Earthquakes & Volcanoes

Geography Marking Scheme

Higher Level

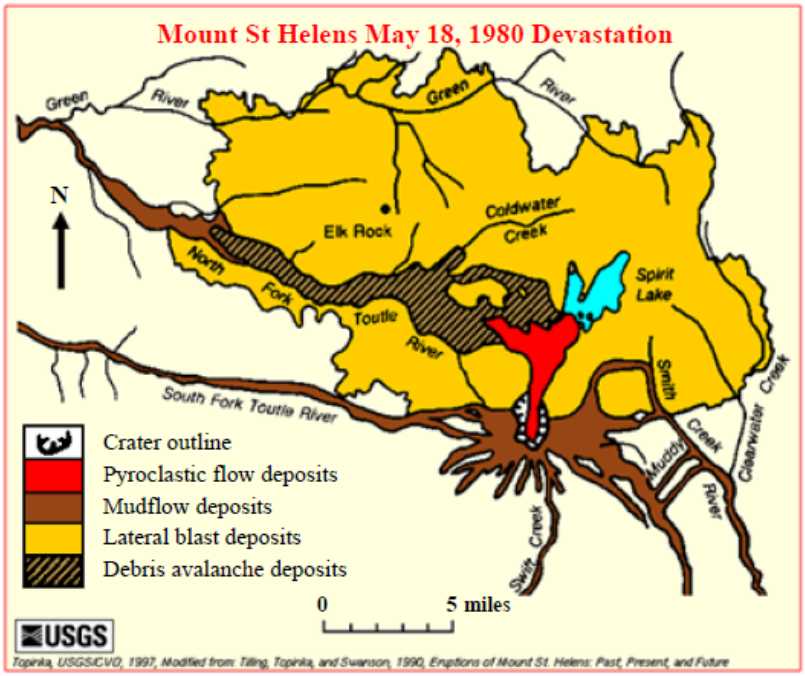
2013

Section 1 – Q3

(i) C Focus
D Epicentre
A Seismic waves
B Fault line
(ii) Any two valid explanations

Section 2 – Q3 A

A. Volcanoes



Examine the map and legend above showing the extent of the materials deposited as a result of the eruption of the Mount St Helens volcano and answer the following questions.

(i) What were the most extensive deposits as a result of the eruption?
(ii) What was the direction of the pyroclastic flow deposits?
(iii) What distance did the pyroclastic flow deposits extend to?
(iv) Name **two** examples of pyroclastic materials.
(v) Explain briefly why some volcanoes erupt violently.

[20m]

Five parts @ 4 marks each.

(i)	Lateral blast deposits	4 marks
(ii)	North West – North East	4 marks
(iii)	5-5.2 miles	4 marks
(iv)	Any two named	2 + 2 marks
(v)	Any valid explanation	2 + 2 marks

Q3 C

C. Earthquakes and Volcanoes

Explain how the occurrence of earthquakes and volcanic eruptions can be monitored and predicted.

[30m]

Explanation 15 x SRPs

- If only earthquakes or only volcanoes discussed max 8 x SRPs.

2012

Section 1 – Q 4

Q.4

G
C
B
H
A
E
D
F

Section 2 – Q1 C

C. Earthquakes

Explain, with reference to examples that you have studied, how the theory of plate tectonics helps to explain the distribution of earthquakes around the world.

[30m]

Global examples/locations of earthquakes	2+2 marks
Discussion	13 x SRPs

- If no link made between the theory of plate tectonics and earthquakes, maximum of 6 x SRPs
- Credit relevant labelled diagram for 1 x SRP
- Credit extra relevant information on labelled diagram for 2 x SRPs
- Diagram without labelling = 0 marks

2011

Section 1 – Q1 C

B. Volcanoes

Discuss the positive impacts of volcanic activity.

