Scavenger Hunt Answer Key

Go to the Website:
<http://www.bbc.co.uk/schools/gcsebitesize/science/edexcel_pre_2011/waves/soundultrasoundandseismicwavesrev1.shtml>

Describe sound waves.
Sound Waves are longitudinal waves. Their vibrations occur in the same direction of travel. Sound Waves only travel through solid, liquid, or gas.

How do vibrations create sound and affect amplitude?
A sound is created when an object vibrates. The bigger the vibration the greater the amplitude.

Go to the Website:
<http://www.physicsclassroom.com/Class/waves/u10l1a.cfm#slinky>

List at least 3 different categories of waves we encounter on a daily bases.
Sound Waves
Visible Waves
Radio Waves
Microwaves
Earthquake waves
Waves on a string or
Slinky Waves are just a few.

Explain how a slinky wave illustrates a sound wave.
Slinky waves can be made by vibrating the first coil back and forth in either horizontal or a vertical direction. A wave will be seen traveling from one end of the slinky to the other. As the wave moves along the slinky, each individual coil moves out of place and then returns to normal position. The coil always moves in the same direction that the first coil was vibrated.

Go to the website:
<http://kidshealth.org/kid/htbw/ears.html>
Interpret, in writing, how our ears process sound.
Our ears transduce sound waves into electrical signals that are sent to the brain. There, the signals aer processed and the sound is heard.

<http://www.mhschool.com/science/2005/student/summary.php?isbn=0022812156&id=810&level1=F&level2=15&level3=5>

Differentiate between loudness (amplitude) and pitch (frequency).
The amplitude is the maximum displacement of the air molecules determining the intensity of the loudness and the frequency is the number of waves that pass a point in a given time causing highness or lowness.

Go to the website:
<http://www.dangerousdecibels.org/virtualexhibit/>

Judge if listening to a hair drier for over 2 hours could damage your hearing.  Why or Why not?
Yes listening to a hair drier for 2 or more hours will damage your hearing, although, no one uses a hair drier that long. Using a hair dryer at a higher decibel can damager your hearing so replace your old hair dryer with a new, quieter model.

Evaluate if you choose to wear ear plugs, even if someone tells you it’s not cool, when snowmobiling. Why or why not? What will you say to someone who tells you it’s not cool?
Wear ear plugs because it is not healthy for your ears.  I will tell someone respectfully they need to respect others who want to be safe and healthy.

<http://www.school-for-champions.com/science/sound_music.htm>

Design a string musical instrument reusing items around the house.
Explain how your instrument creates sound to your classmates using the terms pitch and vibration.
I created a guitar out of a Kleenex box, rubber bands, and an empty paper towel roll.
My guitar creates sound by striking the rubber bands, the rubber bands vibrate back and forth moving molecules in the air, and the sound depends on what type and the thickness of the string to create a high or low pitch.