

## Prep guide – Reflection and refraction

Big picture goal – To figure out from first principles how radiation behaves when it hits the interface between two dielectrics.

1) How does the wave speed of a plane wave change as it crosses a dielectric interface? How do we define index of refraction?

2) Which boundary conditions do we need to figure out the relationships between the different fields in this situation?

3) How do the frequency and wavelength of a plane wave change as it crosses a dielectric interface?

4) What are the laws of reflection and refraction?