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| Lesson ideas for geography teachers to share: Physics in the natural world |

**Go to**

Geography and physics have a long history of collaboration and mutual interest in studying the natural world. This worksheet utilises the geography-related animations of the website <http://www.schoolphysics.co.uk/>. Consider the questions below.

Did you know there are two high tides and two low tides each day? Do you understand why?

<http://www.schoolphysics.co.uk/animations/Astronomy%20animations/Tides_html5/index.html>

Rotating Earth – how might your world perspective differ if you were from Svalbard or the Russian archipelago of Franz Josef?

<http://www.schoolphysics.co.uk/animations/Astronomy%20animations/Rotating_Earth_html5/index.html>

The Earth does not have a circular orbit; we undergo an elliptical trajectory. Watch this animation and have a think – what might be the effect of this on our natural world? <http://www.schoolphysics.co.uk/animations/Astronomy%20animations/Keplers_laws_html5/index.html>

Are you studying the different types of waves of coastal geography? Can you identify the constructive and destructive wave shapes?

[www.schoolphysics.co.uk/animations/Sound%20animations/Standing\_waves\_html5/index.html](http://www.schoolphysics.co.uk/animations/Sound%20animations/Standing_waves_html5/index.html)

Ever wondered what effect a sea wall has on an incoming wave?

<http://www.schoolphysics.co.uk/animations/Waves%20animations/Plane_wave_reflection_html5/index.html>

**Suggested further work**

Learn what a ‘slingshot’ calculation is, often done by NASA or SpaceX. <http://www.schoolphysics.co.uk/animations/Astronomy%20animations/Slingshot_2_html5/index.html>

What on earth is Solar and sidereal time?

<http://www.schoolphysics.co.uk/animations/Astronomy%20animations/Solar_and_sidereal_time_html5/index.html>

Could you use a sine wave to predict an economic recovery or to study historic temperature change (or any other cyclic phenomenon)? <http://www.schoolphysics.co.uk/animations/Waves%20animations/Sine_wave_html5/index.html>