**Chapter 7 Notes**

**Bacteria**

**Section 7.1 – What are Bacteria?**

**3 Shapes of Bacteria**

1. **Sphere (round) – cocci**
2. **Rod (bacilli) – rod**
3. **Spiral – spirilla**

**Bacterial cells are Prokaryotic – no true nucleus**

**Genetic material is found in one circular chromosome**

**Plasmid – small circular piece of DNA**

**Special Features**

**Gelatin-like Capsule – protects the bacteria**

**Slime Layer – allows the bacteria to stick to surfaces and reduces water loss**

**Flagella – movement – whip-like tail**

**Reproduction**

**Usually by fission – produces 2 new cells with genetic material that is identical to the original cell**

**Sometimes bacteria will exchange DNA through a small tube – this allows for variations that can help in survival**

**How Bacteria Get Food and Energy**

1. **Bacteria with Chlorphyll – Energy from the Sun**
2. **Use energy from Chemical Reactions to make food**
3. **Most are Consumers**
4. **Decomposers – break down dead organisms**
5. **Live as parasites in a host**

**Aerobe - Use oxygen for respiration**

**Anaerobe - do not use oxygen for respiration**

**2 Kingdoms of Bacteria**

1. **Eubacteria – Example – Cyanobacteria**
2. **Archaebacteria – Examples – Heat Loving, Acid Loving, Salt Loving**

**Ways of Grouping Eubacteria**

1. **Cell Shape and Structure**
2. **How they obtain food**
3. **What they eat**
4. **The type of waste they produce**
5. **Method of movement**
6. **Aerobe or anaerobe**

**Cyanobacteria – Make own food using carbon dioxide, water and energy and they produce oxygen**

**Importance of Cyanobacteria**

1. **Source of food**
2. **Produce oxygen**
3. **Produce blooms**

**Archaebacteria – often found in extreme conditions like hot springs**

**How are they classified?**

1. **Where they live**
2. **How they get energy**

**Groups of Archaebacteria**

1. **Salt Loving – Dead Sea**
2. **Heat Loving – Deep Ocean Vents or**
3. **Acid Loving – Hot Springs**
4. **Methane Producing – Intestines**