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 Baselines Physical Science
Trend Profile: 2014-2015
Subject: Life and Physical Sciences
Test Focus: All Test Focuses
Test Level: 09
Test Category: District Benchmark
Grade: 09
Enrollment: Any year

Number of questions: 40
Number of test-taking students: 332

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	29%	D	71%	56%	A	1	95 / 332	0.29	0.20
2 - Multiple Choice	82%	B	18%	9%	C	1	271 / 332	0.83	0.42
3 - Multiple Choice	84%	C	16%	7%	A	1	278 / 332	0.81	0.42
4 - Multiple Choice	45%	D	55%	31%	C	1	149 / 332	0.44	0.26
5 - Multiple Choice	49%	B	51%	35%	A	1	163 / 332	0.42	0.41
6 - Multiple Choice	17%	B	83%	52%	D	1	56 / 332	0.14	0.11
7 - Multiple Choice	22%	A	78%	39%	C	1	74 / 332	0.23	0.15
8 - Multiple Choice	49%	A	51%	27%	B	1	164 / 332	0.47	0.17
9 - Multiple Choice	38%	B	62%	28%	A	1	125 / 332	0.40	0.17
10 - Multiple Choice	43%	B	57%	27%	D	1	143 / 332	0.43	0.18
11 - Multiple Choice	68%	B	32%	19%	C	1	225 / 332	0.64	0.41
12 - Multiple Choice	66%	C	34%	13%	A	1	219 / 332	0.68	0.43
13 - Multiple Choice	32%	B	68%	30%	C	1	107 / 332	0.31	0.24
14 - Multiple Choice	37%	D	63%	27%	A	1	122 / 332	0.36	0.29
15 - Multiple Choice	20%	D	80%	50%	B	1	68 / 332	0.19	0.14
16 - Multiple Choice	42%	C	58%	28%	A	1	139 / 332	0.45	0.28
17 - Multiple Choice	20%	C	80%	39%	D	1	65 / 332	0.19	0.00
18 - Multiple Choice	36%	C	64%	31%	B	1	120 / 332	0.36	0.29
19 - Multiple Choice	51%	B	49%	18%	C	1	168 / 332	0.45	0.41
20 - Multiple Choice	27%	C	73%	61%	B	1	90 / 332	0.31	0.24

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This report is confidential and for informal purposes

21 - Multiple Choice	25%	B	75%	34%	A	1	83 / 332	0.21	0.10
22 - Multiple Choice	61%	C	39%	19%	A	1	203 / 332	0.55	0.41
23 - Multiple Choice	22%	A	78%	42%	B	1	72 / 332	0.19	0.08
24 - Multiple Choice	41%	B	59%	25%	A	1	137 / 332	0.36	0.26
25 - Multiple Choice	49%	D	51%	21%	C	1	164 / 332	0.42	0.49
26 - Multiple Choice	45%	B	55%	30%	C	1	148 / 332	0.44	0.23
27 - Multiple Choice	24%	D	76%	29%	A	1	79 / 332	0.24	0.16
28 - Multiple Choice	30%	A	70%	27%	C	1	99 / 332	0.34	0.08
29 - Multiple Choice	16%	A	84%	33%	D	1	52 / 332	0.13	0.04
30 - Multiple Choice	18%	D	82%	42%	B	1	60 / 332	0.11	0.13
31 - Multiple Choice	29%	A	71%	32%	B	1	95 / 332	0.28	0.02
32 - Multiple Choice	30%	A	70%	24%	B	1	100 / 332	0.31	0.13
33 - Multiple Choice	28%	D	72%	26%	B	1	94 / 332	0.26	0.32
34 - Multiple Choice	45%	A	55%	24%	D	1	151 / 332	0.48	0.21
35 - Multiple Choice	44%	C	56%	24%	A	1	146 / 332	0.44	0.35
36 - Multiple Choice	60%	B	40%	14%	A	1	200 / 332	0.57	0.41
37 - Multiple Choice	27%	B	73%	25%	C	1	90 / 332	0.29	0.28
38 - Multiple Choice	51%	C	49%	25%	A	1	169 / 332	0.51	0.36
39 - Multiple Choice	33%	D	67%	23%	B	1	110 / 332	0.37	0.14
40 - Multiple Choice	54%	A	46%	21%	C	1	179 / 332	0.56	0.45
Summary	**40%**		**60%**				**132 / 332**		

