

## Pre-Formatted Reports: Benchmark Test Item Analysis - New Format

### Data Selections

**Institution(s):** All School Types, All Schools  
**Benchmark Administration:** 09/03/14, 2014-2015 Baseline Science 8  
**Trend Profile:** 2014-2015  
**Subject:** Life and Physical Sciences  
**Test Focus:** All Test Focuses  
**Test Level:** 08  
**Test Category:** District Benchmark  
**Grade:** 08  
**Enrollment:** Any year

Number of questions: 45  
 Number of test-taking students: 1595

### Student Responses

Question - Type	Correct		Incorrect	Most Common Mistake		Point Value	Points Achieved / Possible	P-Value/Item Mean	Discrimination
	Rate	Value	Total Rate	Rate	Value				
1 - Multiple Choice	44%	B	56%	40%	A	1	701 / 1595		
2 - Multiple Choice	75%	B	25%	19%	A	1	1195 / 1595		
3 - Multiple Choice	53%	B	47%	24%	A	1	847 / 1595		
4 - Multiple Choice	24%	D	76%	49%	B	1	384 / 1595		
5 - Multiple Choice	63%	B	37%	25%	C	1	997 / 1595		
6 - Multiple Choice	85%	A	15%	10%	C	1	1352 / 1595		
7 - Multiple Choice	35%	B	65%	30%	C	1	565 / 1595		
8 - Multiple Choice	74%	C	26%	10%	B	1	1181 / 1595		
9 - Multiple Choice	49%	D	51%	20%	C	1	788 / 1595		
10 - Multiple Choice	49%	A	51%	41%	B	1	775 / 1595		
11 - Multiple Choice	36%	C	64%	34%	D	1	575 / 1595		
12 - Multiple Choice	21%	A	79%	31%	D	1	342 / 1595		
13 - Multiple Choice	77%	D	23%	11%	B	1	1229 / 1595		
14 - Multiple Choice	25%	A	75%	45%	C	1	398 / 1595		
15 - Multiple Choice	9%	D	91%	43%	C	1	150 / 1595		
16 - Multiple Choice	85%	C	15%	6%	D	1	1351 / 1595		
17 - Multiple Choice	43%	B	57%	40%	A	1	682 / 1595		
18 - Multiple Choice	47%	A	53%	23%	D	1	743 / 1595		

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19 - Multiple Choice	68%	C	32%	17%	D	1	1077 / 1595		
20 - Multiple Choice	57%	D	43%	25%	A	1	903 / 1595		
21 - Multiple Choice	38%	C	62%	25%	A	1	600 / 1595		
22 - Multiple Choice	28%	B	72%	28%	C	1	452 / 1595		
23 - Multiple Choice	70%	A	30%	14%	D	1	1115 / 1595		
24 - Multiple Choice	38%	C	62%	26%	B	1	599 / 1595		
25 - Multiple Choice	55%	C	45%	19%	A	1	876 / 1595		
26 - Multiple Choice	44%	C	56%	24%	A	1	709 / 1595		
27 - Multiple Choice	28%	B	72%	43%	A	1	441 / 1595		
28 - Multiple Choice	40%	C	60%	28%	B	1	643 / 1595		
29 - Multiple Choice	63%	B	37%	20%	C	1	1009 / 1595		
30 - Multiple Choice	59%	B	41%	22%	A	1	945 / 1595		
31 - Multiple Choice	62%	D	38%	15%	A	1	982 / 1595		
32 - Multiple Choice	78%	B	22%	11%	D	1	1242 / 1595		
33 - Multiple Choice	75%	A	25%	10%	B	1	1201 / 1595		
34 - Multiple Choice	74%	B	26%	16%	C	1	1186 / 1595		
35 - Multiple Choice	67%	B	33%	16%	A	1	1063 / 1595		
36 - Multiple Choice	50%	C	50%	24%	A	1	804 / 1595		
37 - Multiple Choice	28%	D	72%	39%	A	1	444 / 1595		
38 - Multiple Choice	60%	C	40%	21%	B	1	963 / 1595		
39 - Multiple Choice	44%	A	56%	29%	D	1	696 / 1595		
40 - Multiple Choice	69%	A	31%	21%	B	1	1097 / 1595		
41 - Multiple Choice	42%	C	58%	38%	B	1	673 / 1595		
42 - Multiple Choice	51%	C	49%	20%	A	1	807 / 1595		
43 - Multiple Choice	56%	C	44%	30%	A	1	886 / 1595		
44 - Multiple Choice	69%	A	31%	22%	C	1	1097 / 1595		
45 - Multiple Choice	64%	A	36%	18%	C	1	1027 / 1595		
<b>Summary</b>	<b>53%</b>		<b>47%</b>				<b>840 /</b>		

							<b>1595</b>		
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P-value represents an item's difficulty as evaluated by dividing the total number of correct responses by the total number of students tested. P-value is calculated for true/false, multiple choice, gridded or hot spot-single response items.

