

Combined Science Biology Paper 1 Foundation Tier: Extended Open Response question 6(c)

\*(c) Figure 8 shows three stone tools found in different layers of rock.

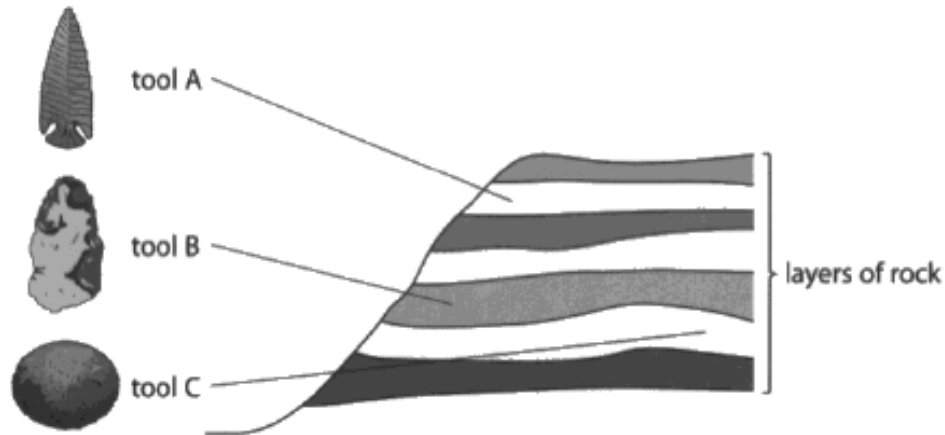


Figure 8

Explain how information from Figure 8 provides evidence for human evolution.

(6)

Tool A is stronger because it has less layers of rock causing the tool to be much more sharper. This changes with tool C as it is made of lots of layers of rock. However it can't cut through much due to it being round and not having sharp edges.

Question	Indicative content	Mark
6(c)*	<p><b>A02 (6 marks)</b></p> <p><b>Area 1 - Age of tools</b></p> <ul style="list-style-type: none"> <li>• Younger rock layers towards top / older rock layers lower down</li> <li>• C is older than B which is older than A</li> <li>• Tools can be compared with other fossils from known time period</li> <li>• Rocks can be dated, e.g. radiometric dating</li> </ul> <p><b>Area 2 - Quality of tools</b></p> <ul style="list-style-type: none"> <li>• A is the most sophisticated / most finely worked / more specialised / more refined / more symmetrical</li> <li>• B shows some evidence of being worked / is rough</li> <li>• C most basic / most simple / less sophisticated / unworked</li> </ul> <p><b>Area 3 - Skills and Intelligence</b></p> <ul style="list-style-type: none"> <li>• tools show evidence of greater human manipulation / greater skill (between C and A)</li> <li>• higher intelligence in more recent (species of) humans</li> </ul>	<p>(6)</p> <p>A02 1</p>

Level	Mark	Descriptor
	0	<ul style="list-style-type: none"> <li>• No awardable content</li> </ul>
Level 1	1-2	<ul style="list-style-type: none"> <li>• The explanation attempts to link and apply knowledge and understanding of scientific ideas, flawed or simplistic connections made between elements in the context of the question.</li> <li>• Lines of reasoning are unsupported or unclear. (AO2)</li> </ul>
Level 2	3-4	<ul style="list-style-type: none"> <li>• The explanation is mostly supported through linkage and application of knowledge and understanding of scientific ideas, some logical connections made between elements in the context of the question.</li> <li>• Lines of reasoning mostly supported through the application of relevant evidence. (AO2)</li> </ul>
Level 3	5-6	<ul style="list-style-type: none"> <li>• The explanation is supported throughout by linkage and application of knowledge and understanding of scientific ideas, logical connections made between elements in the context of the question.</li> <li>• Lines of reasoning are supported by sustained application of relevant evidence. (AO2)</li> </ul>

Level	Mark	Additional Guidance	General additional guidance
	0	No rewardable material.	The level is determined by the number of areas covered within the response. The mark within the band is determined by the presence of <b>linkage</b> between areas.
Level 1	1-2	A simple observation <b>with</b> a brief explanation from one of the three areas of indicative content.	<u>Possible candidate responses</u> The deeper the rock the older it is. Tool B is older than tool A. Tool C is just a rock but tool B has been made. Tool C is older than B/A because it is found in deeper rock.
Level 2	3-4	A simple explanation from at least two areas of indicative content.	<u>Possible candidate responses</u> Tool B is older than tool A. Tool C is older than tool B. Tool B has been shaped by a more intelligent human. Tool C is older than tool B and tool A is more sophisticated than tool B showing that the brain of the human who made tool A is more developed.
Level 3	5-6	<u>Additional guidance</u> A detailed explanation linking ideas from all three areas of indicative content.	<u>Possible candidate responses</u> Tool C is older than tool B which is older than tool A. Older rocks are found further down. The person who made / used tool A was more intelligent. Tool A was found in younger rock because it is higher up in the cliff. Tool A is more sophisticated which suggests the person who made it is more intelligent than the person who made tool A or B. Production of tool A suggests more skilled / intelligent humans when compared with tools B and C which were found in deeper rocks.