

Grade 6 Populations and Resources



Review Lessons + Hands-On + Test Prep

The five-step teacher model is central

Two-page Read, Annotate, Find evidence, Analyze, and Eliminate and justify walkthrough. Shows what to say/mark, how to use population records and explain distractors, plus guided transfer to seedling growth.

Review and apply before test practice

Four illustrated lessons/eight quick checks. Four linked paper activities: resource budgets, interaction cards, matter/energy tracing and freshwater-use arguments. Preparation, records, explanations and limits included.

Inside the 36-page PDF

Graphs, labeled ecosystem diagrams, reusable interaction cards and matter mat; four MC, select-two, dependent/independent pairs, two-point writing, original six-point extended task; eight task/answer cards and optional six-point digital quiz setup.

Louisiana and NGSS scope

Louisiana 6-MS-LS2-1/2/3 and 6-MS-ESS3-4, with corresponding NGSS targets. Original independent topic review, not the complete Amplify curriculum. Supplied data are invented learning records. No live organisms required.

Free study guide available separately

A separate free one-page guide connects hands-on models with science. Find it at crackthetestco.com. It is its own file and is not inside the paid PDF.

Actual sample pages follow

Both teacher-model pages, two student lessons and four task cards. Worked-example answers are intentionally shown; other keys reserved for the full resource. PDF only; no premade live Form.



Teacher Worked Example Read Annotate Find Evidence

I DO Part 1 | The five-step method is the teaching centerpiece

Set the question

Say: "Which explanation best fits the resource and population records? I need the numbers, the conditions and the science, not a guess from one label." These invented learning records describe matched snail groups with the same starting number, tank size, temperature and oxygen conditions. No snails enter or leave. Only food supplied differs.

Week	More food group	Less food group
0	20 snails	20 snails
1	22 snails	19 snails
2	24 snails	17 snails
3	26 snails	16 snails

Model question

Which explanation is best supported?

- A. The less-food group grew because 16 is greater than 20.
- B. Food has no connection to survival or reproduction.
- C. More food supported a larger final population under these conditions.
- D. Every natural snail population must reach exactly 26.

1 READ THE CLUES Teacher says

"Best supported asks for a reasonable explanation. It does not ask me to claim every natural population behaves this way." Circle best supported and underline only food differs.

2 ANNOTATE Teacher models

Box week 0 and week 3. Mark 20 to 26 as +6 and 20 to 16 as -4. Note same starting number and no movement. Label the records model data.

3 FIND EVIDENCE Teacher points

"Both groups started at 20. After three weeks, more food has 26 and less food has 16, a difference of 10 snails. I will connect this with survival and reproduction."



Teacher Worked Example Analyze Eliminate Justify

I DO Part 2 | Then WE DO transfer

4 ANALYZE Think aloud

"Food supplies matter and energy for survival, growth and reproduction. These matched records support a resource explanation. They are one invented comparison, not repeated real trials or proof that food alone controls every ecosystem."

Choice	Teacher models evidence-based elimination
A eliminate	16 is less than 20; the group declined by 4.
B eliminate	Food provides matter and energy; the group outcomes differ.
C keep	Fits 26 versus 16 under the stated matched conditions.
D eliminate	An exact universal population is not supported.

5 ELIMINATE AND JUSTIFY

"C. Both groups began with 20 snails. At week 3 the more-food group had 26 and the less-food group 16. Access to food can support survival and reproduction. The conclusion applies to these conditions; other factors matter in nature."

WE DO Transfer

New invented seedling records: same species, initial size, soil, light and temperature. Adequate-water group mean height gain is 5 cm; low-water group is 2 cm over the same period. Walk through all five steps. What is supported about individual growth? Why does this not show that the number of plants increased?

Expected response

Adequate water is associated with 3 cm more mean height gain under the stated conditions. Water supports plant processes and growth. Height gain measures individual size, not births or plant population count. Replication and real observations would strengthen the evidence.

