

**Science 10: Earth and Space Science
Item-Level Response Report (Provincial Level)**

British Columbia

All Schools

June/2008

Provincial Science 10 Item-Level Response Reports include data for all BC students who wrote the exam in June 2008 (about 34,740 students). Both public and independent schools are included. The Science 10 June 2008 (Earth and Space Science) provincial Item-Level Response Report displays the proportion of students who made errors on each test item and a description of the misconception.

Form	Item #	Question type	Number of Students who Responded to the Item	Percentage of Students who Answered Incorrectly	Specific Curricular Aspect that Needs Attention [>20% selected incorrect response]
A	88	TF	34655	34	<ul style="list-style-type: none"> Students did not understand how seismology was used to identify the boundary between the crust and the uppermost mantle.
A	89	TF	34648	26	<ul style="list-style-type: none"> Students answered incorrectly that surface seismic waves travel through to the Earth's core.
A	90	MC	34636	27	*
A	91	TF	34671	30	<ul style="list-style-type: none"> Students did not understand that tectonic plates have been moving on the Earth since the Precambrian Era; likely did not refer to the data booklet.
A	92	MC	34640	47	<ul style="list-style-type: none"> Students likely did not refer to the Geological Time Scale in the data booklet; incorrectly answered that the Paleozoic Era represented the greatest length of time, not the Precambrian Era.
A	93	MC	34649	77	<ul style="list-style-type: none"> Students likely did not refer to the Geological Time Scale in the data booklet; incorrectly answered that a trilobite fossil was from the Cambrian to Permian, not the Cambrian.

A	94	MT	34514	31	*
A	95	MT	34499	25	*
A	96	MT	34553	22	*
A	97	MT	34561	30	*
A	98	MT	34578	32	*
A	99	MC	34608	48	*
A	100	TF	34613	16	N/A
A	101	MC	34659	73	<ul style="list-style-type: none"> Students did not understand the Law of Superposition; were unable to correctly interpret two diagrams of cross sections of rock layers.
A	102	MC	34658	14	N/A
A	103	MC	34662	34	*
A	104	TF	34651	30	<ul style="list-style-type: none"> Students did not understand that volcanoes can occur in areas other than subduction zones.
A	105	TF	34612	9	N/A
A	106	MC	34644	57	<ul style="list-style-type: none"> Students likely did not refer to the data booklet; incorrectly answered that a divergent plate boundary is found on the North American continent, not the African continent.
A	107	MC	34611	71	<ul style="list-style-type: none"> Students did not understand how oceans form in divergent plate boundaries as the plates continue to diverge; did not understand how hot spots form.
A	108	TF	34659	43	<ul style="list-style-type: none"> Students likely did not refer to the data booklet; were unable to choose the correct era for 400 Ma; confused the Precambrian era with the Paleozoic era.
A	109	MC	34640	49	<ul style="list-style-type: none"> Students were unable to interpret a diagram showing Pangea; incorrectly answered that Pangea was 150 Ma, not 250 Ma.
A	110	MC	34553	60	<ul style="list-style-type: none"> Students incorrectly answered that magnetic reversal

					patterns are evidence for transform faults, not seafloor spreading.
A	111	MC	34662	29	*
A	112	MC	34614	68	<ul style="list-style-type: none"> • Students did not understand that earthquakes can be used to outline all of the Earth's tectonic plates; incorrectly answered that mid-ocean ridges, not earthquakes, can be used to outline the Earth's tectonic plates. • Students did not understand that earthquakes can be used to outline all of the Earth's tectonic plates; incorrectly answered that volcanic eruptions, not earthquakes, can be used to outline the Earth's tectonic plates.
A	113	MC	34621	44	<ul style="list-style-type: none"> • Students were unable to compare and contrast the Theory of Plate Tectonics and the Continental Drift Theory.
A	114	MC	34637	49	<ul style="list-style-type: none"> • Students did not understand the term "hot spot"; were unable to interpret a diagram of two hot spots and island chains, and compare the plate movement.
A	115	MC	34620	27	*
A	116	TF	34632	9	N/A

Note:

'*' indicates that there were fewer than 20% of the students who selected any of the possible incorrect answers to the item, hence, no curricular note is reported;

'N/A' indicates that there were fewer than 20% of the students who incorrectly answered the item, hence, no curricular note is reported.

Question Type: Multiple Choice (MC), Matching (MT), True/False (TF).