North Carolina Department of Public Instruction

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

Data Selections

Institution(s): Middle School,All Schools
Benchmark Administration: 03/24/15, 2014-15 BA2 8th Science
Trend Profile: 2014-2015
Subject: Life and Physical Sciences
Test Focus: All Test Focuses
Test Level: 08
Test Category: District Benchmark
Grade: 08
Enrollment: Current

Number of questions: 35
Number of test-taking students: 1641

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	76%	C	24%	20%	B	1	1249 / 1641	0.76	0.47
2 - Multiple Choice	87%	D	13%	6%	C	1	1427 / 1641	0.87	0.41
3 - Multiple Choice	83%	C	17%	7%	A	1	1370 / 1641	0.83	0.49
4 - Multiple Choice	73%	B	27%	11%	C	1	1205 / 1641	0.73	0.47
5 - Multiple Choice	89%	C	11%	5%	A	1	1454 / 1641	0.88	0.46
6 - Multiple Choice	59%	B	41%	27%	A	1	960 / 1641	0.58	0.45
7 - Multiple Choice	69%	D	31%	12%	A	1	1140 / 1641	0.69	0.50
8 - Multiple Choice	43%	D	57%	29%	C	1	711 / 1641	0.43	0.43
9 - Multiple Choice	76%	A	24%	12%	C	1	1254 / 1641	0.76	0.56
10 - Multiple Choice	56%	D	44%	17%	A	1	927 / 1641	0.56	0.50
11 - Multiple Choice	47%	B	53%	33%	C	1	776 / 1641	0.47	0.26
12 - Multiple Choice	65%	C	35%	12%	D	1	1059 / 1641	0.64	0.47
13 - Multiple Choice	12%	C	88%	63%	A	1	189 / 1641	0.12	0.05
14 - Multiple Choice	83%	A	17%	7%	B	1	1368 / 1641	0.83	0.44
15 - Multiple Choice	56%	C	44%	30%	A	1	912 / 1641	0.55	0.43

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16 - Multiple Choice	**46%**	D	**54%**	**22%**	C	1	759 / 1641	0.46	0.47
17 - Multiple Choice	**81%**	C	**19%**	**8%**	A	1	1332 / 1641	0.81	0.53
18 - Multiple Choice	**80%**	C	**20%**	**12%**	D	1	1311 / 1641	0.80	0.35
19 - Multiple Choice	**64%**	D	**36%**	**17%**	A	1	1043 / 1641	0.63	0.35
20 - Multiple Choice	**54%**	D	**46%**	**18%**	C	1	885 / 1641	0.54	0.41
21 - Multiple Choice	**48%**	C	**52%**	**40%**	B	1	789 / 1641	0.48	0.42
22 - Multiple Choice	**72%**	A	**28%**	**14%**	C	1	1181 / 1641	0.72	0.52
23 - Multiple Choice	**62%**	B	**38%**	**13%**	D	1	1023 / 1641	0.62	0.41
24 - Multiple Choice	**60%**	B	**40%**	**17%**	A	1	978 / 1641	0.59	0.38
25 - Multiple Choice	**64%**	B	**36%**	**16%**	A	1	1055 / 1641	0.64	0.56
26 - Multiple Choice	**73%**	D	**27%**	**11%**	C	1	1198 / 1641	0.73	0.62
27 - Multiple Choice	**67%**	D	**33%**	**18%**	A	1	1100 / 1641	0.67	0.53
28 - Multiple Choice	**58%**	D	**42%**	**19%**	A	1	953 / 1641	0.58	0.51
29 - Multiple Choice	**85%**	D	**15%**	**7%**	A	1	1398 / 1641	0.85	0.43
30 - Multiple Choice	**67%**	B	**33%**	**16%**	C	1	1102 / 1641	0.67	0.51
31 - Multiple Choice	**66%**	D	**34%**	**19%**	A	1	1081 / 1641	0.66	0.50
32 - Multiple Choice	**52%**	C	**48%**	**20%**	A	1	855 / 1641	0.52	0.35
33 - Multiple Choice	**33%**	B	**67%**	**39%**	D	1	544 / 1641	0.33	0.16
34 - Multiple Choice	**27%**	D	**73%**	**29%**	B	1	439 / 1641	0.27	0.22
35 - Multiple Choice	**49%**	B	**51%**	**21%**	A	1	809 / 1641	0.49	0.35
Summary	**62%**		**38%**				**1024 / 1641**		