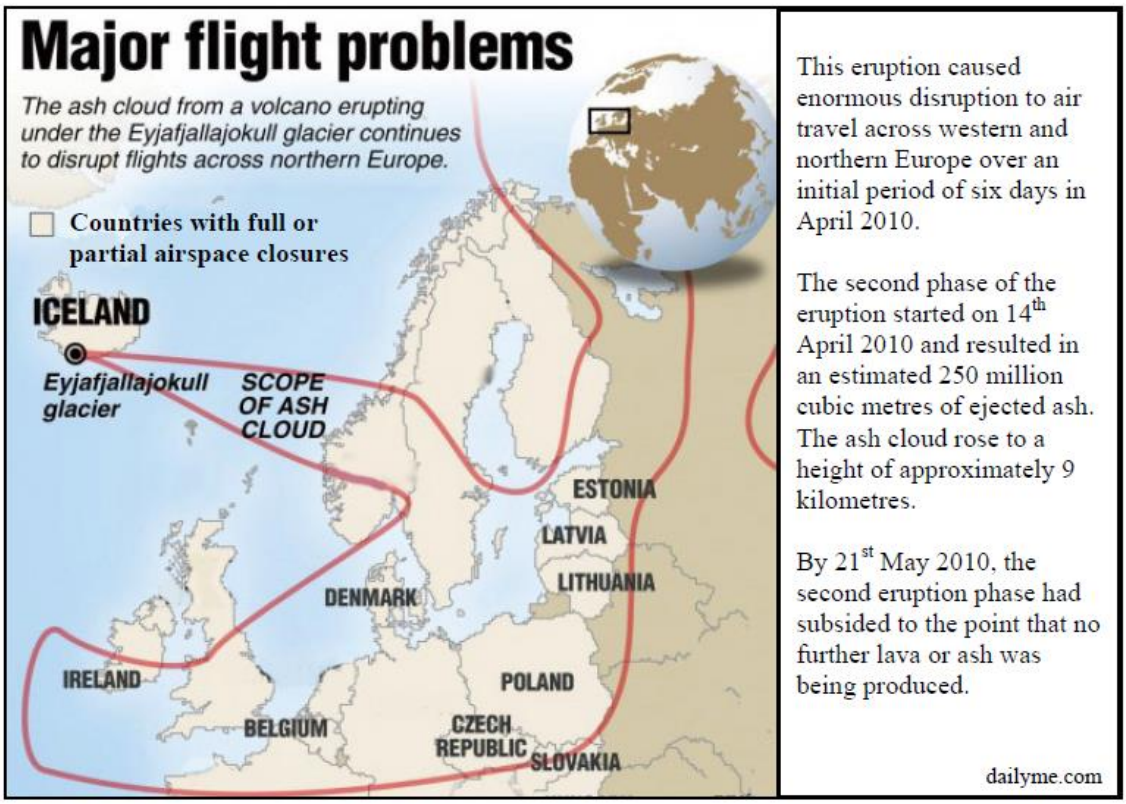
[30m]

Positive impacts identified	2 + 2 marks
Discussion	13 x SRPs

- Credit 1 named volcano or volcanic area from discussion SRPs
- All other positive impacts must be discussed for SRPs
- Credit relevant extra information on relevant labelled diagram(s) relating to positive impacts
- Give credit for 1 SRP for diagram without annotation.

Q3 A

A. Volcanoes



Examine the data above relating to the Eyjafjallajökull volcano which erupted in April 2010 and answer the following questions:

(i) What approximate height did the volcanic ash cloud rise to?

(ii) How many cubic metres of ash were ejected by the volcano?

(iii) Name **two** countries not named on the map which had full or partial airspace closures.

(iv) Briefly explain why volcanic activity occurs in Iceland.

[20m]