Item Mean is the average score for student responses to an open response question or to a multi-part question. Item Mean is calculated for inline response, matching or hot spot-multiple selections items.

Discrimination or Item Total Score Correlation is the correlation between the question score and the overall test score and indicates the extent to which success on an item corresponds to success on the test.

## Standards Alignment to NC Essential Standards

Question	ID	Standard Description
<b>1 - Multiple Choice</b>		Earth Systems, Structures and Processes
<b>2 - Multiple Choice</b>		Earth Systems, Structures and Processes
<b>3 - Multiple Choice</b>		Earth Systems, Structures and Processes
<b>4 - Multiple Choice</b>	<b>NCES.8.P.1.3</b>	Compare physical changes such as size, shape and state to chemical changes that are the result of a chemical reaction to include changes in temperature, color, formation of a gas or precipitate.
<b>5 - Multiple Choice</b>	<b>NCES.8.P.1.2</b>	Explain how the physical properties of elements and their reactivity have been used to produce the current model of the Periodic Table of elements.
<b>6 - Multiple Choice</b>		Earth Systems, Structures and Processes
<b>7 - Multiple Choice</b>		Earth Systems, Structures and Processes
<b>8 - Multiple Choice</b>	<b>NCES.8.L.4.1</b>	Summarize the use of evidence drawn from geology, fossils, and comparative anatomy to form the basis for biological classification systems and the theory of evolution.
<b>9 - Multiple Choice</b>	<b>NCES.8.E.1.2</b>	Summarize evidence that Earth's oceans are a reservoir of nutrients, minerals, dissolved gases, and life forms:
<b>10 - Multiple Choice</b>	<b>NCES.8.E.1.1</b>	Explain the structure of the hydrosphere including:
<b>11 - Multiple Choice</b>	<b>NCES.8.E.1.2</b>	Summarize evidence that Earth's oceans are a reservoir of nutrients, minerals, dissolved gases, and life forms:
<b>12 - Multiple Choice</b>	<b>NCES.8.E.1.2</b>	Summarize evidence that Earth's oceans are a reservoir of nutrients, minerals, dissolved gases, and life forms:
<b>13 - Multiple Choice</b>	<b>NCES.8.E.1.4</b>	Conclude that the good health of humans requires:
<b>14 - Multiple Choice</b>	<b>NCES.8.P.1.1</b>	Classify matter as elements, compounds, or mixtures based on how the atoms are packed together in arrangements.
<b>15 - Multiple Choice</b>	<b>NCES.8.P.1.1</b>	Classify matter as elements, compounds, or mixtures based on how the atoms are packed together in arrangements.
<b>16 - Multiple Choice</b>	<b>NCES.8.P.1.2</b>	Explain how the physical properties of elements and their reactivity have been used to produce the current model of the Periodic Table of elements.
<b>17 - Multiple Choice</b>	<b>NCES.8.L.1.1</b>	Summarize the basic characteristics of viruses, bacteria, fungi and parasites relating to the spread, treatment and prevention of disease.
<b>18 - Multiple Choice</b>	<b>NCES.8.L.5.2</b>	Explain the relationship among a healthy diet, exercise, and the general health of the body (emphasis on the relationship between respiration and digestion).
<b>19 - Multiple Choice</b>	<b>NCES.8.P.1.3</b>	Compare physical changes such as size, shape and state to chemical changes that are the result of a chemical reaction to include changes in temperature, color, formation of a gas or precipitate.
<b>20 - Multiple Choice</b>	<b>NCES.8.P.1.3</b>	Compare physical changes such as size, shape and state to chemical changes that are the result of a chemical reaction to include changes in temperature, color, formation of a gas or precipitate.

