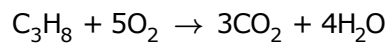


# SCIENCE **Grade 8**

**2011 Released Test Questions**

These released questions represent selected TEKS student expectations for each reporting category. These questions are samples only and do not represent all the student expectations eligible for assessment.

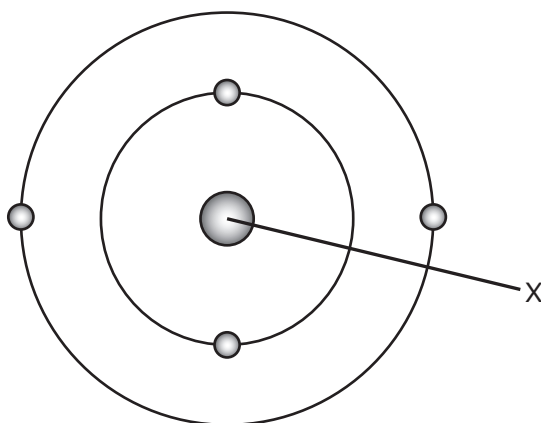
1



How many different elements are involved in the reaction shown above? Record and bubble in your answer on the answer document.

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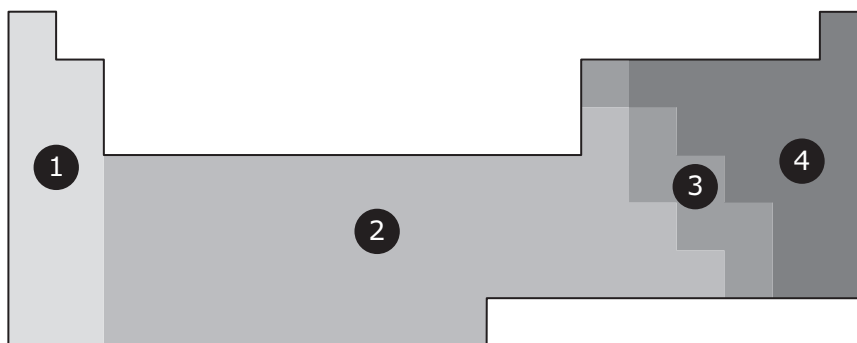
2



Which of these best describes one of the subatomic particles that could be found at location X in the model of an atom shown above?

- A** It has mass but no charge.
- B** It has no mass and a positive charge.
- C** It has a large mass and a negative charge.
- D** It has no mass and an equal number of positive and negative charges.

3

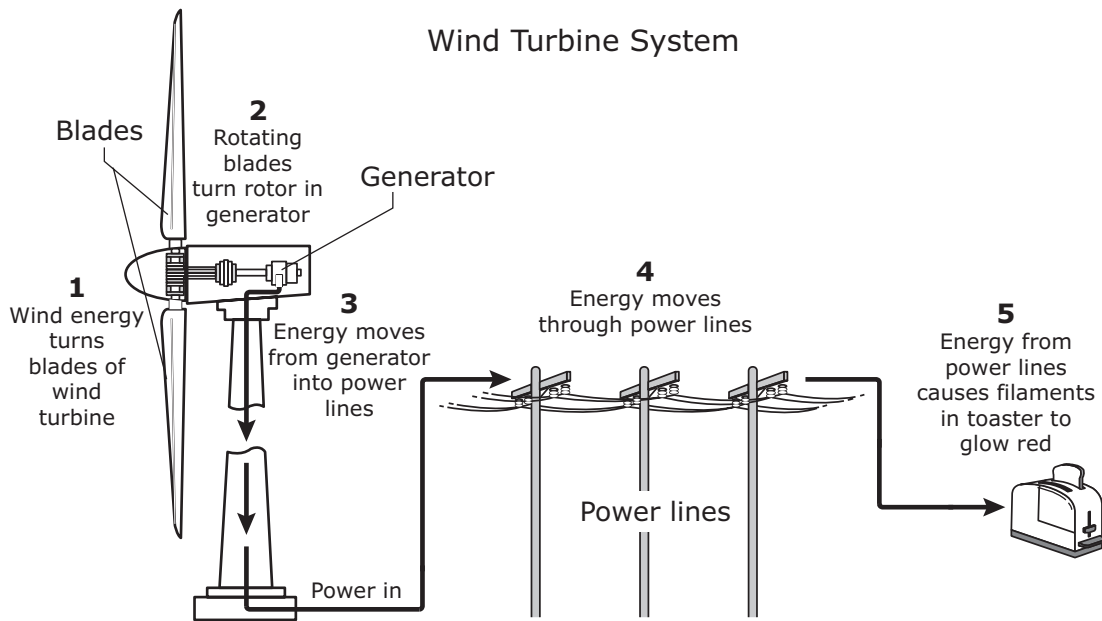


An element has a metallic-gray appearance. It also has the properties of both a metal and a nonmetal. In which section of the periodic table indicated above would the element most likely be found?

