



## Student Pre-Quiz

### *Resolving Power – Seeing is Understanding*

Name \_\_\_\_\_

1. Resolving Power is:
  - a) A cleanser's ability to remove stains
  - b) Magnification (how much larger can you make it)
  - c) The ability to distinguish objects separated by small angles
  - d) The ability to maintain one's resolve in the face of experimental difficulties
2. The two principal factors affecting resolving power are:
  - a) Aperture and wavelength
  - b) Magnification and frequency
  - c) Courage and Stamina
  - d) pH and abrasive particles
3. The Scanning Electron Microscope can resolve smaller features because
  - a) It has a really big magnifying lens
  - b) Electrons have smaller wavelength than visible light waves
  - c) It uses a display screen instead of eyepieces
  - d) It has a powerful vacuum inside
4. The Atomic Force Microscope, unlike the SEM, uses
  - a) A cantilever and laser
  - b) Atoms
  - c) Scanning
  - d) Vacuum
5. Which microscope first used Quantum effects to "see" things at the nanoscale?
  - a) The AFM
  - b) The Electron Microscope
  - c) The Hubble
  - d) The Scanning Tunneling Microscope
6. Why can't you image sandpaper with an AFM?
  - a) Too rough
  - b) Too smooth
  - c) Too small
  - d) No vacuum



7. Name one type of aberration common in optical microscopes
  
8. Name one (or more) advance in Nanoscience that is a result of our ability to “see” or manipulate things on the nanoscale

