy of credit.

**Award [1]** for a simple description or evaluation of coastal management which may not name a location, e.g.  
The groynes worked well.

**Award [2]** for an answer in which the coastal management method is evaluated with respect to time, but lacks detail, e.g.

The groynes will protect the coast from wave attack for years to come.

**Award [3]** for a definite evaluation of how it will last in the long term – with a specific fact/figure included, \***NB** this could be negative or positive, e.g.

Two large groynes which trap sand and will protect the local coast from wave attack were built. They are costly but as they are made from rock they could last for a long time. [3]

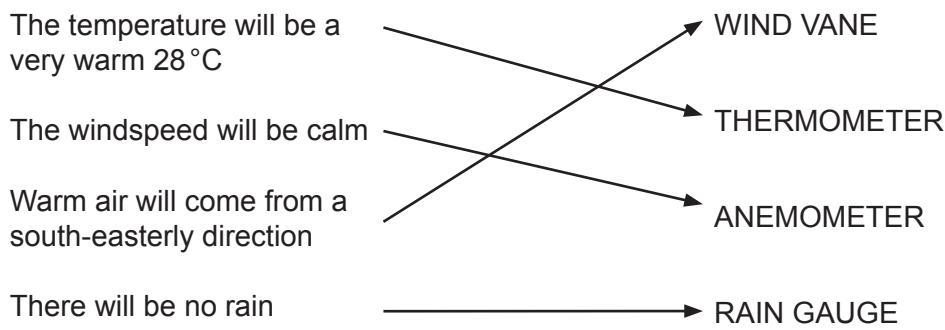
AVAILABLE  
MARKS

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## Theme B: Our Changing Weather and Climate

AVAILABLE MARKS

2 (a) (i) Using **Fig. 5** match up the letter with the correct instrument.



(4 × [1]) [4]

(ii) Name one **other** aspect of the weather which can be measured.

Any **other** valid weather element (cannot be mentioned in **Fig. 5**), e.g. Cloud type, hours of sunshine, amount of snow, visibility etc. [1]

(iii) Underline the air mass which is likely to be responsible for the weather described in **Fig. 5**.

**POLAR CONTINENTAL**      **TROPICAL CONTINENTAL**

**POLAR MARITIME** [1]

(iv) Anticyclones are weather systems which affect the U.K. Underline the correct word in each sentence. One has been completed for you.

- Winds in an anticyclone blow clockwise/anti-clockwise (given).
- Anticyclones or low/high pressure systems can occur at any time of the year.
- In winter anticyclones bring cold temperatures.
- Isobars are close together/far apart in an anticyclone.
- Skies have lots of/few clouds during an anticyclone.

(4 × [1]) [4]

(b) (i) Underline the time period below that saw the smallest increase in global air temperatures.

**1981–2020**      **1861–1900**      **1901–1940** [1]

(ii) State the meaning of the term **global warming**.

**Award [1]** for an incomplete definition/statement, e.g.  
It's when the earth is warming up.

**Award [2]** for a complete definition, e.g.  
The increased heating of the atmosphere caused by human activities.[2]

(iii) Explain how burning fossil fuels causes climate change.

AVAILABLE  
MARKS

**Award [1]** for a basic statement, e.g.

People burning oil releases gases into the air. [1]

It causes pollution. [1]

**Award [2]** for a statement and a consequence, e.g.

People burn oil which releases greenhouse gases and these make the Earth heat up. [2]

**Award [3]** for a statement with a consequence and elaboration, e.g.

People burn oil which releases a greenhouse gas such as CO<sub>2</sub>. This builds up in the atmosphere. Incoming heat from the sun goes through the atmosphere but it can't escape. This makes the Earth heat up. [3]

(iv) Explain **one** effect climate change might have on a country you have studied.

Do **not** award name of city or continent.

Any valid country.

[1]

Award [0] for a response not worthy of credit.

**Level 1 ([1])**

A basic statement, e.g.

It will be warmer.

**Level 2 ([2])**

A stated cause with a consequence, e.g.

