

ARKTIK EDUCATION · ACADEMIC RECOVERY

Start with the evidence

Observe → Diagnose → Practice → Prove → Advance. Use real observations, independent questions, corrections and a delayed check. A grade can improve before a skill is secure; measure both.

Parent setup: access the school gradebook yourself. Record the date, source, course, category, weight, assignment status, permitted recovery option and deadline. Never share school passwords with ARKTIK.

Verify each zero: missing work, incomplete work, an absent assessment, an excused item or a posting issue can require different actions. Ask the teacher; do not infer the cause from a zero alone.

Seven-course audit: 1 AP Human Geography; 2 Geometry; 3 Biology; 4 _____; 5 _____; 6 _____; 7 _____. Confirm the exact names and current unit with the school.

Grade recovery: count only eligible tasks with teacher permission. Record submission confirmation, acceptance and the later gradebook result separately.

Mastery: record baseline questions correct / attempted, assistance, current result, written explanation review and 48–72-hour retention result. Blank means unknown, not zero.

Weekly briefing: What changed? What evidence proves it? What remains unclear? Which one task is next? Who owns it, and when is it due?

Use this on paper or inside a confirmed restricted Education record. Student results do not belong in marketing, public GitHub or broad AI knowledge sources.

A manageable fourteen-day pilot

Days 1–2: Audit seven courses and teacher deadlines. Evidence: verified recovery queue and three short baselines.

Days 3–4: Geography population, migration and diffusion. Evidence: explanations and independent practice.

Days 5–6: Geometry foundations. Evidence: labeled worked solutions and error analysis.

Day 7: Biology concepts. Evidence: independent practice and written explanation.

Days 8–9: Geography timed practice and new reasoning questions. Record time and assistance.

Day 10: Reconcile missing work. Check teacher permission and submission receipts.

Days 11–12: Delayed checks and new advanced-course questions. Compare with baseline, not only repeated items.

Day 13: Student explains learning and next priorities. Day 14: parent reviews evidence and chooses the next phase.

Fourteen days means fourteen instructional visits within a practical schedule; it is not a guarantee of a fourteen-calendar-day grade recovery. Respect Shabbat, school deadlines, rest and adult availability.

Private planner: Task _____ Course _____ Skill _____ Owner _____ Deadline _____
Permitted by _____ Source date _____ Evidence _____

Teacher question draft: “Could you confirm the status of [task], whether recovery is permitted, the deadline and how it affects the grade? What skill should we practice first?” Parent verifies recipient and approves before sending.

Advanced Learner Reset

Reignite: Choose a real interest—sports, food, music, maps, making things or investigating evidence. Connect it to one skill in the current unit.

Reorganize: Choose one task, write the deadline and first five-minute action, and set a manageable finish time. Plan rest and existing commitments.

Recalibrate: Attempt without notes, classify the mistake, practice one prerequisite and attempt a different question. Look separately at recall, calculation, prompt reading and time management.

Rechallenge: Compare an ordinary route with a map, a court with its dimensions, or a food label with serving counts. Write three observations, one supported inference and one unanswered question. No extra travel or personal data is required.

Student-led conference: Here is my goal. Here is my independent work. Here is an error I corrected. Here is what I will check again. Here is the help I need.

Engagement check: “How willing am I to try the next task?” Record the learner’s own words privately. This is not a clinical scale or a diagnosis.

Persistent distress or access concerns require a trusted adult and appropriate school or professional support. Do not diagnose attention or mental health from a report card.

GEO-12 · Moving homes, growing populations

Distinguish migration from daily mobility; calculate population change; read age structure without claiming more than the evidence shows.

25-minute structure: Diagnose 0–5; teach 5–10; practice 10–15; prove 15–23; correct 23–25.

Diagnostic: Does traveling to school change your usual residence? Explain. / What four events can change a place's population? / Does seeing a new restaurant prove that its owner migrated? Explain.

Think about the difference between moving homes and going to a store. Migration changes usual residence. A trip to school or a restaurant is daily mobility. A move within one country is internal migration. Leaving a country is emigration from the origin and immigration into the destination. Jobs can attract people; conflict can push people away, but a map alone does not prove why someone moved.

Population changes through births, deaths, immigration and emigration. The Census counted 308,745,538 US residents in 2010 and 331,449,281 in 2020. Subtract to find an increase of 22,703,743. Divide that increase by the 2010 count and multiply by 100: approximately 7.35%, or 7.4% rounded to one decimal. These dated counts are not today's population. Two totals alone do not reveal how much change came from each cause.

A population pyramid shows age groups on the vertical axis and population counts or shares on the horizontal axis, often split by sex. Compare the Census's actual 2010 and 2020 US diagrams: check axis units before comparing bar widths. More children can mean future demand for schools; more older adults can mean different service needs. Age is not a measure of an individual's dependence or ability. In demographic transition, death rates typically fall before birth rates, creating a period of faster natural increase; immigration also matters. Food, music and styles spreading between places are cultural diffusion. Social media can spread a style without a permanent move.

Practice: Use the linked Census diagrams. Record the year, axis units and two age groups. Describe one visible difference, then write one question the chart cannot answer. Keep home addresses and household histories private.

