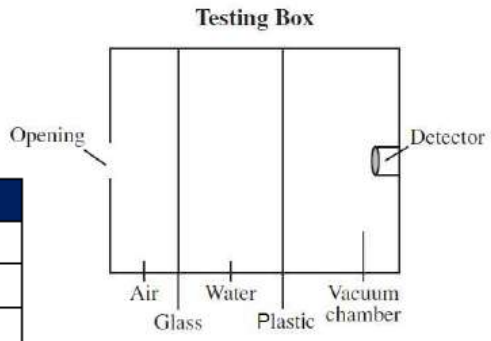
Physical Science End of Course Milestone Information and Resources

- **Test Format**
  - The test will be given in two sections with a total of 75 selected-response (multiple choice) items. Students may have up to 70 minutes, per section, to complete Sections 1 and 2 for a total of 140 minutes.
  - During the Physical Science assessment, a reference sheet that includes a periodic table and formulas will be available for students to use. Students may use a scientific calculator throughout all sections of the test.
  - Test consist of content that is grouped into four domains [Standard numbers listed in brackets]
    - Chemistry: Atomic and Nuclear Theory and the Periodic Table [1a, 1b, 3a, 3b, 3c, 3d, 4a, 4b, 5a, 5b]
    - Chemistry: Chemical Reactions and Properties of Matter [2a, 2b, 2c, 2d, 2e, 6a, 6b, 6c, 6d, 6e]
    - Physics: Energy, Force, and Motion [7a, 7b, 7c, 7d, 8a, 8b, 8c, 8d, 8e]
    - Physics: Waves, Electricity, and Magnetism [9a, 9b, 9c, 9e, 9f, 10a, 10b, 10c]
    - https://www.georgiastandards.org/standards/Georgia%20Performance%20Standards/Physical_Science_Revised_06.pdf
- **Resources**
  - Reference Sheets: http://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Documents/2706769_Physical_Science_Reference_Sheet_and_Periodic_Table.pdf
  - Assessment Guide: http://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Documents/GM%20Physical%20Science%20EOC%20Assessment%20Guide.pdf
  - USA test prep: www.usatestprep.com Account ID: dutchtownga Student Activation Code: stu7561
  - **DHS Physical Science Teachers and Room numbers**
    - Charlena Raines room 126
    - Sharye Richardson room 226
    - Ashley Roe room 224

• Example test questions:

1. The table below shows four wave sources.
   The waves enter the testing box through the opening. Inside the testing box are three sections. The air and water sections are separated by a transparent glass pane. The water section and the vacuum chamber are separated by a transparent plastic pane. What sources will be detected?

Source
Green laser
Tuning fork
UV lamp
Megaphone

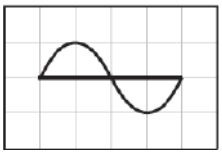


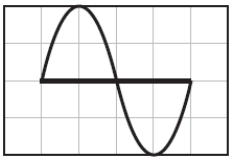
   a. UV lamp and megaphone
   b. green laser and UV lamp
   c. green laser and tuning fork
   d. tuning fork and megaphone

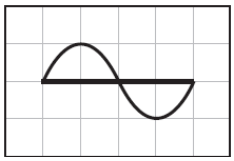
2. Which of the following describes the conversion of chemical energy to heat energy?
   a. A hair sitting still
   b. A leaf absorbing sunlight
   c. A battery powering a flashlight
   d. A rock hitting the ground

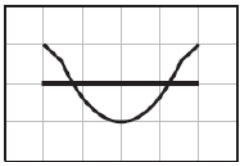
3. The force of gravity on Mars is 0.38 times the gravity on Earth. The mass of an object on Earth is 71 kg. What are the mass and weight of that object on Mars?
   a. mass: 71 kg, weight: 710 N
   b. mass: 71 kg, weight: 270 N
   c. mass: 27 kg, weight: 270 N
   d. mass: 27 kg, weight: 103 N

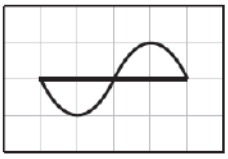
4. This diagram shows the wavelength and amplitude of Wave P. Which of the following diagrams shows the wavelength and amplitude required to cancel Wave P through destructive interference?



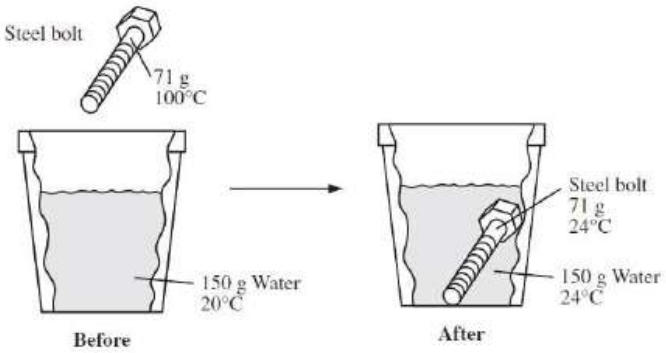
a. 

c. 

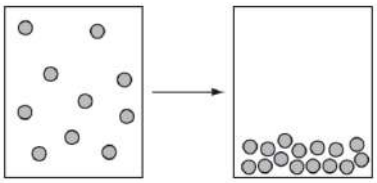
b. 

d. 

5. A hot (100°C) bolt with a mass of 71 grams is placed in 150 grams of cool (20°C) water. This diagrams shows the resulting temperature changes. The specific heat of water is 4.186 J/g°C. Approximately how many joules of heat does the water absorb?
   a. 2,512 J
   b. 3,700 J
   c. 15,070 J
   d. 22,590 J



6. In the diagram shows matter changing state. How did these particles move as matter changed state?
   a. The particles lost energy and moved more slowly.
   b. The particles lost energy and moved more quickly.
   c. The particles gained energy and moved more slowly.
   d. The particles gained energy and moved more quickly.



7. Four students each prepare a cup of coffee. The students use similar amounts of brewed coffee, sugar, and cold milk. This table describes each student's method of dissolving the sugar in the coffee. Which students uses the method that will dissolve the sugar in the coffee the fastest?
   a. Student 1
   b. Student 2
   c. Student 3
   d. Student 4

Coffee	
Student 1	Adds sugar to hot coffee; then adds cold milk
Student 2	Adds sugar to hot coffee and stirs; then adds cold milk
Student 3	Adds cold milk to hot coffee; then adds sugar
Student 4	Adds cold milk to hot coffee; then adds sugar and stirs

8. A scientist is measuring the mass of two boron (B) atoms. One atom has a mass of 10 units. The other atom has a mass of 11 units. The image to the right is a model of a boron atom with a mass of 11 units. Which subatomic particle needs to be removed to represent boron atom with an atomic mass of 10 units?
   a. particle L
   b. particle M
   c. particle N
   d. particle P