**
Biology PACING GUIDE**

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| **FIRST QUARTER** |
| **UNIT** | **PACING** | **TOPICS** |
| **Designing and conducting an experiment** | **2 weeks** | **1. Good experimental design****2. Use of appropriate tools and**  **technology** **3.Precise data****4. Applying qualitative and**  **quantitative measures****5.Free of bias****6.Using math to understand concepts**  |
| **Biochemistry and Cells** | **7 weeks** | 1. **Bonds/Chemical Reactions**
2. **Macromolecules-Monomers & Indicators**
3. **Enzymes**
4. **Cell theory**
5. **Prokaryotic vs Eukaryotic**
6. **Structures/functions of organelles**
7. **Plasma membrane**
8. **Active/Passive transport**
9. **Types of cellular transport**
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| **SECOND QUARTER** |
| **UNIT** | **PACING** | **TOPICS** |
| **Cellular Energy** | **3 weeks** | 1. **ATP**
2. **Photosynthesis**
3. **Respiration**
4. **Compare/contrast photosynthesis & respiration**
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| **Cell Division** | **2 weeks** | 1. **Types of cell division**
2. **Cell cycle and growth**
3. **Mitosis and cytokinesis**
4. **Abnormal cell cycle**
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| **Meiosis and Mendelian Genetics**  | **4 weeks** | **1. Meiosis****2. Mendelian Genetics (Punnet**  **square & probability)****3. Gene linkage and polyploidy****4. Human inheritance****5. Patterns of inheritance****6. Chromosomes & human heredity** |
| **THIRD QUARTER** |
| **UNIT** | **PACING** | **TOPICS** |
| **Molecular Genetics** | **4 weeks** | 1. **DNA**
2. **Replication of DNA**
3. **DNA, RNA and protein**
4. **Gene regulation and mutation**
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| **Genetic Disorders & Genetic Engineering** | **2 weeks** | 1. **Applied genetics**
2. **Recombinant DNA technology**
3. **DNA technology**
4. **The Human Genome**
5. **Identifying Genes**
6. **Bioinformatics**
7. **DNA Microarrays**
8. **The Genome & Genetic disorders**
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| **Population Ecology & Energy Flow** | **3 weeks** | 1. **Population dynamics**
2. **Human populations**
3. **Population ecology**
4. **Biomes/Ecosystems**
5. **Biodiversity**
6. **Natural Selection**
7. **Speciation**
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| **FOURTH QUARTER** |
| **UNIT** | **PACING** | **TOPICS** |
| **Evolution and Classification** | **3 weeks** | 1. **Evolutionary theory**
2. **Natural Selection**
3. **History of Classification**
4. **Domains and Kingdoms**
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| **Biology EOC** | **3 weeks** | **1. Preparation for EOC** |