

Organizing Life's Diversity

Section 3 Domains and Kingdoms

Main Idea

Details

Scan Section 3 of the chapter. Use the checklist as a guide.

- Read all section titles.
- Read all boldfaced words.
- Read all tables and graphs.
- Look at all pictures and read the captions.
- Think about what you already know about groups of organisms.

Write three facts you discovered as you scanned the section.

1. **Accept all reasonable responses.** _____
2. _____
3. _____

Review Vocabulary

eukaryote

Use your book or dictionary to define eukaryote.

an organism composed of one or more cells containing a nucleus and membrane-bound organelles

New Vocabulary

Bacteria

Use your book or dictionary to define each term.

a domain and kingdom of prokaryotes whose cell walls contain peptidoglycan

Archaea

a domain and kingdom of prokaryotes whose cell walls do not contain peptidoglycan; sometimes called extremophiles

protists

eukaryotic; unicellular, colonial, or multicellular; subclassified as plantlike, funguslike, and animal-like

fungus

eukaryotic; unicellular or multicellular; absorb nutrients from organic materials; have cell walls that contain chitin

Section 3 Domains and Kingdoms (continued)

Main Idea

Details

Grouping Species

I found this information on page _____.

SE, p. 499
RE, p. 208

Domain Bacteria

I found this information on page _____.

SE, pp. 499–500
RE, pp. 208–209

Domain Archaea

I found this information on page _____.

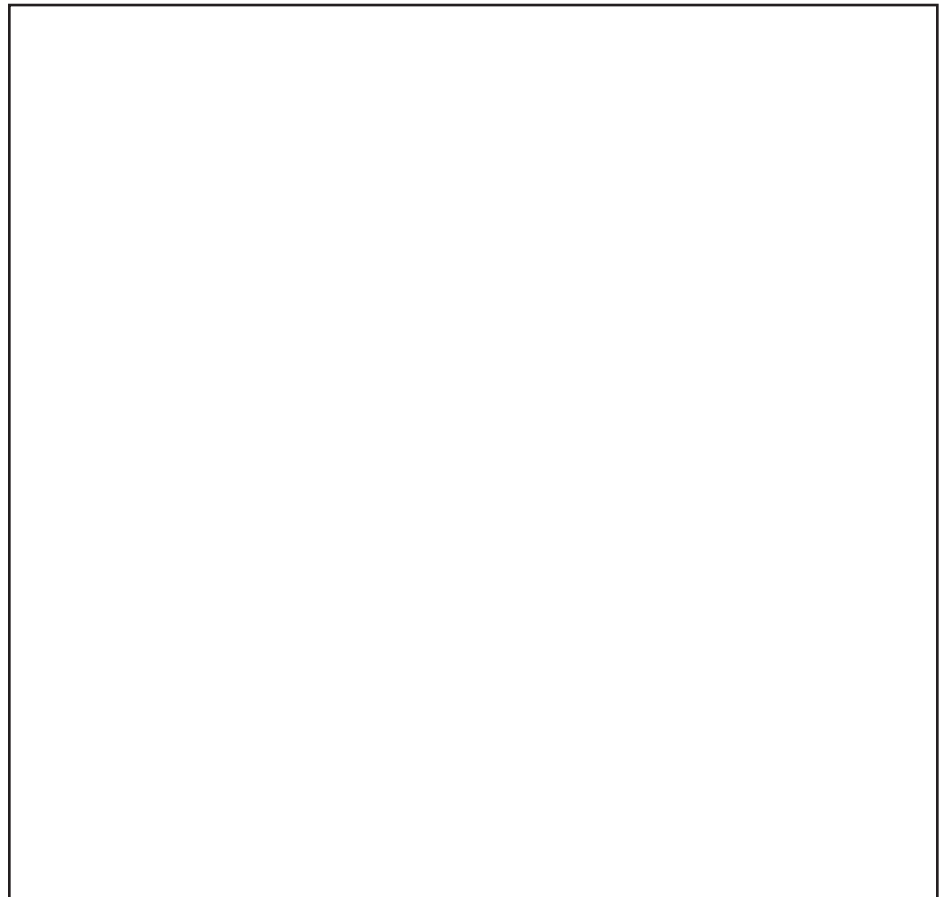
SE, p. 500
RE, p. 209

Rephrase why the members formerly in the Kingdom Monera were separated into the domains Bacteria and Archaea.

Biochemical studies showed that bacteria and archaea are as different from each other as they are from eukaryotes, so they were placed in separate domains.

Model the cell walls of bacteria. Label the features of bacteria.

Accept all reasonable drawings.



Analyze why archaea are sometimes called extremophiles.

Archaea are called extremophiles because they live in some of the most extreme environments on Earth, including hot springs, salty lakes, thermal vents, and mud.

Section 3 Domains and Kingdoms (continued)

Main Idea

Details

Domain Eukarya

I found this information on page _____.

SE, pp. 501–503
RE, pp. 209–212

Organize the kingdoms in the Domain Eukarya and describe their cell structure. List each kingdom’s sources of energy and other important characteristics.

Kingdom	Cell Structure	Energy Sources	Other Characteristics
Protista	unicellular or multicellular	autotrophs, heterotrophs	no organs
Fungi	unicellular or multicellular	heterotrophs	stationary
Plantae	have cell walls	autotrophs	stationary
Animalia	no cell walls	heterotrophs	most able to move

SUMMARIZE

Model a diagram of the relationship between domains and kingdoms. **Accept all reasonable responses.**