HOW Big?	Name	Per

Reference: Central Science \rightarrow Life Science \rightarrow Cells \rightarrow Cells Alive \rightarrow Interactive: How Big? **Oregon Standard:** Explain how our understanding of cells and microbes has changed over time.

Background: The microscope (and increased magnification) has allowed us to view and increase our understanding of cells and microbes. Our compound microscopes magnify up to _ _ _X, allowing us to see cells with some detail. At 500X, bacteria are barely visible. Viruses are not.

- 1. "Start the Animation". You will see a green "ruler" or scale next to a thumb and pin. Use pencil to mark the length of the "ruler" on the top margin of this paper.
- 2. Change the magnification. Notice the units change as the magnification changes. Use your "paper ruler" to determine the length and width of each of the following.

3 Complete the Chart. Have checked while animation is on the screen. 1% per row.

#	Description	Magnification	Diagram: Draw an outline drawing.	L X W (units.)
1	Human Hair			
2	Dust Mite (Found in dust and bedding. May cause allergic reactions.)			
3	Ragweed Pollen (Contains male cell of ragweed flower. Often causes allergic reactions.)			
4	Lymphocyte (White blood cell)			
5	Red Blood Cell (Carries food and oxygen to cells.)			
6	Baker's yeast (Used in bread dough. CO ₂ gas given off makes bread rise.)			
7	<i>E. coli</i> (Bacteria that live in your intestines, but make you sick if they get in your stomach.)			
8	<i>Staphlylococcus (</i> Bacteria that cause minor and serious infections, including skin infection with puss.)			
9	Ebola virus (Virus that causes serious illness with internal bleeding, mostly in Africa.)			
10	Rhino virus (Virus that causes the common cold.)			