

Appendix S4

This appendix shows the analysis grid used for the pre- and post-test questionnaire (pre- and post-test) on the History of Earth and Life.

Question inside the questionnaire		Type of response/Coding
P1_1	Cite the name of the missing Periods/Systems	1=Paleogene; 0=any other answer/blank
P1_2	or Floors/Ages in the table below.	1=Cretaceous; 0=any other answer/blank
P1_3		1=Permian; 0=any other answer/blank
P1_4		1=Silurian; 0=any other answer/blank
P1_5		1=Cambrian; 0=any other answer/blank
P2	How old is the Earth estimated to be?	1=4600 Ma; 0=any other answer/blank
P3	Which of the following Eons has no fossil record?	1=Hadian; 0=any other answer/blank
P4_1	What are the names of the first fossils we found in the fossil record?	1=Stromatolites; 0=not answered
P4_2	In which Era did we find them?	1=Precambrian; 2=Archaean 0= not answered
P4_3	Which living thing do they correspond to?	1=bacteria; 2=Cyanobacteria; 0= not answered
P5	In which Era did an oxygenic atmosphere begin to exist?	1=Paleoproterozoic; 0=any other answer/blank
P6	The first land plants appear	1=Silurian; 0=any other answer/blank
P7	In which Eon is Rodinia formed?	1=Proterozoic; 0=any other answer/blank
P8	The first amphibians appear	1=Devonian; 0=any other answer/blank
P9	The Alpine Orogeny occurs	1=Cenozoic; 0=any other answer/blank
P10	In this Period fern forests abounded	1=Carboniferous; 0=any other answer/blank
P11	Pangaea is formed in this Period	1=Permian; 0=any other answer/blank
P12_1	What is the extinction that wiped out 96% of the planet's species?	1=Late Permian; 2=Permian-Triassic; 0=any other answer/blank
P12_2	How many million years ago did it occur?	1=251 Ma ago; 0=any other answer/blank
P13_1	What is the extinction that wiped out the dinosaurs?	1=Late Cretaceous; 2=Cretaceous-Paleogene; 0=any other answer/blank
P13_2	How many million years ago did it occur?	1= 66 Ma ago; 2= 65 Ma ago; 0=any other answer/blank
P13_3	How did it happen?	1=Meteorite impact; 0=any other answer/blank
P14	The Moon was formed	1=Hadian; 0=any other answer/blank
P15	Place each fact in each column with the corresponding time	Subdivided by event
P15_1	Presence of trilobites	1=Paleozoic; 0=any other answer/blank
P15_2	Appearance of the first birds	1=Mesozoic; 0=any other answer/blank
P15_3	Presence of ammonites	1=Paleozoic; 0=any other answer/blank
P15_4	Appearance of hominids	1=Cenozoic; 0=any other answer/blank
P15_5	Presence of dinosaurs	1=Mesozoic; 0=any other answer/blank
P16	Put the following groups of living things in chronological order.	1 to 3 well sorted=1 4 to 6 well sorted=2 7 to 8 well sorted=3 Not correct=0
P17_1	Identify the following fossils	1=Nummulites; 0=any other answer/blank
P17_2		1=Trilobites; 0=any other answer/blank
P17_3		1=Ammonitidae; 0=any other answer/blank
P17_4		1=Ferns; 0=any other answer/blank
P18	Because of the large amount of plant life, at _____ the atmosphere gets 21% O ₂ , as it does today.	1=Silurian; 0=any other answer/blank
P19_1		1=True; 0=False

P19_2	Indicate if the following sentences are true or	1=True; 0=False
P19_3	false	1=True; 0=False
P19_4		1=True; 0=False
P20_1	Indicate if the following sentences are true or	1=True; 0=False
P20_2	false	1=True; 0=False
P20_3		1=True; 0=False
P20_4		1=True; 0=False