Maryland Science - Next Generation

Waves and Their Applications in Technologies for Information Transfer: Grades 9-12

Adopted 2013

Waves and Their Applications in Technologies for Information Transfer HS-PS4

HS-PS4-1. **Use mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media.** HS-PS4-1

HS-PS4-2. **Evaluate questions about the advantages of using a digital transmission and storage of information.** HS-PS4-2

HS-PS4-3. **Evaluate the claims, evidence, and reasoning behind the idea that electromagnetic radiation can be described either by a wave model or a particle model, and that for some situations one model is more useful than the other.** HS-PS4-3

HS-PS4-4. **Evaluate the validity and reliability of claims in published materials of the effects that different frequencies of electromagnetic radiation have when absorbed by matter.** HS-PS4-4

HS-PS4-5. **Communicate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy.** HS-PS4-5