Four parts @ 5 marks each

(i) 9 kilometres — 5 marks

(ii) 250 million — 5 marks

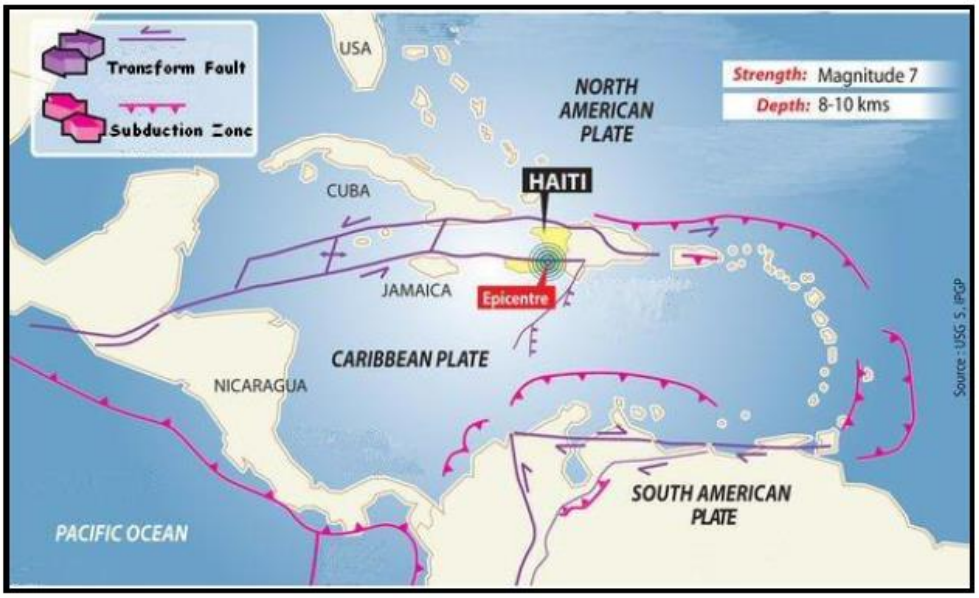
(iii) Germany, Netherlands, Finland, France, Norway, Austria, Hungary, Sweden, Britain, Northern Ireland England, Scotland, Wales (any two) — 3 + 2 marks

(iv) Explanation — 3 + 2 marks

2010

Section 1 – Q3 A

A. Earthquakes



Examine the map above relating to the earthquake in Haiti in January 2010 and answer the following questions in your answer book:

(i) Activity along which **two** plates resulted in the earthquake in Haiti?
(ii) What type of fault caused the earthquake?
(iii) Describe the fault responsible for the earthquake.
(iv) What tectonic activity along the subduction zone created the island arc on the map?

[20m]

Four answers @ 5 marks each:

(i)	3 marks + 2 marks	North American Plate / Caribbean Plate
(ii)	5 marks	Transform /Transverse /Tear/Passive /Neutral
(iii)	3 marks + 2 marks	Any valid description
(iv)	5 marks	Volcanic Activity / Rock Melting etc.

2008

Section 1 – Q2 B

B. VULCANICITY

Explain how the study of plate tectonics has helped us to understand the global distribution of volcanoes.

[30m]

Global Examples:	2 marks + 2 marks
Plate tectonics examined:	13 x SRPs

- Examination all on plate tectonics – max 6x SRPs.
- Give credit to relevant diagrams for a max of 2 x SRPs and credit extra annotated information on diagrams.
- No credit for the effects of volcanoes.

Q3 C

C. EARTHQUAKES

Examine, with reference to actual examples, the measurement and effects of earthquakes.

[30m]

Measurement identified:	2 marks
Effects identified:	2 + 2 marks
Named Examples:	2 + 2 marks
Discussion:	10 x SRPs (5 x SRPs per each aspect)

2007

Section 1 Q3 A

A SATELLITE IMAGES

Name an example of a volcano which you have studied.
State **two** advantages and **one** disadvantage for people living in a volcanic region

(20 marks)

Four answers @ 5 marks each

- No grading / scaling of marks.

Q3 B

B STRUCTURES OF DEFORMATION

Examine the impact of **folding and faulting** on the landscape.
In your answer refer to **one** landform in **each** case.

(30 marks)

Folding

Named landform:	2 marks
Discussion:	7(6) x SRPs

Faulting

Named landform:	2 marks
Discussion:	6 (7) x SRPs

- Credit relevant labelled diagrams.
- Give credit for one named example of each landform

2006

Section 1 – Q3 C

C VOLCANOES

Examine the processes that have led to the formation of any **two** volcanic landforms.

(30 marks)

For each of two landforms:

Naming landform:	2 marks each
Processes discussed:	5 SRPs
Overall coherence (over both landforms):	6 marks graded.

- Unless there is reasonable difference in processes, reduce the overall coherence accordingly.

OR (where processes are dealt with as a unit)

Volcanic landforms or examples identified:	2 marks each
Processes discussed	10 SRPs
Overall coherence:	6 marks graded

- Give credit from the SRPs for diagrams & labelling for new information.
- Give credit from the SRPs for one example of each landform
- If only 1 landform / example identified, OC = 0m.
- Accept process-based answer.