Study Guide

1. **What are the advantages and disadvantages of Asexual Reproduction?**

   **Advantage:** Quick Reproduction, Requires no mate, only 1 parent needed

   **Disadvantage:** Can not adapt to change, no genetic diversity, DNA is exactly the same as parent

2. **What are the advantages and disadvantages of Sexual Reproduction?**

   **Advantage:** Genetic Diversity, Can adapt to change, Genes are changing each generation

   **Disadvantage:** Slow Reproduction and 2 parents are needed (male and female)

3. **How can plant reproduce asexually and sexually? (They reproduce both ways; example: blackberry and strawberry plants)**

   **Sexual Reproduction** is through seed production

   **Asexual Reproduction** when branches grow roots whenever the stem touches the ground. This produces an identical offspring of parent.

4. **Which reproduction are mitosis and meiosis associated with? How many daughter cells are produced with each? How is your genetic information (heredity) passed down in each cell division?**

   **Mitosis:** Cell division in Asexual Reproduction. 2 Daughter cells exactly like the parent. Heredity is passed to offspring: 100% DNA from 1 parent.

   **Meiosis:** Cell division in Sex Cells during Sexual Reproduction. 4 Daughter Cells not exactly like the parent. Heredity is passed to offspring: 50% from one parent; 50% from other parent.

5. **All the forms of Asexual Reproduction with examples of each.**

   **Binary Fission:** Single Celled Organisms. Exact copy of DNA. Identical to Parent. Example: Bacteria

   **Budding:** Example: Hydra. Organism has an offspring grow off of the parent

   **Fragmentation:** Example: Mold and Yeast; The parent breaks into and forms two organisms.
Regeneration: Example Flatworm. Part of Parent detaches and forms a new organism

Internal Budding (Gemmules): example Sponges

**Study all notes given on power points and the videos we watched. All information can be on test!!!!!!**