

ICS1 – Active Physics Storyboard

	Ch. 4 Act. 1 Making Waves	Ch. 4. Act. 2 Sounds in Strings	Ch. 4. Act. 3 Sounds from Vibrating Air	Ch. 4 Act. 5 Reflected Light	Ch.4 Act 7 Refraction of Light	Ch. 5 Act.3 The Electricity and Magnetism Connection.	Ch. 6 Act. 8 The Doppler Effect
Student Experience / Experimental Evidence	Students create transverse and longitudinal waves. Students measure wavelength, amplitude, and speed. Students calculate wave frequency.	Students create sounds by changing the length and tension of strings.	Students create pipes of different lengths using straws and test tubes. Students create sound by causing the columns of air inside the pipes to vibrate.	Students draw the normal and then measure the angles of incidence and angles of reflection.	Students observe light bending as it travels through different substances. Students measure the angle of incidence and the angle of refraction.	Students create electromagnets and observe the magnetic field. Students generate electricity using magnets.	Students observe a demo of the Doppler effect and attempt to observe the phenomenon of the pitch changing as the object approaches and the moves away.
Big Idea	Waves carry energy from place to place. Wave have certain characteristic properties.	The pitch of the sound is related to the length of the string. Longer string = lower pitch, shorter string = higher pitch. Sting tension is related to pitch. High tension = high pitch, low tension = low pitch.	The length of the column of the air affects the pitch of the sound. Closed pipes create a different sound than open pipes because the wavelength is longer.	The angle of incidence is equal to the angle of reflection.	Light bends as it travels through different media.	Electricity can create magnetic fields. Magnets can create electrical current.	The pitch increases as the sound source approaches and decreases as the sound source moves away.
Tie To Chapter Challenge							
CA Standards	Physics 4.a.b.d I&E 1.a.c.d.g	Physics 4.a.b.d I&E 1.a.c.d.g	Physics 4.a.b.d I&E 1.a.c.d.g	Physics 4.e.f I&E 1.a.c.d.g	Physics 4.e.f I&E 1.a.c.d.g	Physics 5.e.h.j I&E 1.a.c.d.g	Physics 4.f I&E 1.a.c.d.g
Common Misconceptions							

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