- A 1
- B 2
- C 3
- D 4

- 
- 4 A student observes some sugar as it is heated and burns. The student concludes that a chemical reaction has occurred. Which of the following observations about the burning sugar provides evidence of a chemical reaction?
- A Heat is added to the sugar crystals.
  - B The sugar melts and becomes a liquid.
  - C The temperature of the sugar increases.
  - D Gas is produced as the sugar turns black.

5



In the diagram above, a wind turbine is transforming energy from the wind. Between which two steps in the diagram is mechanical energy being converted into electrical energy?

- A** 1 and 2
- B** 2 and 3
- C** 3 and 4
- D** 4 and 5

- 6 In a series of controlled experiments, a student measures the force acting on a wheeled cart and the cart's acceleration. The student's data are shown below.

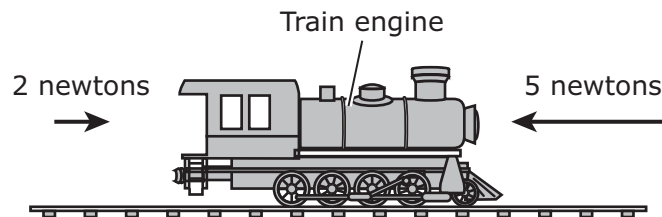
Force (N)	Acceleration ( $\text{m/s}^2$ )
10	0.5
20	1.0
30	1.5
40	2.0

Based on the recorded observations, what is the mass of the cart in kilograms? Record and bubble in your answer on the answer document.

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7

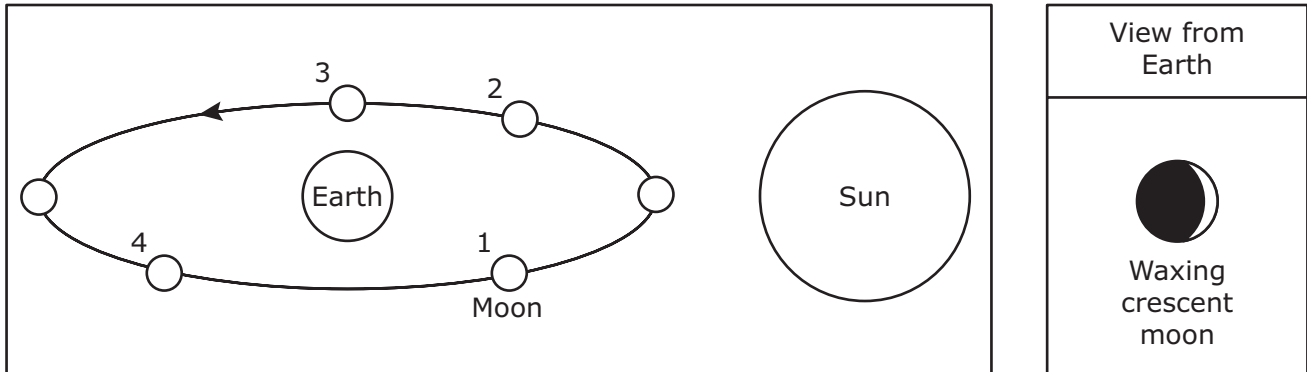
Side View of a Toy Train Engine



A toy train engine rests motionless on a track. One student begins pushing the engine to the right with a force of 2 newtons. At the same time, another student begins pushing the engine to the left with a force of 5 newtons. Which of the following best describes the resulting motion of the engine?

- A It travels left at a constant speed.
- B It travels left at an increasing speed.
- C It travels right at a constant speed.
- D It travels right at an increasing speed.

8



The diagram above shows the orbit of the moon around Earth. At which point in the moon's orbit will a person standing on Earth see a waxing crescent moon?

- A 1
- B 2
- C 3
- D 4

9 Earth's land areas, oceans, and atmosphere maintain fairly constant average temperatures. What is the best explanation for these constant average temperatures?

- A Earth's Northern Hemisphere and Southern Hemisphere have opposite seasons.
- B Earth is tilted and rotates daily on its axis.
- C The continuous motion of air and water distributes the sun's energy.
- D Global weather systems generally move from west to east.

