**Chapter 7 sound**

**p80 look at groove in record**

**p80 look at a cd**

**p81 take apart a phone**

**?How do they play music or transmit sound?**

**Phone speakers**

**-when you move a magnet near a wire, the electrical current flows into the wire**

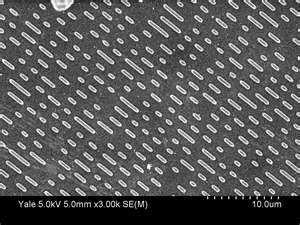
**-sound waves produced cause the magnet inside the phone to vibrate**

**Records**

[](http://images.search.yahoo.com/images/view;_ylt=A0PDoTGF0YxPvncAydGJzbkF;_ylu=X3oDMTBlMTQ4cGxyBHNlYwNzcgRzbGsDaW1n?back=http%3A%2F%2Fimages.search.yahoo.com%2Fsearch%2Fimages%3Fp%3Dpicture%2Brecord%2Bsurface%26n%3D30%26ei%3Dutf-8%26y%3DSearch%26fr%3Dyfp-t-701-1%26tab%3Dorganic%26ri%3D15&w=360&h=361&imgurl=cleanlp.com%2FCLPExamples%2F116.0CLPMicroGrooveGlob_0758.jpg&rurl=http%3A%2F%2Fcleanlp.com%2FCleanLPMicroscopePhotos.tpl&size=15+KB&name=Record+surface&p=picture+record+surface&oid=f6520aafc472745e8b32809675a800cf&fr2=&fr=yfp-t-701-1&tt=Record%2Bsurface&b=0&ni=40&no=15&tab=organic&ts=&sigr=11ea12tco&sigb=13t9b415m&sigi=11o2osa62&.crumb=OToD2CV5TU3)

**CD**

**-you cannot see grooves as they are smaller to reflect light waves**

[](http://images.search.yahoo.com/images/view;_ylt=A0PDoS1L0YxPjSIAFxqJzbkF;_ylu=X3oDMTBlMTQ4cGxyBHNlYwNzcgRzbGsDaW1n?back=http%3A%2F%2Fimages.search.yahoo.com%2Fsearch%2Fimages%3Fp%3Dpicture%2Bcd%2Bsurface%26fr%3Dyfp-t-701-1%26fr2%3Dpiv-web%26tab%3Dorganic%26ri%3D0&w=1280&h=960&imgurl=volga.eng.yale.edu%2Fuploads%2FCDsAndDVDs%2FCD-SEM.jpg&rurl=http%3A%2F%2Fvolga.eng.yale.edu%2Findex.php%2FCDsAndDVDs%2FMethodsAndMaterials&size=246.5+KB&name=SEM+image+of+CD+surface.+Each+tick+is+1+micrometer+%28%C2%B5m%29.+SEM+image+...&p=picture+cd+surface&oid=28999c6e9b9fb421c87ab67c183f45ff&fr2=piv-web&fr=yfp-t-701-1&tt=SEM%2Bimage%2Bof%2BCD%2Bsurface.%2BEach%2Btick%2Bis%2B1%2Bmicrometer%2B%2528%25C2%25B5m%2529.%2BSEM%2Bimage%2B...&b=0&ni=80&no=0&tab=organic&ts=&sigr=1222qs62n&sigb=13dbdiaf9&sigi=11gd09kkp&.crumb=OToD2CV5TU3)

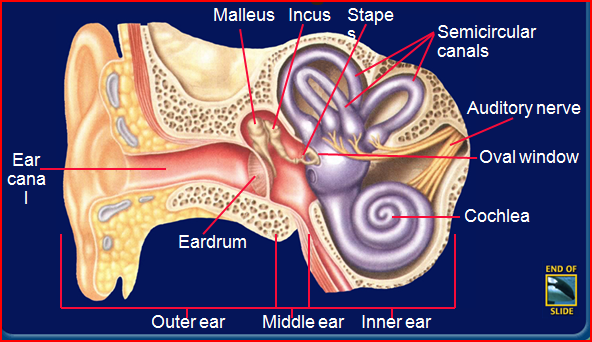
**VIBRATIONS BECOME ELECTRICAL SIGNALS**

**p84 paper cone**

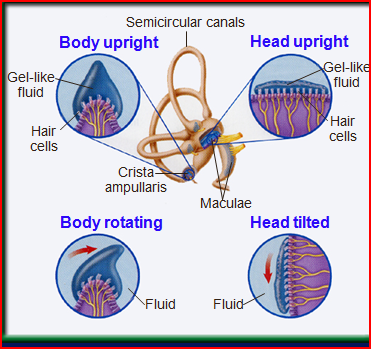
**p84-85 rock and ruler**

**p85 bottle and jar water and balloon demo**

**Hearing-**

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**-the inner ear converts information about the position of your head into nerve impulses which travel to your brain, informing it about your body’s equilibrium**

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**Outer ear-(resembles the paper cone)**

**Middle ear-**

**Eustachian tube-**

**(like the rock and ruler but consider the rock to be the sound waves going into your ear)**

**-oval window-**

**-round window-**

**Sound-sound enters the ear canal and causes the membrane(tympanum) to vibrate which travels through bone sin the inner ear with the cochlea(snail shaped structure) to vibrate where the hair cells to vibrate and send nerve impulses into the auditory nerve transmitted to the brain**

**Jars**

**-cochlea is filled with perilymph which its movement is important for hearing and balance**