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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?
 | *

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| **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
*
*
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| **T028362ATypes of Eubacteria** | * **Parasitic Heterotrophs**, such as…
* **Saprophages** aka…
* **Chemosynthetic Autotrophs**, such as…
* **Photosynthetic Autotrophs**, such as…
 |
| **11cyanobacteria220805How can we identify bacteria?**  | *

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| **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.

1.

1.
 |  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** | 1.
2.
3.
 |
| **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.
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| **istockphoto_3801474_medicine_bottledesast02IntestineGlossyyoplait-yogurt_7Importance of Bacteria** | * Producers that capture energy by photosynthesis
*
* Fix nitrogen
* Various human uses…such as?
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