

Grade 8 – Science Answer Key

Item Number	Item Type	TEKS	Maximum Number of Points	Correct Answer(s)	Reporting Category	Readiness and Supporting
1	Multiple Choice	3.8.9.B	1	A	3	Readiness
2	Multiple Choice	2.8.6.C	1	D	2	Readiness
3	Short Constructed Response	1.8.5.D	2	See Appendix 1.1	1	Readiness
4	Multiple Choice	3.8.7.A	1	C	3	Readiness
5	Multiple Choice	4.8.11.A	1	B	4	Readiness
6	Multiple Choice	3.8.10.C	1	D	3	Supporting
7	Multiple Choice	3.8.9.C	1	D	3	Readiness
8	Multiple Choice	3.8.7.B	1	C	3	Readiness
9	Multiple Choice	1.8.5.A	1	D	1	Readiness
10	Multiple Choice	4.7.10.C	1	A	4	Supporting
11	Multiple Choice	2.6.8.D	1	B	2	Supporting
12	Multiple Choice	4.7.14.C	1	B	4	Supporting

13	Drag and Drop	3.8.8.A	2	Hot, bright, Cool, bright, Hot, dim, Cool, dim See Appendix 1.2	3	Readiness
14	Multiple Choice	2.6.9.C	1	C	2	Supporting
15	Multipart	1.8.5.B	2	C, C	1	Readiness
16	Drag and Drop	1.8.5.C	2	metals, valence electrons See Appendix 1.3	1	Readiness
17	Multiple Choice	3.8.9.B	1	A	3	Readiness
18	Multiple Choice	4.8.11.B	1	C	4	Readiness
19	Text Entry	2.8.6.A	1	4 or 4.0 See Appendix 1.4	2	Readiness
20	Multiple Choice	1.8.5.E	1	B	1	Readiness
21	Multiple Choice	1.8.5.A	1	C	1	Readiness
22	Multiple Choice	4.7.14.B	1	B	4	Supporting
23	Multiple Choice	1.6.6.B	1	C	1	Supporting
24	Drag and Drop	1.6.6.A	2	Metalloid, Nonmetal, Metal, Metal, Metal See Appendix 1.5	1	Supporting
25	Multipart	4.7.10.B	2	D, C	4	Supporting
26	Multiple Choice	3.8.8.B	1	C	3	Supporting

27	Multiple Choice	2.8.6.B	1	B	2	Supporting
28	Multiple Choice	2.6.8.A	1	C	2	Supporting
29	Drag and Drop	4.7.12.D	2	Provides energy for cell functions, Animal Cell, Storage and transport of molecules See Appendix 1.6	4	Supporting
30	Multiple Choice	2.8.6.A	1	C	2	Readiness
31	Multiple Choice	3.8.7.B	1	B	3	Readiness
32	Short Constructed Response	2.8.6.C	2	See Appendix 1.7	2	Readiness
33	Multiple Choice	1.8.5.E	1	B	1	Readiness
34	Multiple Choice	3.8.7.A	1	A	3	Readiness
35	Multiple Choice	4.7.12.B	1	C	4	Supporting
36	Multiple Choice	1.8.5.B	1	A	1	Readiness
37	Multiple Choice	2.6.8.C	1	A	2	Supporting
38	Multiple Choice	4.8.11.A	1	B	4	Readiness

Grade 8 – Science

Appendix

1.1

Sodium sulfate (Na_2SO_4) is used to produce many products.

Which elements are represented in the formula **AND** how many atoms of each element are represented in the formula?

Read the question carefully. Then enter your answer in the box provided.

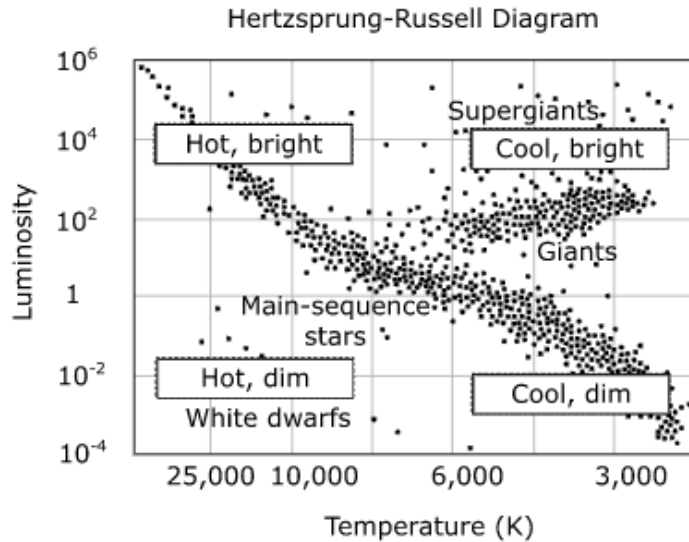
The student's response includes: The three elements represented in the formula are sodium (Na), sulfur (S), and oxygen (O). There are 2 atoms of sodium, 1 atom of sulfur, and 4 atoms of oxygen represented.

