

MICROBIOME

Grade 6 Science | Free One Page Study Guide



Read | Annotate | Find evidence | Analyze | Eliminate and justify

1 Investigate known-source cell evidence

6-MS-LS1-1

Yeast model



One cell can be an organism.
Purple dots: nuclei.

Onion tissue model



Simplified models, not micrographs.

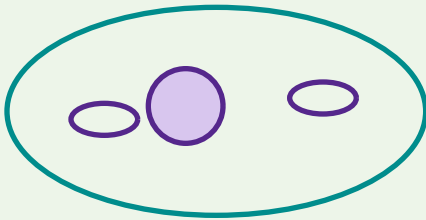
What we did. We examined prepared known-source slides, or interpreted supplied model records.

Why it works. Preserved cells from known organisms support cellular organization. One view may show only part of an organism.

Apply what you know. Why does one isolated cell not prove the whole organism is unicellular?

2 Build and revise a whole-cell model

6-MS-LS1-2



Boundary: membrane
Circle: nucleus
Ovals: mitochondria

Typical animal cell; not to scale.

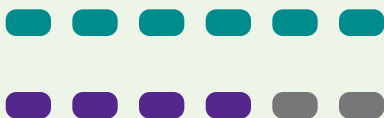
What we did. We arranged parts, explained their roles, then revised our cell model.

Why it works. The membrane regulates exchange. The nucleus holds instructions; mitochondria help release usable energy from food.

Apply what you know. How do two parts contribute to the cell working as a whole?

3 Model a microbiome community

Context
application



A: 6 B: 4 C: 2
Move two A out, two B in:
A: 4 B: 6 C: 2

Paper groups, not actual body counts.

What we did. We used 12 symbols for three groups in one environment.

Why it works. A microbiome is a community. Composition can change while total symbol count stays 12; the model cannot diagnose health.

Apply what you know. Why does one bacterium differ from an entire microbiome?