

READING ASSIGNMENT FOR APRIL 8

SECTIONS 15.5 AND 17.1

15.5 - Circular, Spherical, and Plane Waves

- As the title suggests, I just want you to read the small section on the different shapes of waves. This will help explain what we are being drawn and what we want you to understand in chapter 17.
- Wave Fronts - A picture of the points where the wave is at its maximum value. (At one instant of time.)
- Spherical Waves - Wave whose wave fronts are concentric spheres. Objects that radiate in all directions make spherical waves close to their source. (See next item.)
- Plane Waves - Wave whose wave fronts are straight lines. “Far away” from any source, any wave starts to look like a plane wave.

17.1 - What is Light

- This section may seem a little strange since we are doing things in a different order and already know what light is, but do read carefully the parts on diffraction and index of refraction.
- Diffraction - The spreading of a wave when it passes through an opening that is small compared to its wavelength.
- Index of Refraction, n - Kind of a “backwards” measure of the speed of light in a material. Index of refractions get larger as the light goes slower.
- When changing media, the wavelength of light changes due to change in speed but not the frequency.

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