

Differences between Prokaryotes and Eukaryotes: 1. **DNA**: Both contain DNA as their genetic material, which directs cellular activities. – **Eukaryotes**: Contain various membrane-bound organelles that perform specialized functions. **Organelles**: – **Prokaryotes**: Do not have membrane-bound organelles (e.g., mitochondria, endoplasmic reticulum). **Reproduction**: – **Prokaryotes**: Reproduce asexually through binary fission. – **Eukaryotes**: Reproduce sexually (through meiosis) or asexually (through mitosis). **Ribosomes**: Both have ribosomes that synthesize proteins, though the ribosome structures differ slightly. **Basic Life Functions**: Both perform essential life processes like metabolism, growth, and reproduction. 2. 3. 4. 5. 2. 3. 4