**Sound chapter 6**

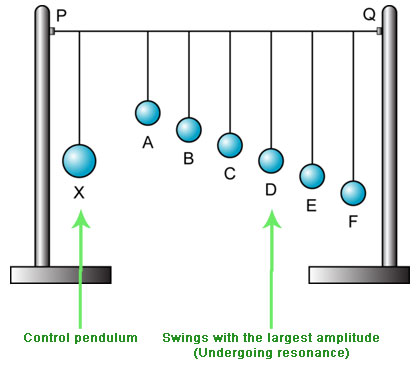
**p70 washer pendulum-start with free end getting washer to swing-look at the frequency(swings per second) especially its resonance frequency/what happens if you hold it further down and get it to swing**

**p70 now build second pendulum same length and tie them on a string and start one of the pendulums swinging/shorten one string and try it**

**p70 with a guitar, adjust tension so that two strings have the same frequency/pluck one string and watch what second string does**

**p72-try it with two tuning forks of same frequency**

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**Resonance**

In sound applications, a resonant frequency is a natural frequency of vibration determined by the physical parameters of the vibrating object. This same basic idea of physically determined natural frequencies applies throughout physics in mechanics, electricity and magnetism, and even throughout the realm of modern physics. Some of the implications of resonant frequencies are:

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| 1. It is easy to get an object to vibrate at its resonant frequencies, hard to get it to vibrate at other frequencies. |
| 2. A vibrating object will pick out its resonant frequencies from a complex excitation and vibrate at those frequencies, essentially "filtering out" other frequencies present in the excitation. |
| 3. Most vibrating objects have multiple resonant frequencies. |

**p73 copper pipe ¼ to ¾ diameter to blow on open and blow with finger over hole/blow with open end against jeans**

**p77 try creating feedback on a guitar by placing speaker by strings**