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<b>21 - Multiple Choice NCES.8.P.1.4</b>	Explain how the idea of atoms and a balanced chemical equation support the law of conservation of mass.
<b>22 - Multiple Choice NCES.8.P.1.4</b>	Explain how the idea of atoms and a balanced chemical equation support the law of conservation of mass.
<b>23 - Multiple Choice NCES.8.L.1.1</b>	Summarize the basic characteristics of viruses, bacteria, fungi and parasites relating to the spread, treatment and prevention of disease.
<b>24 - Multiple Choice NCES.8.L.2.1</b>	Summarize aspects of biotechnology including:
<b>25 - Multiple Choice NCES.8.E.2.1</b>	Infer the age of Earth and relative age of rocks and fossils from index fossils and ordering of rock layers (relative dating and radioactive dating).
<b>26 - Multiple Choice NCES.8.L.3.2</b>	Summarize the relationships among producers, consumers, and decomposers including the positive and negative consequences of such interactions including:
<b>27 - Multiple Choice NCES.8.E.2.1</b>	Infer the age of Earth and relative age of rocks and fossils from index fossils and ordering of rock layers (relative dating and radioactive dating).
<b>28 - Multiple Choice NCES.8.P.2.1</b>	Explain the environmental consequences of the various methods of obtaining, transforming and distributing energy.
<b>29 - Multiple Choice NCES.8.L.4.1</b>	Summarize the use of evidence drawn from geology, fossils, and comparative anatomy to form the basis for biological classification systems and the theory of evolution.
<b>30 - Multiple Choice NCES.8.L.4.1</b>	Summarize the use of evidence drawn from geology, fossils, and comparative anatomy to form the basis for biological classification systems and the theory of evolution.
<b>31 - Multiple Choice NCES.8.L.4.1</b>	Summarize the use of evidence drawn from geology, fossils, and comparative anatomy to form the basis for biological classification systems and the theory of evolution.
<b>32 - Multiple Choice NCES.8.L.3.3</b>	Explain how the flow of energy within food webs is interconnected with the cycling of matter (including water, nitrogen, carbon dioxide and oxygen).
<b>33 - Multiple Choice NCES.8.P.1.3</b>	Compare physical changes such as size, shape and state to chemical changes that are the result of a chemical reaction to include changes in temperature, color, formation of a gas or precipitate.
<b>34 - Multiple Choice</b>	Earth Systems, Structures and Processes
<b>35 - Multiple Choice NCES.8.L.5.1</b>	Summarize how food provides the energy and the molecules required for building materials, growth and survival of all organisms (to include plants).
<b>36 - Multiple Choice NCES.8.L.5.1</b>	Summarize how food provides the energy and the molecules required for building materials, growth and survival of all organisms (to include plants).
<b>37 - Multiple Choice NCES.8.L.4.1</b>	Summarize the use of evidence drawn from geology, fossils, and comparative anatomy to form the basis for biological classification systems and the theory of evolution.
<b>38 - Multiple Choice NCES.8.L.3.3</b>	Explain how the flow of energy within food webs is interconnected with the cycling of matter (including water, nitrogen, carbon dioxide and oxygen).
<b>39 - Multiple Choice NCES.8.E.2.2</b>	Explain the use of fossils, ice cores, composition of sedimentary rocks, faults, and igneous rock formations found in rock layers as evidence of the history of the Earth and its changing life forms.
<b>40 - Multiple Choice NCES.8.L.3.3</b>	Explain how the flow of energy within food webs is interconnected with the cycling of matter (including water, nitrogen, carbon dioxide and oxygen).
<b>41 - Multiple Choice NCES.8.L.3.3</b>	Explain how the flow of energy within food webs is interconnected with the cycling of matter (including water, nitrogen, carbon dioxide and oxygen).
<b>42 - Multiple Choice NCES.8.P.1.3</b>	Compare physical changes such as size, shape and state to chemical changes that are the result of a chemical reaction to include changes in

	temperature, color, formation of a gas or precipitate.
43 - Multiple Choice NCES.8.E.2.2	Explain the use of fossils, ice cores, composition of sedimentary rocks, faults, and igneous rock formations found in rock layers as evidence of the history of the Earth and its changing life forms.
44 - Multiple Choice	Earth Systems, Structures and Processes
45 - Multiple Choice NCES.8.L.3.3	Explain how the flow of energy within food webs is interconnected with the cycling of matter (including water, nitrogen, carbon dioxide and oxygen).