Physics 101- Year 9 Waves of Energy

Using the website below, read through the notes, answer the questions and complete the 'Did you get it' section questions at the bottom.

http://www.bitesizephysics.com/energywaveslesso.html.

1. Define what a wave is?

A wave is the way energy moves from place to place.

2. Name 4 types of waves that are around you?

-Sound waves
-Light waves
-Radio waves
-Seismic waves

3. Where do waves come from?

Waves come from a particle which then vibrates then results to energy waves

4. In a wave of energy, do the particles move or does the wave move? Explain your response.

The wave moves because the particle pushes itself. The wave can either move through the particle or push against it.

5. Why are waves described as energy-mobiles?

Waves are described as energy-mobiles because the particles form energy for the wave to then be created and move along.

6. What are the 2 types of energy waves?

1. Tranverse waves

2.Compression/longitude waves

7. Define what a transverse and a longitudinal wave is.

A transverse waves is where the wave moves in the opposite direction from where the particle is moving/ vibrating

A longitudinal wave is where the particle and wave is moving in the same direction

8. What does perpendicular mean?

Perpendicular means 90 degree angle

9. What is a medium?

A medium is the material (solid,liquid or gas) which waves travel.

10. What does parallel mean?

Parallel means where there two lines traveling in the same direction but never meet

11. What is a wavelength?

A wavelength is the distance between the tops/crests of the two waves.

12. Define what the frequency of a wave is?

The frequency of a wave is the number of complete vibrations or waves made in one second (how frequent the waves are)

13. In sounds waves, what does the wavelength determine?

In sound waves the wavelength determines the pitch of the sound.

14. In electromagnetic waves what does the wavelength determine?

In electromagnetic waves the wavelength determines whether the wave is radio or microwave or light, ect.

15. Define what amplitude means?

Amplitude means the height of the wave

16. What does amplitude determine for sound and light waves?

In sound waves, amplitude determines the volume of the sound

In light waves, amplitude determines the brightness.

17. Write down all of the 'In a nutshell notes'.
*Waves are the way energy moves from place to place. Waves are energy-mobiles.
*Waves move. The particles in the wave only vibrate.
*Particles in a wave are moving a distance against a force. They are having work done on them and they can do work.
*A transverse wave is a wave where the particle moves perpendicular to the medium.
*A longitudinal wave is where the particle moves parallel to the medium.
*The wavelength is the distance between two like parts of the wave.
*Amplitude is the height of the wave.
18. Complete the 'Did you get it?' section questions.

1. How does energy move?

Energy moves by waves.

2. True or false: the particles in a wave move from where the wave starts to where the wave ends up.

False particles only vibrate, they do not move along the wave they stay put.

3. What is having work done on it in a wave?

Particles in a wave are moving a distance against a force. They are having work done on them and they can do wo

4. What are the two types of waves?

Transverse and compression/longitude

5. In which wave do the particles vibrate in the same direction as the wave?

Compression

6. In which wave do the particles vibrate perpendicularly to the direction of the wave?

Transverse

7. What does wavelength mean?

The distance between two tops of the waves

8. What does amplitude mean?

The maximum distance that each particles moves away from its resting position

9. Which of the following has the longer wavelength? The second picture because there is a higher frequency.