# M14 Game Day

Friday, July 16, 2010
7:20 AM

| Slide | Notes |
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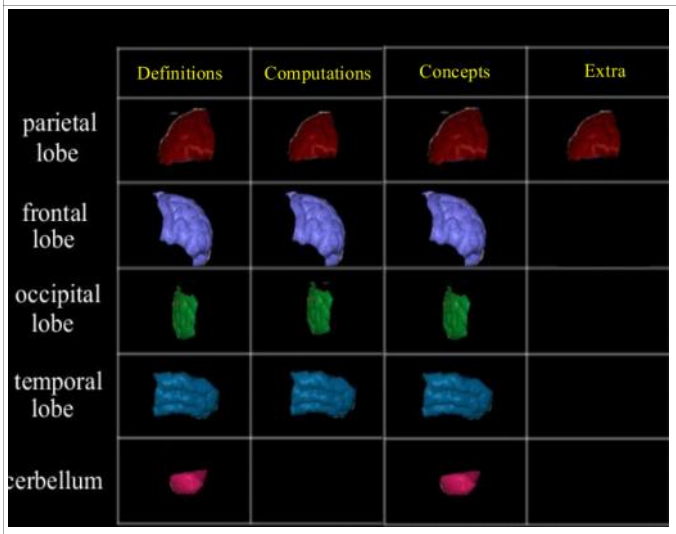
|  | Categories:<br><br>Definitions<br>Computations<br>Concepts<br>Extra |
| A wave whose propagation is perpendicular to its oscillation. — Choose...<br>Any speed that is faster than the speed of sound in a substance of interest.<br>The sound produced as a result of something traveling at or above Mach 1.<br>A wave whose propagation is parallel to its oscillation. — Choose...<br>The highness or lowness of a sound — Choose...<br>(Choose... / transverse wave / sonic boom / pitch / supersonic / longitudinal wave) | Match the definitions to the terms.<br><br>The highness or lowness of a sound — pitch<br>The sound produced as a result of something traveling at or above Mach 1. — sonic boom<br>A wave whose propagation is parallel to its oscillation. — longitudinal wave<br>Any speed that is faster than the speed of sound in a substance of interest. — supersonic<br>A wave whose propagation is perpendicular to its oscillation. — transverse wave |
| What is the speed of sound in air that has a temperature of 25 degrees Celsius?<br><br>A sound wave traveling through 17 degree air has a wavelength of 2 meters. What is the frequency of the sound wave?<br><br>The temperature is 10 degrees C. You see a lightening strike and then hear the thunder 2 seconds later. How far away did the lightening strike?<br><br>An amplifier takes a 30 decibel sound and amplifies it to an 80 decibel sound. How many times more intense is the sound? | Computations:<br><br>What is the speed of sound in air that has a temperature of 25 degrees Celsius?<br>Answer: 346.5 m/sec<br><br>A sound wave traveling through 17 degree air has a wavelength of 2 meters. What is the frequency of the sound wave?<br>Answer: 170.85 Hz.<br><br>The temperature is 10 degrees C. You see a lightening strike and then hear the thunder 2 seconds later. How far away did the lightening strike?<br>Answer: 675 m<br><br>An amplifier takes a 30 decibel sound and amplifies it to an 80 decibel sound. How many times more intense is the sound?<br>Answer: 100000 |
| A musician has two wind instruments of the same type. One is long and one is short. Which recorder will be able to play the lowest pitch?<br>Choose one answer. ○ a. long ○ b. short | Concepts:<br><br>A musician has two wind instruments of the same type. One is long and one is short. Which recorder will be able to play the lowest pitch?<br>Choose one answer. ◉ a. long ○ b. short |

Do sound waves oscillate parallel or perpendicular to the direction in which the wave travels?

Choose one answer.
- a. perpendicular
- b. parallel

Which wave has the longest wavelength:

Choose one answer.
- a. infrasonic waves
- b. ultrasonic waves
- c. sonic waves

In which medium will sound waves travel faster?

Choose one answer.
- a. air
- b. water

As you speed up, the pitch of a siren gets higher. Are you driving toward or away from the source of the sound?

Choose one answer.
- a. toward the sound
- b. away from the sound

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"In space, no one can hear you scream"

Based on what you have learned about sound waves, *why* would you say that is true.

Extra:

Sound must travel through a medium. In space, there isn't air so there isn't a medium for it to travel through.

Quiz: http://www.virtualhomeschoolgroup.com/mod/quiz/view.php?id=17727
Exam: http://www.virtualhomeschoolgroup.com/mod/quiz/view.php?id=17729