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

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Question	ID	Standard Description
1 - Multiple Choice	NCES.8.E.2.1	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).
2 - Multiple Choice		Earth Systems, Structures and Processes
3 - Multiple Choice		Earth Systems, Structures and Processes
4 - Multiple Choice	NCES.8.E.1.2	Summarize evidence that Earth's oceans are a reservoir of nutrients, minerals, dissolved gases, and life forms:
5 - Multiple Choice	NCES.8.L.1.1	Summarize the basic characteristics of viruses, bacteria, fungi and parasites relating to the spread, treatment and prevention of disease.
6 - Multiple Choice	NCES.8.L.3.2	Summarize the relationships among producers, consumers, and decomposers including the positive and negative consequences of such interactions including:
7 - Multiple Choice	NCES.8.L.5.1	Summarize how food provides the energy and the molecules required for building materials, growth and survival of all organisms (to include plants).
8 - Multiple Choice	NCES.8.L.5.1	Summarize how food provides the energy and the molecules required for building materials, growth and survival of all organisms (to include plants).
9 - 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).
10 - Multiple Choice	NCES.8.L.5.1	Summarize how food provides the energy and the molecules required for building materials, growth and survival of all organisms (to include plants).
11 - Multiple Choice	NCES.8.E.1.3	Predict the safety and potability of water supplies in North Carolina based on physical and biological factors, including:
12 - Multiple Choice	NCES.8.E.1.4	Conclude that the good health of humans requires:
13 - Multiple Choice	NCES.8.L.1.1	Summarize the basic characteristics of viruses, bacteria, fungi and parasites relating to the spread, treatment and prevention of disease.
14 - Multiple Choice	NCES.8.L.1.1	Summarize the basic characteristics of viruses, bacteria, fungi and parasites relating to the spread, treatment and prevention of disease.
15 - Multiple Choice	NCES.8.L.3.2	Summarize the relationships among producers, consumers, and decomposers including the positive and negative consequences of such interactions including:
16 - Multiple Choice	NCES.8.L.2	Understand how biotechnology is used to affect living organisms.
17 - Multiple Choice	NCES.8.L.3.1	Explain how factors such as food, water, shelter and space affect populations in an ecosystem.
18 - Multiple Choice	NCES.8.L.1.1	Summarize the basic characteristics of viruses, bacteria, fungi and parasites relating to the spread, treatment and prevention of disease.
19 - Multiple Choice	NCES.8.L.5.1	Summarize how food provides the energy and the molecules required for building materials, growth and survival of all organisms (to include plants).
20 - Multiple Choice	NCES.8.L.1.1	Summarize the basic characteristics of viruses, bacteria, fungi and parasites relating to the spread, treatment and prevention of disease.
21 - Multiple Choice	NCES.8.E.1.3	Predict the safety and potability of water supplies in North Carolina based on physical and biological factors, including:
22 - Multiple Choice	NCES.8.P.1.3	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.
23 - Multiple Choice	NCES.8.E.1.2	Summarize evidence that Earth's oceans are a reservoir of nutrients, minerals, dissolved gases, and life forms:
24 - Multiple Choice	NCES.8.E.1.3	Predict the safety and potability of water supplies in North Carolina based on physical and biological factors, including:

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25 - Multiple Choice	**NCES.8.P.1.1**	Classify matter as elements, compounds, or mixtures based on how the atoms are packed together in arrangements.
26 - Multiple Choice	**NCES.8.E.1.4**	Conclude that the good health of humans requires:
27 - Multiple Choice	**NCES.8.E.1.4**	Conclude that the good health of humans requires:
28 - Multiple Choice	**NCES.8.P.1.3**	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.
29 - Multiple Choice	**NCES.8.E.1.1**	Explain the structure of the hydrosphere including:
30 - Multiple Choice	**NCES.8.E.1.1**	Explain the structure of the hydrosphere including:
31 - Multiple Choice	**NCES.8.E.1.1**	Explain the structure of the hydrosphere including:
32 - Multiple Choice	**NCES.8.L.1.2**	Explain the difference between epidemic and pandemic as it relates to the spread, treatment and prevention of disease.
33 - Multiple Choice	**NCES.8.P.2.2**	Explain the implications of the depletion of renewable and nonrenewable energy resources and the importance of conservation.
34 - Multiple Choice	**NCES.8.L.1.1**	Summarize the basic characteristics of viruses, bacteria, fungi and parasites relating to the spread, treatment and prevention of disease.
35 - Multiple Choice	**NCES.8.P.2.1**	Explain the environmental consequences of the various methods of obtaining, transforming and distributing energy.

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