Up and Down, Side to Side –

**Physics Waves revision song by SciTunes**

*Move up, move down*

*then pass the movement around.*

*Move side to side,*

*then spread the movement out wide.*

*Move up, move down*

*then pass the movement around.*

*Move side to side,*

*then spread the movement out wide.*

*Up and down or side to side.*

*Waves are how vibrations spread*

*whether seismic, sound or light.*

*Up and down, transverse,*

*or to and fro, longitudinal,*

*transferring energy and information as they go!*

**If you wanna send energy**

**without matter being sent too,**

**get a substance vibrating**

**and watch the ripples spread through.**

**Seismic waves go through the Earth,**

**sound can ripple through air,**

**light don't need no medium**

**and that's why it's everywhere.**

*Move up, move down*

*then pass the movement around.*

*Move side to side,*

*then spread the movement out wide.*

**Vibrations in a transverse wave**

**are perpendicular to the**

**direction that the wave will go,**

**peaks and troughs occur.**

**Seismic s waves, water waves**

**and light are examples**

**but seismic p and sound waves**

**are longitudinal.**

**They have vibrations parallel**

**to the direction they go,**

**compressions, rarefactions form**

**as they're shaking to and fro!**

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*transferring energy and information as they go!*

*Move up, move down, spread the movement around*.

**The period's the time for one vibration to complete,**

**and the number of waves that pass**

**a point each second's frequency.**

**The amplitude is the middle to**

**the vibration's maximum,**

**wavelength is the distance moved when a period is done.**

**Wavelength times by frequency**

**will give the ripple's speed,**

**and if you are describing waves**

**they're all the words you need.**

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**Make the frequency high!**

**Make the frequency low!**

**Turn up the amplitude, now take it down low.**

**When a wave hits a boundary,**

**what's it gonna do?**

**It might refract and get transmitted yeah,**

**it bends and goes right through.**

**It might be reflected, bats use echoes to locate,**

**It might be absorbed and then the temperature will escalate.**

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