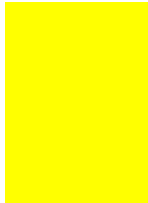


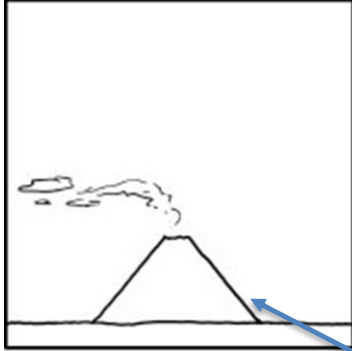
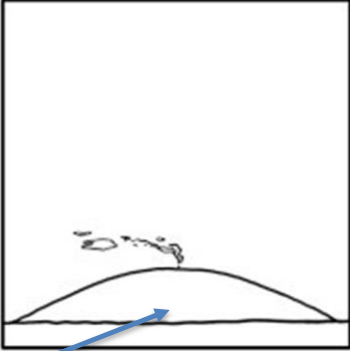
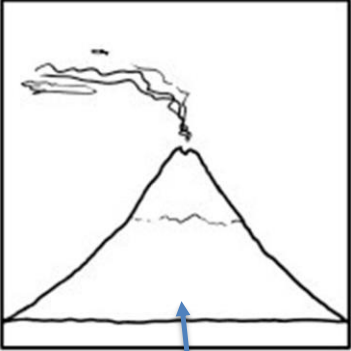
MC Question	MC Answer
1	c
2	d
3	f
4	a
5	b
6	f
7	e
8	a
9	b
10	d
11	a
12	c
13	b
	See visual solution
14	a
15	d
16	f
17	c
18	d
19	f
20	a
21	e
22	a
23	c
24	a
25	b
26	d
27	b
28	e
29	b
30	See visual solution
31	a
32	a
33	a
34	c
35	e
36	c
37	f
38	b
39	See WA solution
40	

41 e  
42 a  
43 See WA  
solution  
44 c  
45 a  
46 a  
47 c  
48 b  
49 FALSE  
50 FALSE  
51 TRUE  
52 TRUE  
53 TRUE  
54 FALSE  
55 TRUE  
56 TRUE  
57 FALSE  
58 FALSE  
59 TRUE  
60 FALSE  
61 TRUE  
62 TRUE  
63 FALSE  
64 TRUE  
65 FALSE



### Question 14 – Visual solution

Q: Which drawing did she associate with each block of text (draw lines)?

 <p>A small, conical volcano with a steep slope and a single plume of smoke rising from its peak.</p>	 <p>A broad, low-profile volcano with a gentle slope and a small plume of smoke rising from its peak.</p>	 <p>A tall, steep-sided volcano with a jagged peak and a large, billowing plume of smoke rising from its summit.</p>
<p><i>CINDER CONE</i></p>	<p><i>SHIELD VOLCANO</i></p>	<p><i>STRATOVOLCANO</i></p>
<ul style="list-style-type: none"><li>• Cover a huge area</li><li>• Mostly lava flows</li><li>• Forms over hot spots</li><li>• Explosive eruptions rare</li></ul>	<ul style="list-style-type: none"><li>• Covers a small area</li><li>• Mostly ash and small pyroclastic fragments</li><li>• Lots of gas escaping</li><li>• Lava fountains</li></ul>	<ul style="list-style-type: none"><li>• Alternating layers of pyroclastic flows, ash fall and lava flows</li><li>• Steep sides</li><li>• Slow moving lava</li><li>• Form over subduction zones</li></ul>

The question is worth one (1) mark, so each correct arrow is worth one third (0.33) of a mark.

**Question 31 – WA/visual solution**

**Q: What order did she place the following fossils in? Write the correct period next to the fossil using: Cambrian, Ordovician, Silurian, Devonian, Carboniferous and Pliocene**

A kangaroo femur	Pliocene
Dunkleosteus – a placoderm fish	Devonian
Monograptus sp. a graptolite	Silurian
Redlichiina – a Redlichiida family trilobite	Cambrian
Tetragraptus sp. – a graptolite	Ordovician
a Lepidodendron early plant fossil	Carboniferous

The question is worth one (1) mark, so each correct word placement is worth 0.166 of a mark.

## Written answer “solutions”.

These questions do not have perfect solutions. Some solutions will be more correct than others, so we are interested to see how the student argues for the correctness of their answer, using observations and logic. Provided below is one solution as an example of how marks may be distributed but this is at the discretion of the examiner.

### Question 40

**Q: What do you think Gemma said as she put them in the correct order (oldest to youngest) and explained why she put each of A, B, C, D, E and F in the order (or lack of order) that she did (5 marks):**

- Volcano B is the oldest volcano and structure because other volcanic features overlap it and other linear features cut across it. 1 mark
- Curved linear structure F looks to be part of a ring feature formed around B so either formed at the same time as B or shortly after. 1 mark
- Linear feature C cross cuts both B and F so is younger than them. 1 mark
- Volcano A overlaps B as does Volcano E so both are younger than B 1 mark
- Linear features D overlap B and E so are younger than both but it unclear if A is younger or older than them. 1 mark

In short B is oldest, F same age or a bit younger than B. C younger than B and F. A and E younger than B and F but unclear if A precedes or post dates C. D younger than E and thus younger than B and F. Unclear if D and C are same age or different ages.

### Question 43

**Q: How should Vincent answer? Write your answer with reference to our solar system's formation and Earth's carbon-based inhabitants. Limit your answer to no more than 10 dot points, no more than 2 sentences each. [5 marks].**

- YES, it is accurate. [0.5 mark]
- The early universe was nothing but hydrogen, concentrated into stars [0.5 mark]
- In 'burning' hydrogen stars make heavier elements [0.5 mark]
- ... including carbon and other elements that are essential to life as we know it [0.5 mark]
- Some first-generation and later generation stars go supernova, making the heaviest elements [0.5 mark]
- ... and scattering all elements into interstellar space [0.5 mark]
- Nebula of multi-element gas/materials coalesce to form new stars [0.5 mark]
- ... and solar systems [0.5 mark]
- Solar systems with multi-element planets have the possibility of evolving life [0.5 mark]
- ... Earth and all its biological evolution being the only example available [at the moment]. [0.5 mark]