

## Reflected and refracted waves

- BECA            Having a little trouble?
- SARA            I thought this would be easy Beca. I just want to surf the web.
- BECA            Surf the web? Hey Sara, the 90s just called – they want their catchphrase back.
- ADA             In order to surf, you must understand waves!
- SARA            Ahh, this'll help!
- ADA             Reflection is when a wave bounces off a surface. As the wave travels towards the cliff, it connects with the cliff, and the energy of the wave bounces back out towards the sea. The wave here hits the cliff directly at a 90 degree angle, and so it's reflected at a 90 degree angle. But if the wave hits the cliff at a 45 degree angle, it's reflected at a 45 degree angle too.
- BECA            That's great... er... Ada... but Sara was talking about going on the internet. I don't think learning about...
- ADA             Refraction is how a wave is affected when it passes through one medium into another. As a wave interacts with a denser medium, its speed slows down. However, if the wave interacts with the dense medium at an angle, the wave not only slows, but bends. As the wave travels through deep water, it is unaffected, but as the wave interacts with the shallow waters, that part of the wave slows. This causes the wave to refract and bend. Now you can go surfing!
- BECA            Don't worry Sara, I've got this!
- SARA            Thanks Ada! Right, I'm coding the virus now, Minik52, I need you to find the exploit. Arnaxus will install a backdoor and a logic bomb. Alright Beca?