Higher temperatures could lead to an increase in the number of pests and diseases in the U.K.

**Level 3 ([3])**

A stated cause with a consequence and elaboration which includes 1F/F from the chosen case study, e.g.

A temperature increase of 2 °C could lead to an increase in the number of pests and diseases in the U.K. More insect pests, e.g. aphids and mites, could attack crops and therefore lower a farmer's profit.

**Or**

Diseases such as malaria could spread into the U.K. as mosquitoes could survive in the higher temperatures.

[3]

<p>(c) (i) Durban</p> <p>(ii) Why is it difficult for countries to work together to deal with climate change? You should give two reasons in your answer.</p>	<p>[1]</p> <p>AVAILABLE MARKS</p>
<p>This question focuses on the challenges with securing international co-operation when dealing with climate change.</p>	
<p>Challenges may include dependence on fossil fuels, development of economy, public resistance to greener technology, financial cost to governments of implementing these agreements.</p>	
<p>Award [0] for a response not worthy of credit.</p>	
<p>Candidate should refer to two challenges. If only one challenge is discussed then award only [2].</p>	
<p>Each challenge must have some elaboration.</p>	
<p>Countries are heavily dependent on fossil fuels [1]. It is expensive to implement new green technologies to create the same amount of power to sustain the current energy demand. Therefore it's hard to fulfil these agreements. [1]</p>	
<p>Many governments have good intentions when it comes to reducing carbon emissions [1]. However some MEDCs such as the USA refuse to sign these treaties as they think it will harm their economy by raising unemployment levels. [1]</p>	
<p>Many individuals recognise that climate change is a problem [1]. However, not everyone will exercise responsibility when it comes to energy efficiency or waste reduction. People need to make these personal choices if these agreements are to work. [1]</p>	
<p>(2 × [2])</p>	<p>[4] 25</p>

## Theme C: The Restless Earth

AVAILABLE  
MARKS

3 (a) (i) Complete **Fig. 7** to link the name of each rock to its rock type.

Name of rock	Rock type
Sandstone	Igneous (given)
Basalt	Sedimentary
Slate	Igneous
Granite	Metamorphic

(3 × [1])

[3]

(ii) Number the following statements in the correct order to explain how igneous rocks such as basalt were formed.

The lava hardens to form basalt.	4
The lava cools quickly and makes small crystals.	3
Molten magma rises from the mantle.	1
The magma flows out onto the surface as lava.	2 (given)

(3 × [1])

[3]

(b) (i) Name the features **X** and **Y**.

**X** is an Ocean Trench.

**Y** is a Mid Ocean Ridge/Volcano ["Smokers"].

(2 × [1])

[2]

(ii) Use **Fig. 8** to help explain how plates move.

Award [0] for a response not worthy of credit.

**Award [1]** for a simple accurate statement, e.g.  
Plates float on the mantle.

**Award [2]** for a statement with a consequence which refers to convection currents, e.g.

Plates float on the mantle which has convection currents which move molten magma upwards towards the crust.

**Award [3]** for a statement with a consequence and elaboration relating to the plates being moved, e.g.

Plates float on the mantle which has convection currents which move molten magma upwards towards the crust. These currents spread out at the surface and carry the plates above them.

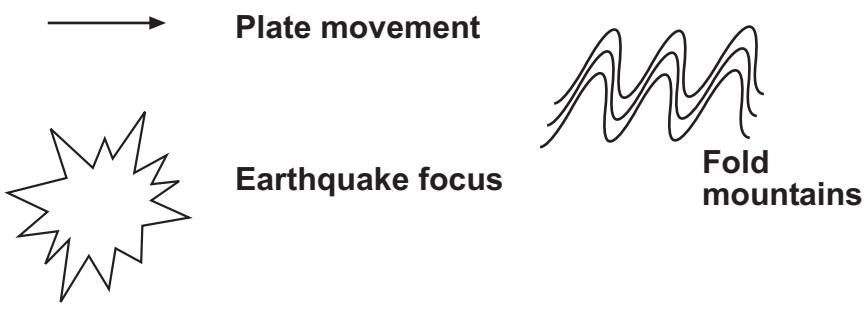
The molten material cools and sinks back down again dragging plates along (like a conveyor belt).

