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| C5_FirstCells_2Bacteria are **PROKARYOTES**, which means… | * Pro: * Karyon: * Simplest forms of life are prokaryotes * Earth’s first cells were prokaryotes |
| **400px-Prokaryote_cell_diagramWhy are prokaryotes so diverse?** | * Earth’s most abundant life forms |
| **procaryoteProkaryotes: A Short Review** | * Unicellular vs. Multicellular * Nucleus vs. No Nucleus * Single Chromosome vs. Many Chromosomes * Cell Wall vs. No Cell Wall * Sexual vs. Asexual * Aerobic vs. Anaerobic * Autotrophic vs. Heterotrophic |
| **Classifying Prokaryotes**   * Until recently, they were classified as members of which kingdom? * Now, we know that prokaryotes are not all alike; therefore, their original kingdom was split into which two kingdoms? |  |
| **800px-Colourful_Thermophilic_Archaebacteria_Stain_in_Midway_Geyser_BasinhalomonasArchaebacteria** | * DNA sequences are more similar to that of Eukaryotes, rather than Eubacteria |
| **methanogens_largeTypes of Archaebacteria** | * **Methanogens:** * **Halophiles:** * **Thermophiles:** |
| **0_rhizobiumbactcellEubacteria** | * Larger of the two prokaryote kingdoms * Tremendous variety; they can survive almost anywhere |
| **T028362ATypes of Eubacteria** | * **Parasitic Heterotrophs**, such as… * **Saprophages** aka… * **Chemosynthetic Autotrophs**, such as… * **Photosynthetic Autotrophs**, such as… |
| **11cyanobacteria220805How can we identify bacteria?** |  |
| **I11-30-bacteriaBacteria are named by their SHAPE** | * **Coccus** * **Bacillus** * **Spirilli** |
| **Bacteria-765512bacteria2Metabolic Diversity** | * **Autotrophic:** * **Heterotrophic:**   \*Best illustration of prokaryotic diversity |
| **Chemoheterotroph** |  |
| **cyanobacteria220805Photoheterotroph** |  |
| **hydrothermal_ventPhotoautotroph** | * Use light energy to convert carbon dioxide and water into carbon compounds and oxygen * Where are they found? |
| **Chemoautotroph** | * Where are they found? |
| **Releasing Energy** | 1. MUST have a constant supply of oxygen 2. MUST live in the absence of oxygen 3. Can survive with OR without oxygen |
| **What would happen if food and space were unlimited?** |  |
| **binfissionenterococcus_dividing_small3 Methods of Reproduction** |  |
| **Binary Fission** | * Asexual…which means? * Bacterium doubles in size, replicates its DNA, and divides in half. What is the result? |
| **350px-BacterConjugationConjugation** | * Sexual…which means? * How does it happen? |
| **spoform2Spore Formation** | * When do spores form? * Spores will remain dormant until conditions improve. |
| **istockphoto_3801474_medicine_bottledesast02IntestineGlossyyoplait-yogurt_7Importance of Bacteria** | * Producers that capture energy by photosynthesis * Fix nitrogen * Various human uses…such as? |