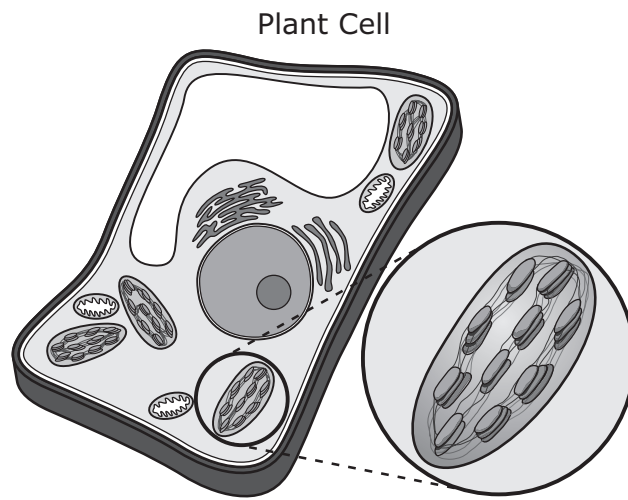
10

Mangrove trees have special roots that let them live in the somewhat salty water where rivers meet the ocean. These roots collect sediments, debris, and mud. This gradually helps coastlines stretch farther into the sea. Forests of mangrove trees also provide shelter for wildlife.

The high winds of hurricanes and typhoons often destroy mangrove forests. The destruction of these forests most likely affects ecosystems by —

- A** reducing beach erosion in sea-turtle nesting areas
- B** reducing the amount of saltwater flowing into lakes
- C** causing pollution in inland rivers and streams
- D** forcing migratory birds to find other places to rest

- 11 A diagram of a plant cell is shown below.

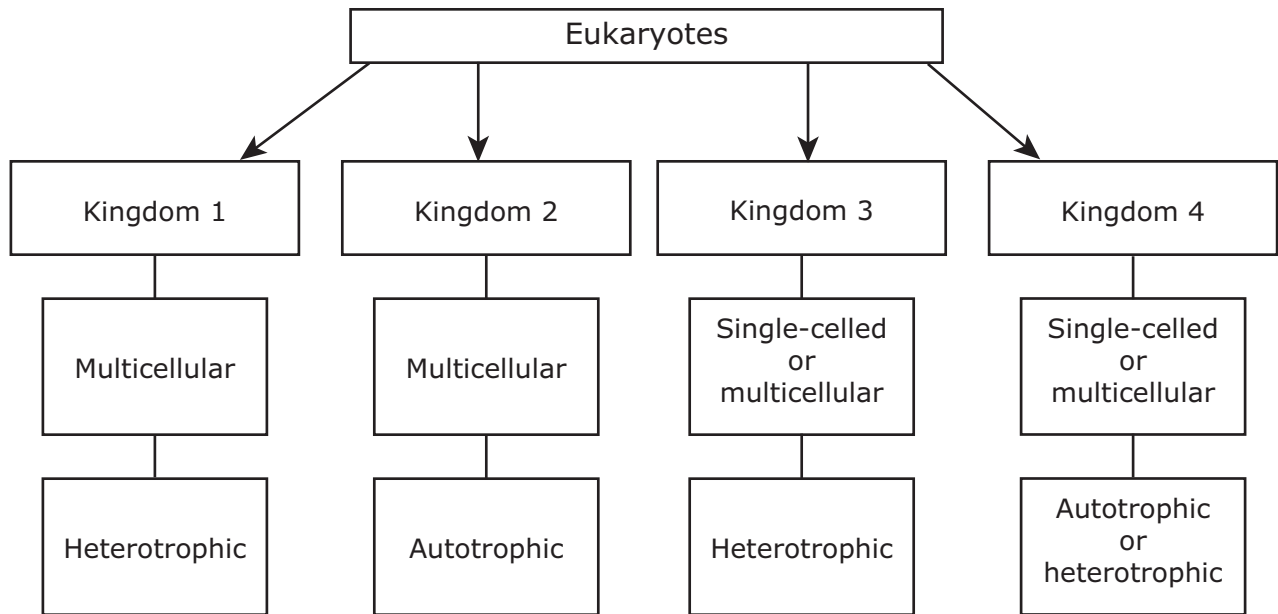


The function of the plant cell structure shown in the enlargement is to —

- A provide support for the cell
- B direct all the cell's activities
- C use energy from sunlight to make sugar
- D regulate substances that enter and exit the cell



- 12 Eukaryotes are classified into four kingdoms according to certain characteristics. The diagram below shows some characteristics of the four kingdoms.



Which of these is the plant kingdom?

- A Kingdom 1
- B Kingdom 2
- C Kingdom 3
- D Kingdom 4

Item Number	Reporting Category	Readiness or Supporting	Content Student Expectation	Process Student Expectation	Correct Answer
1	1	Supporting	6.5(C)		3
2	1	Readiness	8.5(A)	8.3(B)	A
3	1	Readiness	8.5(C)		C
4	1	Readiness	8.5(E)	8.2(A)	D
5	2	Supporting	6.9(C)	8.3(B)	B
6	2	Readiness	8.6(C)	8.2(E)	20
7	2	Readiness	8.6(A)		B
8	3	Readiness	8.7(B)	8.3(B)	B
9	3	Supporting	8.10(A)		C
10	4	Readiness	8.11(C)	8.2(E)	D
11	4	Supporting	7.12(D)	8.3(B)	C
12	4	Supporting	6.12(D)		B

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