

Module 14: Exploring Creation With Physical Science

Longitudinal wave - A wave whose propagation is parallel to its oscillation (347)

Pitch - The highness or lowness of a sound (359)

Sonic boom - The sound produced as a result of aircraft traveling at or above Mach 1 (356)

Supersonic speed - Any speed that is faster than the speed of sound in the substance of interest (356)

Transverse wave - A wave whose propagation is perpendicular to its oscillation (347)

Study all of the mathematical examples well.

Schedule

- Read 345-348
- Read 348-351, do experiment 14.1
- Read 351-355, do experiment 14.2
- Read 355-358
- Read 358-360, do experiment 14.3
- Read 361-362, do experiment 14.4
- Read 363-366, do experiment 14.5
- Read 366-368
- Study
- Test

$f = \frac{v}{\lambda}$ f represents frequency of wave, v stands for speed, λ is lambda and represents wavelength

The speed of sound in air equation:

$$v = (331.5 + 0.60 \cdot T) \frac{m}{sec}$$

$$distance = (speed)(time)$$

Always do the On Your Own questions and check your work afterwards.

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Module 15: Exploring Creation With Physical Science

Electromagnetic wave - A transverse wave composed of an oscillating electrical field and a magnetic field that oscillates perpendicular to the electrical field (374)

The Law of Reflection - The angle of reflection equals the angle of incidence (383)

Schedule

- Read 372-376
- Sunny day needed, Read 377-381, do experiment 15.1
- Read 381-384, do experiment 15.2
- Read 384-389, do experiments 15.3 and 15.4
- Read 389-393
- Read 393-400, do experiment 15.5
- Study, take a day or more
- Test

Always do the On Your Own questions and check your work afterwards.

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Module 16: Exploring Creation With Physical Science

Critical mass - The amount of isotope necessary to cause a chain reaction (410)

Galaxy - A massive ensemble of hundreds of millions of stars, all interacting through the gravitational force, orbiting around a common center (422)

Light year - The distance light travels in a year (421)

Nuclear fission - The process by which a large nucleus is split into two smaller nuclei (409)

Nuclear fusion - The process by which two or more small nuclei fuse to make a bigger nucleus (409)

Star magnitude - The brightness of a star on a scale of -8 to +17. The smaller the number, the brighter the star. (414)

Schedule

- Read 405-408
- Read 409-412
- Read 412-417
- Read 417-419
- Read 419-422
- Read 422-427, do experiment 16.1
- Study
- Test

You're finished! 😊

Always do the On Your Own questions and check your work afterwards.

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