[3]

(c) Formation of fold mountains.

AVAILABLE  
MARKS

**Key:**



(3 × [1])

[3]

(d) (i) State the meaning of the term **tsunami**.

**Award [1]** for a basic statement, e.g.

A tsunami is a large wave.

**Award [2]** for a full definition, referring to earthquakes as the cause,

e.g.

A tsunami is a large wave, caused by an underwater earthquake. [2]

(ii) Explain why an earthquake occurred in a LEDC which you have studied.

Name of LEDC, e.g. India earthquake or Indonesian earthquake [1]

Accept Indian Ocean earthquake.

If a MEDC is named award [0]

Award [0] for a response not worthy of credit.

**Award [1]** for a simple accurate statement referring to plate movement, e.g.

Two plates collided.

Candidates present some relevant information in a form and using a style of writing which suits its purpose. The text is reasonably legible. Spelling, punctuation and the rules of grammar are used with some accuracy so that the meaning is clear. A limited range of specialist terms is used appropriately.

**Award [2]** for a statement with a consequence which refers to how plates moved, building up friction or stress, e.g.

Two plates collided and 'stuck' as friction built up; this happened when the ocean plate went under the land plate and this led to shaking of the rocks causing an earthquake.

Candidates present information in a form and using a style of writing which suits its purpose. The text is legible. Spelling, punctuation and the rules of grammar are used with considerable accuracy so that the meaning is clear. A good range of specialist terms is used appropriately.

AVAILABLE MARKS
<p><b>Award [3]</b> for a statement with a consequence which refers to how plates moved and friction or stress built up to create an earthquake. There must be a fact related and accurate to the named earthquake, such as the Indian Ocean earthquake of 2004, e.g.</p> <p>In the Indian Ocean earthquake of 2004, the Indo-Australian and the Sunda plates collided and the ocean plate went under the European plate. The stress or friction built up between the two plates and they suddenly jerked free, creating an earthquake which sent out shock waves and a tsunami.</p> <p>Candidates present, and organise efficiently, relevant information in a form and style of writing which suits its purpose. The text is fluent and legible. Spelling, punctuation and the rules of grammar are used with almost flawless accuracy so the meaning is clear. A wide range of specialist terms is used skilfully and with precision. [3]</p> <p>(e) Choose <b>two</b> measures from <b>Fig. 11</b> and explain how each helped to reduce the number of deaths in a named earthquake in a MEDC.</p> <p><b>Award [1]</b> for accurately naming an earthquake in a MEDC.</p> <p>If an earthquake in a LEDC is named award [0]</p> <p>Name of earthquake in a MEDC, e.g. Kobe in Japan in 1995. [1]</p> <p>There is no mark for naming the strategy as these are given in the figure. The marks are for explaining how the strategy reduces deaths (Level 1).</p> <p>Award [0] for a response not worthy of credit.</p> <p><b>Award [1]</b> for an accurate statement with a consequence explaining how one of the strategies helped to reduce the number of deaths, e.g.</p> <p>Making earthquake proof buildings stopped them falling on people as buildings had cross beams, springs and rubber pads to absorb the shaking so that the buildings did not collapse and kill people.</p> <p>Or e.g.</p> <p>Educating people means people had made preparations and practised what to do to stay safe.</p> <p><b>Award [2]</b> for a detailed explanation of a strategy which helped to reduce the number of deaths, e.g.</p> <p>Making earthquake proof buildings such as the Kansai International airport stopped them falling on people as buildings had cross beams, springs and rubber pads to absorb the shaking so that the buildings did not collapse and kill people.</p> <p>Or e.g.</p> <p>Educating people means people had made preparations and practised what to do to stay safe. At Kobe people had earthquake kits ready with a bucket to put out fires, a torch and helmets to protect them and to keep them safe.</p> <p>(2 × [2]) [4]</p>
25
Total
108