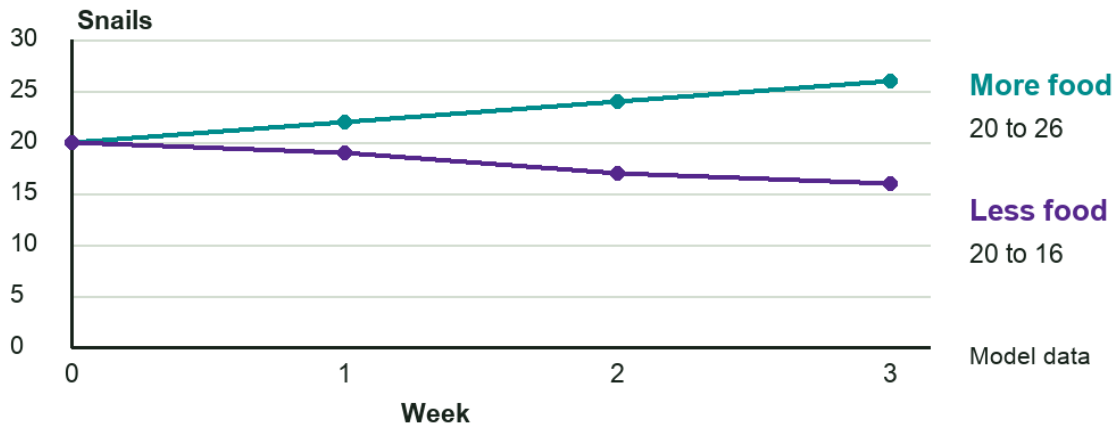


Review Lesson 1 Resources and Population Change

6-MS-LS2-1 | Links to activity 1 and questions 1-2

Name _____ Date _____

Matched snail groups: food supplied differs



Key idea

Food, water, oxygen, space and other resources can constrain growth, survival and reproduction. Births and arrivals add organisms; deaths and departures remove them. A larger individual is not necessarily a larger population. These matched model records support a food-resource explanation.

Quick check 1

How much did each snail group change from week 0 to week 3? Cite the numbers.

Quick check 2

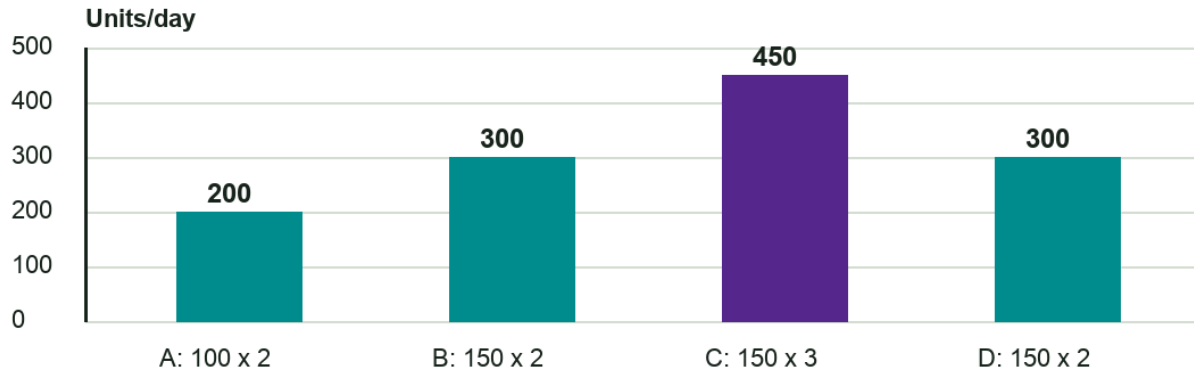
Why does a seedling growing 5 cm not prove that its population increased?



Review Lesson 4 People Natural Resources and Habitats

6-MS-ESS3-4 | Links to activity 4 and question 8

Name _____ Date _____

Total water use = people x units per person per day

Invented scenarios; conservation D uses 150 fewer units/day than C.

Key idea

Total use depends on population and use per person. Here 100 people using 2 units each use 200 units; 150 using 3 each use 450. With limited replenishment, more freshwater withdrawal can leave less for aquatic habitats. Conservation can reduce pressure while communities consider human needs and costs.

Quick check 7

At 2 units per person, what happens to total daily use when people increase from 100 to 150?

Quick check 8

How does reducing use from 3 to 2 units per person affect 150 people's total demand? Explain a possible habitat benefit.



Task Cards 1 to 4

Use all five steps; answer cards are separate

CARD 1 Population change

Snails go from 20 to 26. What is the net change?

- A. Decrease 6.
- B. Increase 6.
- C. Increase 26.
- D. No change.

CARD 2 Births and deaths

Start 20; births 4; deaths 8; no movement. Final?

- A. 32.
- B. 24.
- C. 16.
- D. 8.

CARD 3 Shared resources

Two species share limited food. What pattern fits?

- A. Competition can constrain growth.
- B. Both must grow forever.
- C. Predation always occurs.
- D. Food is never limiting.

CARD 4 Interaction transfer

An owl eats a mouse; a fish eats a snail. Shared pattern?

- A. Mutualism.
- B. Competition only.
- C. No food transfer.
- D. Predation in both settings.