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
1 - Multiple Choice		Physical Science
2 - Multiple Choice		Physical Science
3 - Multiple Choice		Physical Science
4 - Multiple Choice	**NCES.PSc.1.1.2**	Compare speed, velocity, acceleration and momentum using investigations, graphing, scalar quantities and vector quantities.
5 - Multiple Choice	**NCES.PSc.2.3.1**	Compare nuclear reactions including alpha decay, beta decay and gamma decay; nuclear fusion and nuclear fission.
6 - Multiple Choice	**NCES.PSc.3.2.1**	Explain the relationships among wave frequency, wave period, wave

		velocity and wavelength through calculation and investigation.
7 - Multiple Choice	**NCES.PSc.1.1.2**	Compare speed, velocity, acceleration and momentum using investigations, graphing, scalar quantities and vector quantities.
8 - Multiple Choice	**NCES.PSc.2.2.6**	Summarize the characteristics and interactions of acids and bases.
9 - Multiple Choice	**NCES.PSc.2.1.3**	Compare physical and chemical properties of various types of matter.
10 - Multiple Choice	**NCES.PSc.3.2.2**	Compare waves (mechanical, electromagnetic, and surface) using their characteristics.
11 - Multiple Choice	**NCES.PSc.2.1.2**	Explain the phases of matter and the physical changes that matter undergoes.
12 - Multiple Choice		Physical Science
13 - Multiple Choice		Physical Science
14 - Multiple Choice	**NCES.PSc.2.2.1**	Infer valence electrons, oxidation number, and reactivity of an element based on its location in the Periodic Table.
15 - Multiple Choice	**NCES.PSc.1.2.1**	Explain how gravitational force affects the weight of an object and the velocity of an object in freefall.
16 - Multiple Choice	**NCES.PSc.2.1.4**	Interpret data presented in Bohr model diagrams and dot diagrams for atoms and ions of elements 1 through 18.
17 - Multiple Choice	**NCES.PSc.2.2.1**	Infer valence electrons, oxidation number, and reactivity of an element based on its location in the Periodic Table.
18 - Multiple Choice	**NCES.PSc.1.2.3**	Explain forces using Newton's three laws of motion.
19 - Multiple Choice		Physical Science
20 - Multiple Choice		Physical Science
21 - Multiple Choice	**NCES.PSc.2.2.2**	Infer the type of chemical bond that occurs, whether covalent, ionic or metallic, in a given substance.
22 - Multiple Choice	**NCES.PSc.2.2.3**	Predict chemical formulas and names for simple compounds based on knowledge of bond formation and naming conventions.
23 - Multiple Choice	**NCES.PSc.2.2.2**	Infer the type of chemical bond that occurs, whether covalent, ionic or metallic, in a given substance.
24 - Multiple Choice	**NCES.PSc.3.3.1**	Summarize static and current electricity.
25 - Multiple Choice	**NCES.PSc.2.1.2**	Explain the phases of matter and the physical changes that matter undergoes.
26 - Multiple Choice	**NCES.PSc.3.2.2**	Compare waves (mechanical, electromagnetic, and surface) using their characteristics.
27 - Multiple Choice	**NCES.PSc.3.3.2**	Explain simple series and parallel DC circuits in terms of Ohm's law.
28 - Multiple Choice	**NCES.PSc.2.1.4**	Interpret data presented in Bohr model diagrams and dot diagrams for atoms and ions of elements 1 through 18.
29 - Multiple Choice	**NCES.PSc.3.1.3**	Explain work in terms of the relationship among the applied force to an object, the resulting displacement of the object and the energy transferred to an object.
30 - Multiple Choice	**NCES.PSc.1.1.1**	Explain motion in terms of frame of reference, distance, and displacement.
31 - Multiple Choice	**NCES.PSc.3.1.1**	Explain thermal energy and its transfer.
32 - Multiple Choice		Physical Science
33 - Multiple Choice	**NCES.PSc.1.1.2**	Compare speed, velocity, acceleration and momentum using investigations, graphing, scalar quantities and vector quantities.
34 - Multiple Choice	**NCES.PSc.2.1.3**	Compare physical and chemical properties of various types of matter.
35 - Multiple Choice	**NCES.PSc.3.3.1**	Summarize static and current electricity.
36 - Multiple Choice	**NCES.PSc.3.1.4**	Explain the relationship among work, power and simple machines both qualitatively and quantitatively.
37 - Multiple Choice	**NCES.PSc.2.2.4**	Exemplify the law of conservation of mass by balancing chemical

	equations.
38 - Multiple Choice NCES.PSc.3.3.4	Explain magnetism in terms of domains, interactions of poles, and magnetic fields.
39 - Multiple Choice NCES.PSc.2.2.1	Infer valence electrons, oxidation number, and reactivity of an element based on its location in the Periodic Table.
40 - Multiple Choice NCES.PSc.3.1.2	Explain the law of conservation of energy in a mechanical system in terms of kinetic energy, potential energy and heat.