Year 7 Learning Checklist for the first half term

A.C. Norman
Bishop Heber High School

		
1. Know how to use a microscope, and have some idea of how it works and what the various parts are for.		
2. Prepare good slides using cover slips, mounting needles and stains such as iodine.		
3. Be able to draw and label a plant cell and an animal cell, and explain briefly the function of the parts we talked about in lessons.		
4. Describe and explain how different types of cell are adapted to perform their special tasks.		
5. Know about how cells are organized into tissues, organs and systems in a complex organism such as a human or a tree; explain how this helps the organism to do all of the jobs necessary for life.		
6. Understand why new cells are needed (growth, repair, reproduction), and describe at least one way that new cells are formed, e.g. in yeast.		
7. Explain the differences between internal and external fertilization, and be able to give one advantage and disadvantage for each.		
8. Describe the human reproductive organs, using the correct scientific terms, and give a couple of ways in which they are good at doing their job.		
9. Know how and where fertilization occurs in humans, the names of the male and female reproductive cells, and how the embryo starts to develop.		
10. Be able to give changes which happen in both girls and boys during puberty, and know why these are important.		
11. Know that some plants reproduce sexually, and some plants can reproduce by asexual reproduction, and have some idea of how each process happens via fertilization and pollination.		
12. Name the parts of a flower using the correct words, and know about how these parts are involved in reproduction.		

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1. Give examples of solids, liquids and gases, and know some of the properties of each state of matter.		
2. Be able to draw or describe the arrangement of particles in a solid, liquid or gaseous material, and relate this to its properties.		
3. Know that liquids, solids and gases usually expand when they are heated, and that this is because the particles move faster and take up more room.		
4. Carry out a laboratory test for the gases hydrogen, oxygen and carbon dioxide, and *describe ways of preparing these gases.		
5. Describe and explain how liquids and gases can mix and spread by diffusion.		
6. Plan and carry out a scientific experiment to investigate the rate of diffusion in liquids.		
7. Know what all of the laboratory equipment we have used this term looks like, what it is used for, and how to draw it on a diagram.		
8. Describe what happens in the main changes of state: melting, freezing, evaporating and condensing. Be able to explain these in terms of particles.		
9. Understand and explain the process of dissolving (particles again!), and know some of the factors that affect how quickly things dissolve.		
10. Be able to define and use the terms *solute*, *solvent*, *solution*, *soluble*, *insoluble*, *solubility* and *saturated*.		
11. Understand the differences between a mixture, a solution and a pure substance.		
12. Know how to separate mixtures of soluble and insoluble solids (rock salt practical).		
13. Describe and explain how chromatography can be used to separate out mixtures.		