

STAR Test Sample Questions

8th Grade Science

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Standardized Testing and Reporting - STAR

Grade 8: Science

Chemistry of Living Systems (Performance Level: Advanced) – Question 01

What characteristic of carbon (C) makes it essential to living organisms?

A Carbon forms crystal structures under certain conditions.

B Carbon can exist as a solid, liquid, or gas.

C Carbon bonds in many ways with itself to form chains.

D Carbon exists in radioactive forms.

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Earth in the Solar System (Performance Level: Proficient) – Question 01

To express the distance between the Milky Way galaxy and other galaxies, the most appropriate unit of measurement is the

A meter.

B kilometer.

C light-year.

D astronomical unit.

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Investigation and Experimentation (Performance Level: Proficient) – Question 01

A spring scale is pulled downward and readings are recorded.

Data Table

Distance Pulled	Spring Scale Reading
1.0 cm	4 N
1.5 cm	6 N
2.0 cm	8 N
2.5 cm	10 N

If the spring is pulled 3.5 cm, the spring scale should read

A 12 N.

B 13 N.

C 14 N.

D 15 N.

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Periodic Table (Performance Level: Proficient) – Question 01

In a comparison of metals to nonmetals, metals tend to have

- ☐ A lower melting points and greater conductivity than nonmetals.
- ☐ B lower conductivity and lower density than nonmetals.
- ☐ C higher density and lower melting points than nonmetals.
- ☐ D greater conductivity and higher melting points than nonmetals.

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Reactions (Performance Level: Advanced) – Question 01

The table below shows the pH and reaction to litmus of four body fluids.

Body Fluid	pH	red litmus	blue litmus
Blood	7.4	turns blue	no change
Bile	8.2	turns blue	no change
Saliva	6.8	no change	turns red
Gastric Juice	1.7	no change	turns red

These data indicate that gastric juice is

A very acidic.

B very basic.

C positively charged.

D negatively charged.

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Reactions (Performance Level: Proficient) – Question 01

Which of the following forms of energy is released or absorbed in most chemical reactions?

☐ A light energy

☐ B electrical energy

☐ C sound energy

☐ D heat energy

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Structure of Matter (Performance Level: Proficient) – Question 01

Which of the following is found farthest from the center of an atom?

A nucleus

B proton

C neutron

D electron

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Structure of Matter (Performance Level: Proficient) – Question 02

Which of the following best describes an atom?

- ☐ A protons and electrons grouped together in a random pattern
- ☐ B protons and electrons grouped together in an alternating pattern
- ☐ C a core of protons and neutrons surrounded by electrons
- ☐ D a core of electrons and neutrons surrounded by protons