**Pre Biology: Students will have a fundamental understanding of basic science skills including:**

* Utilization of proper lab safety procedures and tools
* Identification and correct usage of lab ware
* Application of the Scientific Method
* Proper experimental setup and procedure
* Evaluation and interpretation of experimental data

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| **Lab Safety:** | | | | | | | |
| **Equipment:** | | | | | | | |
| shower.jpg  Name:  Use: | | extinguisher.jpg  Name:  Use: | | | fire blanket.png  Name:  Use: | | eye wash.jpg  Name:  Use: |
| **Rules in the biology lab:** | | | | | | | |
| 1. lab safety.jpgWash your hands. 2. Wash your desk before and after experiments. 3. Tell your teacher if anything spills or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. 4. No monkey business or horseplay. 5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ carefully. 6. Listen and follow directions. 7. Handle animals with care and respect. 8. Don’t Eat or Drink anything without permission 9. Be careful with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or electrical appliances. 10. Wear your \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | | | | | | | |
| **Lab Tools:** | | | | | | | |
| Beakers.jpg  Name:  Use: | | flasks.jpg  Name:  Use: | | | test tubes.jpg  Name:  Use: | | balance.jpg  Name:  Use: |
| goggles.gif  Name:  Use: | | graduated cyl.jpg  Name:  Use: | | | meniscus.JPG  Name:  Use: | | metric ruler.jpg  Name:  Use |
| **Graphing:** | | | | | | | |
| Types of Graphs: | | | | | | | |
| bar graphs.png  Name:  Used For: | | | line graph.jpg  Name:  Used For: | | | Pie chart.png  Name:  Used For: | |
| Parts of Good Graph: | | | | | | | |
| 1. | 2. | | | 3. | | | 4. |

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| **Scientific Method:** | | | |
| Steps: | | | |
| 1. | 2.  Ways I Can Research My Problem: | | 3. |
| 4. | 5. | | 6. |
| Observation | | Inference | |

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| Experimental Design | | | |
| Groups | | | |
| **Control Group** | | **Experimental/Variable Group** | |
| Variables | | | |
| **Controlled Variables** | **Independent Variable** | | **Dependent Variable** |
| **Data** | | | |
| **Qualitative**   * Deals with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * Data can be observed but not measured * Colors, textures, smells, tastes, appearance, beauty, etc. * Qualitative 🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | **Quantitative**   * Deals with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * Data which can be measured. * Length, height, area, volume, weight, speed, time, temp. * Quantitative 🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |