**Power of Ten Video (1977)**

Objective: To be more aware of the relative size of objects in the universe.

1 m = 100 m couple on the blanket

10 m = \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

107 m = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1011 m = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1012 m = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1017 m = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1021 m = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Emptiness is the \_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_is the exception

10-5 m = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10-7 m = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10-13 m= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

When thinking about different scales we can generally group systems and parts of systems into one of four groups: 1) atomic-molecular (things we cannot see or use a microscope to see; need a really powerful microscope to see), 2) microscopic/cellular (we cannot see with our eyes, but can use a microscope to see), 3) macroscopic (things we can see with our eyes), and 4) large-scale (things that are too large to see with our eyes).

The following is a list of systems included in the Powers of Ten video. Try to sort these systems into one of the four categories described above.

Universe Man or Woman Cell Nucleus United States

Hand Earth Lake Michigan DNA molecule

Skin Carbon Atom Picnic Blanket Galaxy

Capillaries Skin Cell Quarks Chicago

City Park United States White Blood Cell Solar System

1. What systems would you see at the atomic/molecular level?

1. What systems would you see at the microscopic or cellular level?

1. What systems would you see at the macroscopic level?

1. What systems would you see at the large-scale level?
2. Are there any systems that you are unsure about?