

<p>Students will use the work and energy equations. (S2, 2F)</p>	<p>A skier coasts down a snow covered hill. His speed and height at the top of the hill is 14.50 m/s and 25.0 m. (a) How fast will he be moving at the bottom of the hill? (b) What maximum height will he reach on the next hill? (Conservative system)</p>	<p>Force, mass, velocity.</p>	<p>CH 5 Test</p>	<p>Dec</p>	
<p>Students will solve momentum and collision equations. (S2,1CC)</p>	<p>A ballistic pendulum is used to determine the velocity of a bullet. Use the information below to solve for the velocity of the bullet before it hits the pendulum block (m = 0.014 g, M = 0.75 kg, h = 0.828 m)</p>	<p>mass, velocity, energy.</p>	<p>CH 6 Test</p>	<p>Jan</p>	
<p>Students will solve circular motion problems. (S2, 2E)</p>	<p>A cord is tied to a pail of water. The pail is swung in a vertical circle of radius 0.8 m. What must the minimum speed of the pail be at the highest point of the circle if no water is to spill from it?</p>	<p>radians.</p>	<p>CH 7-8 Test</p>	<p>Feb</p>	
<p>Students will solve torque problems. (S2, 2F)</p>	<p>Find the moment of inertia, KE, and angular momentum for the rubber stopper that Mr. S. spins with a speed of 82 rpm in front of the class. The rubber stopper has a mass of 0.045 kg and the string is 1.05 m long.</p>	<p>Force.</p>	<p>CH 7-8 Test</p>	<p>Feb</p>	
<p>Students will solve thermal energy and gas law problems. (S1, 1Dabc)</p>	<p>A 0.350 Kg cup at 22.4 oC is filled with 0.450 Kg of water at 100.0 oC. The cup and the water came to thermal equilibrium at 75.5 oC. If no heat was lost to the environment, what is the specific heat of the cup?</p>	<p>P, V, T, n, R, energy.</p>	<p>CH 10-12 Test</p>	<p>March</p>	

Students will solve sound and wave problem. (S1, 2Ad)	If the frequency of oscillation of the wave emitted by an FM radio station is 92.7 MHz (1MHz = 1,000,000 Hz), determine the wave's (a) period and (b) wavelength. (Radio waves travel at the speed of light: 3.0×10^8 m/s)	Frequency, wavelength.	CH 13-14 Test	Apr	
Students will use archimedes and bouyancy.	Build a cardboard boat and mark the waterline and have it hold at least two students.	Force, density.	Physics Final	Apr and May	

1. Standard: What is the essential standard to be learned? Describe in student-friendly vocabulary.
2. Example/Rigor: What does proficient student work look like? Provide an example and/or description.
3. Prior Skills Needed: What prior knowledge, skills, and/or vocabulary is needed for a student to master this standard?
4. Common Assessment: What assessment(s) will be used to measure student mastery?
6. When will this standard be taught?
6. Enrichment: What supplementary standards/skills enrich the essential standard?

Mattos, Buffum, Weber, 2010