

Carbon Cycle Loop

Track carbon as matter moves through an ecosystem.

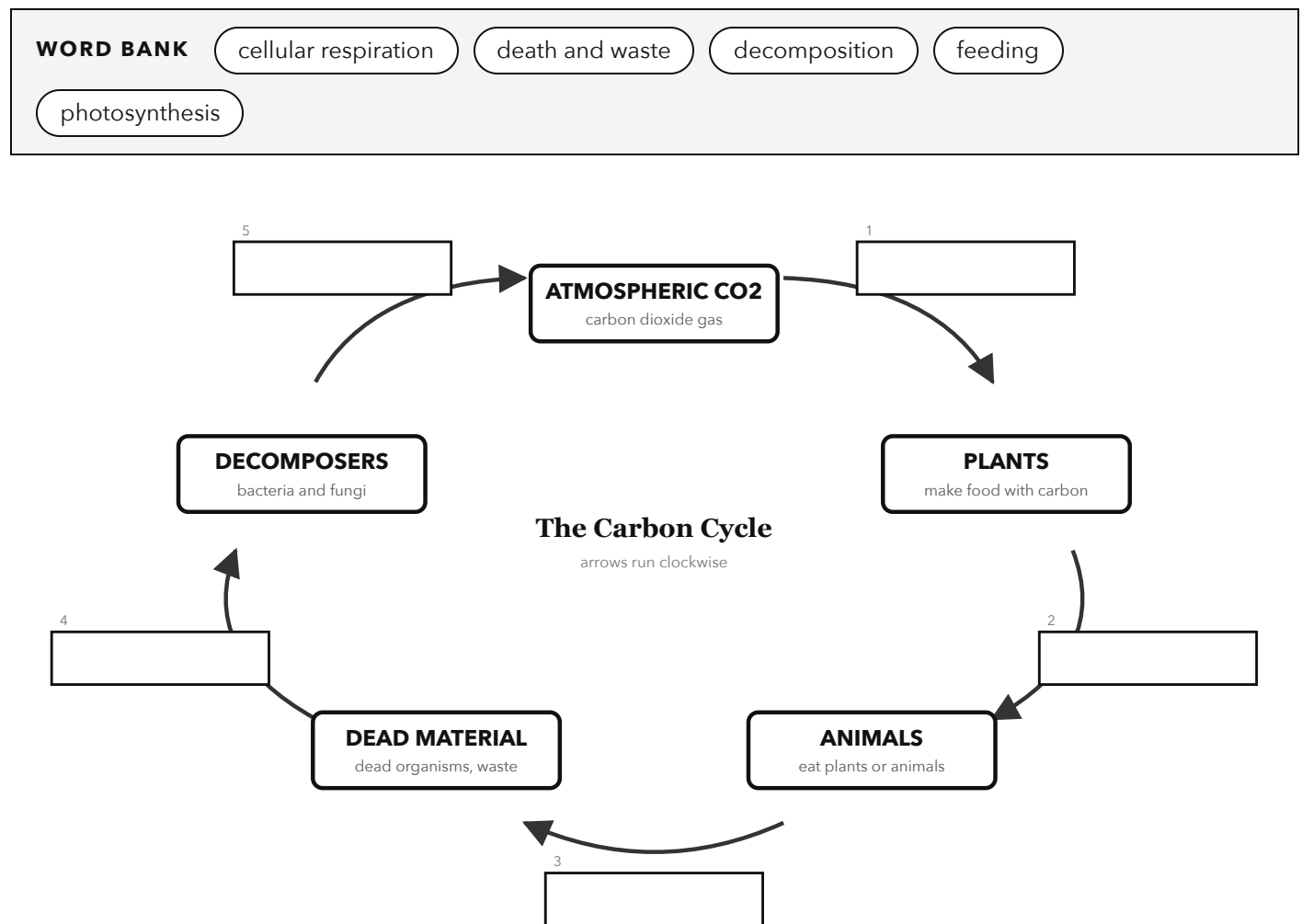
7.12 "Organisms and environments. The student understands that ecosystems are dependent upon the cycling of matter and the flow of energy. The student is expected to: diagram the flow of energy within trophic levels and describe how the..."

NAME _____

DATE _____

1 LABEL THE MODEL _____ Word bank below

Write one process from the word bank in each numbered box. Follow the arrows to show how carbon moves from each stage to the next.



2 RUN THE MODEL _____ Use your finished diagram

1 Which process moves carbon from DECOMPOSERS to ATMOSPHERIC CO₂?

2 A fungus breaks down a fallen leaf. Which process in the model represents this event?

3 Why can carbon move through this model more than once?

3 CHECK IT _____ Before you turn it in

☐ I used each word-bank process once.

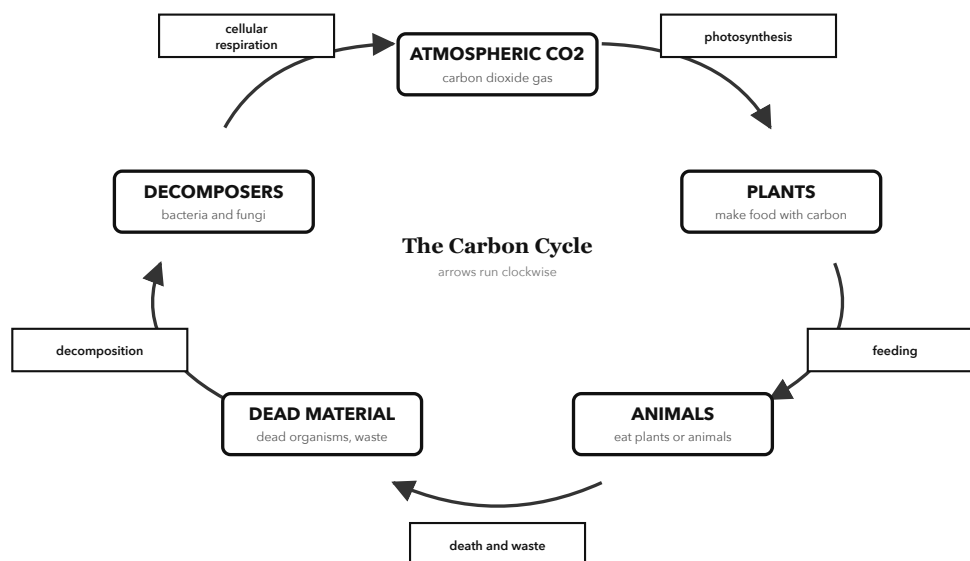
☐ I checked that every process follows its arrow.

☐ I can explain how carbon returns to the air.

TEST THE MODEL

What is one way this model leaves out part of the real carbon cycle?

PART 1 • COMPLETED MODEL



PART 2 • RUN THE MODEL

1. **Cellular respiration.** (Which process moves carbon from DECOMPOSERS to ATMOSPHERIC CO₂?)
2. **Decomposition.** (A fungus breaks down a fallen leaf. Which process in the model represents this event?)
3. **Carbon returns to atmospheric CO₂, and plants can take it in again through photosynthesis.** (Why can carbon move through this model more than once?)

TEST THE MODEL (SAMPLE ANSWERS)

- It leaves out carbon released when fossil fuels burn.
- It does not show plants releasing carbon dioxide during cellular respiration.

The arrow processes, in order, are photosynthesis, feeding, death and waste, decomposition, and cellular respiration. This simplified loop highlights carbon recycling, while real carbon cycles include additional pathways.