Light and "WAVES"!!!

There's still more to know about light...here's a bit more!

1. WAVES

A._____ - wave that requires a medium (matter) to travel.
Examples are an __ __ __ __ __ wave and __ __ __ __ __ waves.

B. _____ - wave that needs no matter. (space/vacuum)
Examples are __ __ __ __ __ and parts of the _____.

Wave Questions

1. Can sound travel under water? ___
2. Can light travel in space? ___
3. Can sound travel in through objects (wall/metal)? ___
4. Can light travel in water? ___
5. Can sound travel in space? ___
6. Can light travel through objects (wall/metal)? ___

2. Sound Travel vs. Medium

Place.... **A. Fast** **B. Faster** **C. Fastest** ...in the blanks below.

Solid	Liquid	Gas
___. _____	___. _____	___. _____

This is due to the "close-ness" of particles....

The particles of a _____ are furthest apart.
The Particles of a _____ are closest, touching, crammed together.
The particles of a _____ are really close, but there's still tiny spaces between.

Think about it...sound vs. particles, it makes sense!!!!????

Do you "*KNOW*" Light?

There's A LOT to know about light...here's a list!!!!

1. Order of Colors/Electromagnetic Spectrum.

Colors in Electromagnetic Spectrum

Color with highest frequency? _____ Lowest? _____
Color with longest wavelength? _____ Shortest? _____

Radiation in Electromagnetic Spectrum

Energy with highest frequency? _____ Lowest? _____
Energy with longest wavelength? _____ Shortest? _____

2. Light and Color vs. Reflection/Absorption

Colors and Reflection - (put "a lot" or "a little")

Dark colors (shirt/car paint) will reflect _____ of energy from the sun.
Light colors (shirt/car paint) will reflect _____ of energy from the sun.

Colors and Absorption - (put "a lot" or "a little")

Dark colors (shirt/car paint) will absorb _____ of energy from the sun.
Light colors (shirt/car paint) will absorb _____ of energy from the sun.

3. Light and Color 411

1. A prism will turn _____ _____ into _____.
2. ALL the colors of the visible light added up would = _____.
3. If you have NO colors of the visible spectrum, you'd have _____.

What can light **DO** ?!

Three words…Reflection, Refraction, and Diffraction!!!

1. Reflection :

_____

2. Refraction :

_____

3. Diffraction :

_____

Label the diagram with A. Reflect, B. Refract, or C. Diffract