Team Name:_____

Team Number:_____

Rocks & Minerals

Score:_____

Station #1

1.	Beryl (emerald)
2.	$Be_3Al_2(SiO_3)_6$
3.	D
4.	Morganite
5.	A
6.	Beryllium (Be)

Station #2

7.	Calcite
8.	$CaCO_3$
9.	E
10.	A
11.	Aragonite
12.	C

Station #3

13.	Scoria
14.	igneous
15.	vesicules (1st tiebreaker)
16.	B
17.	D
18.	1 (one)

Station #4

19.	Anthracite Coal
20.	carbon
21.	sedimentary
22.	Bituminous Coal
23.	B
24.	conchoidal

Station #5

25.	Barite
26.	$BaSO_4$
27.	desert rose
28.	E
29.	E
30.	F

Station #6

31.	Talc
32.	soapstone
33.	1 (one) (2nd tiebreaker)
34.	chlorine
35.	B
36.	A

Station #7

37.	Celestite
38.	$SrSO_4$
39.	E
40.	D
41.	A (3rd tiebreaker)
42.	B

Station #8

43.	Shale
44.	oil shale
45.	sedimentary
46.	fissility
47.	C
48.	Slate

Station #9

49.	Bauxite
50.	aluminum
51.	D
52.	D
53.	Hall-Héroult Process (4th tiebreaker)
54.	Australia

Station #10

55.	Apatite
56.	phosphates (5th tiebreaker)
57.	A
58.	C
59.	B
60.	phosphorous

Station #11

61.	Quartz [Amethyst]
62.	Quartz [Citrine]
63.	SiO_2
64.	iron
65.	C
66.	E

Station #12

67.	Malachite
68.	$Cu_2CO_3(OH)_2$
69.	E
70.	botryoidal
71.	C
72.	D

Station #13

73.	Diatomite
74.	A
75.	B
76.	siliceous rocks
77.	fossil flour
78.	D

Station #14

79.	Hematite
80.	red/brown (6th tiebreaker)
81.	rust
82.	C
83.	B
84.	3+

Station #15

85.	Gypsum [Selenite]
86.	Moon
87.	B
88.	2.3
89.	Mexico
90.	A

Station #16

91.	Gneiss
92.	D
93.	Granite
94.	A
95.	Canada
96.	C

Station #17

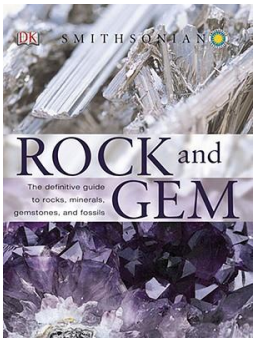
97.	Sphalerite
98.	Galena
99.	F
100.	black-jack
101.	ZnS
102.	iron

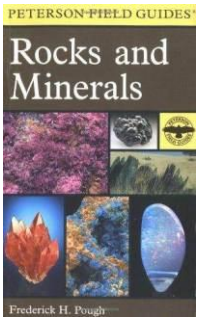
Station #18

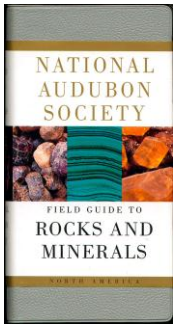
103.	Tourmaline
104.	C
105.	watermelon
106.	A
107.	schorl
108.	elbaite

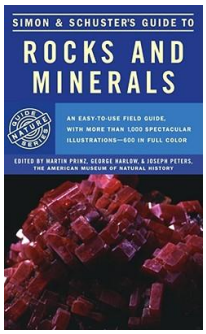
Author's Note: This test and its answers were developed by myself (Rich Lund) and Theresa Hubbard. All samples were identified by multiple members of Michigan lapidary societies, having purchased many from such conventions/auctions. If any samples were ever in the slightest doubt, we did not use them for the test. For the development of questions, and their answers, **multiple expert published sources** were consulted. If sources reported varying answers to questions we posed, we omitted such questions from the test. We did this in an effort to be both fair and responsible to the students taking this test. Sources consulted, which at least one of which will contain the answers supplied on this key were:

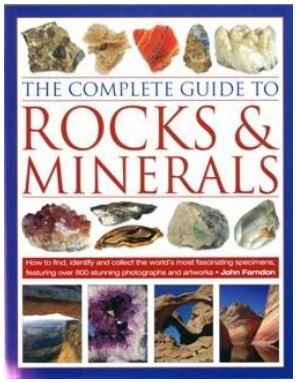
- Smithsonian Rock And Gem – The Definitive Guide to Rocks, Minerals, Gems, and Fossils
- Peterson Field Guides – Rocks And Minerals
- National Audubon Society – Field Guide to Rocks And Minerals
- Simon & Schuster's Guide To Rocks And Minerals
- Hermes House – The Complete Guide To Rocks And Minerals











One thing definitely noticed in doing the research to make this test is that not all "facts" about minerals are undisputed. We certainly tried to avoid such disputes in order to make it a fair test. However, we do apologize if a different "expert" source is consulted which shows conflicting answers to our key. Should such a situation arise, we'd be happy to field any questions you may have about the test and its answers. Please email such queries to: lundr@sjredwings.org

We hope that your test takers enjoyed this one and got a lot out of it!!!

- Rich Lund and Theresa Hubbard

Check out www.youtube.com/MrLundScience for fun science demonstration videos!