1.2

Label the characteristics of stars in each area of the Hertzsprung-Russell diagram.

Move **ONE** correct answer to each box.

Cool, bright Cool, dim Hot, dim Hot, bright



1.3

Complete the sentences to describe an arrangement in the periodic table.

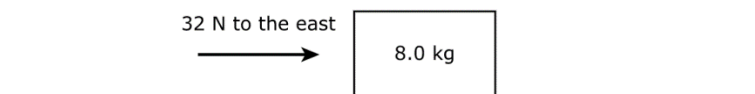
Move the correct answer to each box. Not all answers will be used.

nonmetals metals metalloids valence electrons neutrons protons

All the elements in Group 2 of the periodic table are classified as **metals**. Each element in Group 2 has fewer **valence electrons** than any of the elements in Group 17.

1.4

An unbalanced force of 32 newtons is shown acting on an 8.0-kilogram object.



Based on this information, complete the sentence to predict the motion of the object.

Enter your answer in the box. Your answer must be a whole number.

As long as the force acts on the object, the object will continue to move toward the east and its velocity will increase by m/s every second.

1.5

Students examined the properties of five different elements and recorded observations about their properties in the table. Based on the students' observations, classify each sample as a metal, nonmetal, or metalloid.

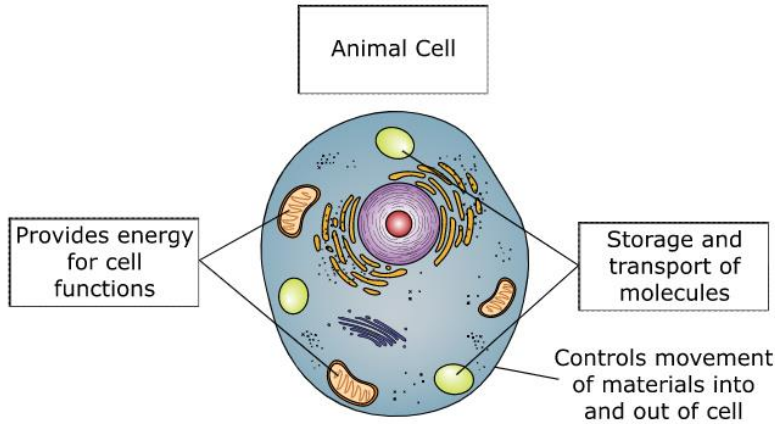
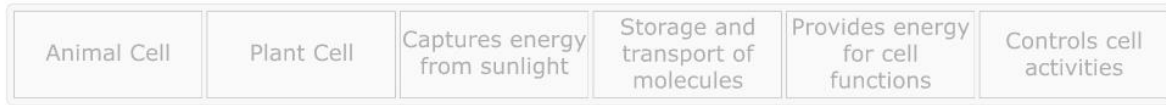
Move the correct answer to each box. Each answer may be used more than once.

Properties	Sample				
	1	2	3	4	5
Color	Blue-gray	Yellow	Gray	Yellow	Silver
More dense than water	Yes	Yes	Yes	Yes	No
Surface appearance	Shiny	Dull	Shiny	Shiny	Shiny
Ability to conduct thermal energy	Average	Poor	Excellent	Excellent	Good
Ability to be stretched into wires	None	None	Excellent	Excellent	Excellent
Reaction to being hit with a hammer	Shatters	Shatters	Bends	Bends	Bends
Ability to conduct electricity	Sometimes	Poor	Excellent	Excellent	Excellent
Classification of sample	<input type="text" value="Metalloid"/>	<input type="text" value="Nonmetal"/>	<input type="text" value="Metal"/>	<input type="text" value="Metal"/>	<input type="text" value="Metal"/>

1.6

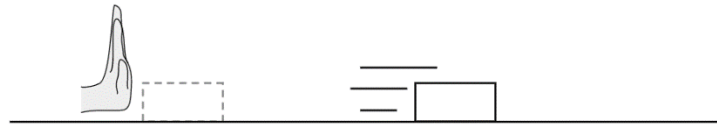
A model of a cell is shown. Use the correct labels to complete the model.

Move the correct answer to each box. Not all answers will be used.



1.7

A 1.5-kilogram block is pushed rapidly and released. The block continues to slide some distance until it comes to a stop. The figure shows the block after it has been released and before it comes to a stop.



Name the forces that directly affect the block's motion both before and after the block has been released. Describe the effects of each force named.

Enter your answer in the box.

The student describes both the student's push and friction as the forces affecting the block's motion before release. The student also identifies that these forces affect the block's acceleration (or change in velocity).