Practice Test

Science and Technology/Engineering

GRADE 8

Student Name

School Name

District Name
This is a practice test. Your responses to practice test questions must be recorded on your Practice Test Answer Document.

Mark only one answer for each multiple-choice question. If you are not sure of the answer, choose the answer you think is best.

HOW TO ANSWER OPEN-RESPONSE QUESTIONS

• Read all parts of each question carefully.
• Make each response as clear, complete, and accurate as you can.
• Support your responses.
• Check your answers.
The illustration below shows Earth and the Sun.

(Not to scale)

What season does the Southern Hemisphere experience when Earth and the Sun are in the positions shown?

A. fall
B. spring
C. summer
D. winter

Which of the following statements best describes the process of natural selection in a population?

A. All individuals develop traits to match changes to their environment.
B. All individuals learn to adapt to specific changes that occur slowly in their environment.
C. Some individuals respond to their environment by mutating to make themselves more likely to survive.
D. Some individuals have genetic differences that make them more likely to survive and reproduce in their environment.
The density of water is 1.0 g/cm$^3$. Although the class has no water, the students want to know if the cube will float or sink in water.

a. List the instruments needed to conduct this investigation.

b. Explain, in detail, the steps that must be taken to determine if the cube will float or sink.
MASSACHUSETTS COMPREHENSIVE ASSESSMENT SYSTEM
Grade 8 Science and Technology/Engineering
Practice Test Answer Document

School Name: _______________________
District Name: _______________________
Last Name of Student: __________________
First Name of Student: ________________

Marking Instructions
• Use a No. 2 pencil only.
• Do not use ink, ballpoint, or felt-tip pens.
• Make solid marks that fill the circles completely.
• Erase cleanly any marks you wish to change.
• Do not make any stray marks on this form.
• Do not fold, tear, or damage this form.