Astronomy (H) Size and Scale Laboratory #2

Name _____ Date _____

Period _____

Directions: Go to the following websites and complete the activity.

1. http://scaleofuniverse.com/

   Visit this page and explore the scales from the extreme end to the opposite
   List the scales for the following:

Structure	Exponent	Appropriate prefix to describe size in Meters
Quantum Foam * Plank Length		
Neutrino*		
Strange Quark		
Limit of Confirmed Length		
Proton		
Uranium Nucleus		
Gamma Ray		
Hydrogen Atom		
Transistor Gate		
Limit of Optical Mircoscope		
White Blood Cell		
Smallest resolution of naked eye		
Sunflower Seed		
Japanese Spider Crap		

Redwood Tree		
Cruithne		
Pluto		
Kapteyns Star		
Antares		
Distance to Comet Hale-Bopp (Closest approach 1997)		
Oort Cloud*		
Leo II Dwarf Galaxy		
Whirlpool Galaxy		
Virgo Cluster		
Virgo Supercluster		
Distance to the Great Attractor *		
Sloan Great Wall *		
Distance to Hubble Deep field *		

Observable Universe *		

For items that are stared, conduct secondary research and determine their nature. I will trust that you will do this out of curiosity and will not have you write anything down.

Part II Speed and Scale

This site gives you an idea of the vast distances in space between neighboring galaxies. Since as you know nothing that we know of travels faster than the speed of light that we be your speed limit. You will input the max speed of three different forms of transportation we currently have in addition to the speed of light. You will make subsequent comparison of the time it will take each. It is up to you to find out the speed of these objects using the net.

The last row looks at space travel in the Star Trek Universe. I will assume you know what warp speed is. If not, read here.

Destination	Distance	Car	Space Shuttle	Speed needed to reach in 30 Days
Earth's Moon				Xxxxxxxxx
The planet Mars				Xxxxxxxxxx
The planet Saturn				Xxxxxxxxx
The planet Pluto				xxxxxxxxx
Closest star to the Sun (Proxima Centauri)				
Center of our Milky Way Galaxy				
Closest large spiral galaxy (Andromeda)				
Coma Cluster of galaxies				
Edge of the observable Universe				

Destination	Estimated Time of Arrival		
	Car	Space Shuttle	Light
Earth's Moon			
The planet Mars			
The planet Saturn			

The planet Pluto	
Closest star to the Sun (Proxima Centauri)	
Center of our Milky Way Galaxy	
Closest large spiral galaxy (Andromeda)	
Coma Cluster of galaxies	
Edge of the observable Universe	