1. Traveling from home to school each morning is usually: A: Internal migration / B: Daily mobility / C: International immigration
2. US population change from 2010 to 2020 was: A: 22,703,743 / B: 331,449,281 / C: 7,350,000
3. Growth percentage uses which denominator? A: The ending count / B: The starting count / C: The sum of both counts
4. In demographic transition, rapid natural increase commonly follows: A: Death rates falling while birth rates remain high / B: Both rates reaching zero / C: Emigration becoming impossible
5. A style spreading through online videos without people moving illustrates: A: Relocation diffusion only / B: Expansion diffusion / C: A population census

Written proof: Explain why a bigger population does not by itself prove greater immigration. Use the real Census counts as evidence and name one additional record you would need.

Correction / evidence: _____

Full teaching, delayed checks and source links: <https://arktikeducation.org/academic-recovery/geography.html>

GEM-12 · See the court. Prove the geometry.

Use area, perimeter, scale and the Pythagorean theorem with correct units.

25-minute structure: Diagnose 0–5; teach 5–10; practice 10–15; prove 15–23; correct 23–25.

Diagnostic: What is the difference between the floor inside a court and the boundary around it? / Why does area use square units? / Which side is the hypotenuse of a right triangle?

An NBA court is 94 feet long and 50 feet wide inside its boundaries. Painting the playing surface concerns area: $94 \times 50 = 4,700$ square feet. Measuring the boundary concerns perimeter: $2 \times (94 + 50) = 288$ feet. A school or community court can have different dimensions; measure or check its own diagram rather than assuming NBA dimensions.

Draw the NBA court at one inch for every ten feet. Divide both real dimensions by 10: 9.4 inches by 5 inches. The perimeter shrinks by a factor of 10, while the area shrinks by a factor of 100. Always label drawing inches separately from real feet.

A diagonal is the hypotenuse of a right triangle with legs 94 and 50 feet. Its length is the square root of 94 squared plus 50 squared: about 106.47 feet. It is longer than either side and shorter than walking along both sides (144 feet). A rectangular corner is 90 degrees. A triangle's three interior angles total 180 degrees.

Practice: Draw and label the scaled court. Mark a diagonal and both legs. Explain which measurement would be useful to a painter and which to someone installing a boundary strip.

1. NBA playing-surface area is: A: 288 square feet / B: 4,700 square feet / C: 144 feet
2. NBA boundary perimeter is: A: 288 feet / B: 4,700 feet / C: 94 feet
3. At one inch per ten feet, the court drawing is: A: 94 by 50 inches / B: 9.4 by 5 inches / C: 4.7 by 2.5 feet
4. Which calculation finds the diagonal? A: $94 + 50$ / B: Square root of $(94^2 + 50^2)$ / C: 94×50
5. If one triangle angle is 90 degrees and another is 35 degrees, the third is: A: 55 degrees / B: 145 degrees / C: 35 degrees

Written proof: Show the diagonal calculation with units. Explain why adding 94 and 50 does not give the straight-line diagonal.

Correction / evidence: _____

Full teaching, delayed checks and source links: <https://arktikeducation.org/academic-recovery/geometry.html>

BIO-12 · From the kitchen to the cell

Distinguish mechanical and chemical digestion, explain enzyme action, and connect membrane selectivity to a familiar object without confusing the analogy with biology.

25-minute structure: Diagnose 0–5; teach 5–10; practice 10–15; prove 15–23; correct 23–25.

Diagnostic: Does chopping food create smaller molecules, or smaller pieces? / What can change when an egg is heated? / Does a kitchen strainer work exactly like a cell membrane? Explain.

Chewing and chopping make smaller pieces: mechanical breakdown. Digestive enzymes help chemical reactions break nutrients into smaller molecules. Carbohydrates are broken down into simple sugars and proteins into amino acids. Many foods contain more than one nutrient, so a food label is evidence, not a reason to put each food into only one category.

Enzymes are biological catalysts. They lower a reaction's activation energy and are not used up as a fuel during each reaction. Shape matters for binding. Heating can change a protein's structure, as you can observe in a cooked egg; excessive heat can reduce an enzyme's activity. Cooking an egg is not a direct experiment on every enzyme. Different enzymes work best under different conditions.

A kitchen strainer offers a limited analogy for selective passage. A cell membrane is a living lipid bilayer with proteins, not just a sieve of holes. Movement depends on properties and concentration gradients; some transport uses cellular energy. Digestion and absorption are different steps. The small intestine absorbs digested nutrients. Plants make sugars through photosynthesis; plant and animal cells use cellular respiration. Matter and energy are tracked differently: matter is rearranged, while some transferred energy disperses as heat.

Practice: Look at a food package already available at home, without eating anything for this task. Record carbohydrate, protein and fat amounts per labeled serving. Identify the serving size and explain why values for the whole package may differ. If no label is available, use a label supplied by your adult tutor. No tasting, heating or chemical experiment is required.

1. Cutting food into small pieces is primarily: A: Mechanical breakdown / B: Chemical digestion by enzymes / C: Cellular respiration
2. An enzyme primarily: A: Supplies all energy as fuel / B: Lowers activation energy / C: Becomes an amino acid each time it acts
3. Protein digestion yields: A: Amino acids / B: Only oxygen / C: Whole cells
4. Why is a strainer only a limited membrane analogy? A: Membranes have selective lipids and proteins, including energy-dependent transport / B: Membranes are made of kitchen metal / C: All particles pass equally
5. Which statement is accurate? A: Only animals perform cellular respiration / B: Plants and animals perform cellular respiration / C: Photosynthesis is chewing

Written proof: Explain why chewing alone does not finish digestion. Name a nutrient, a smaller product of chemical digestion, and the difference between breaking down and absorbing it.

Correction / evidence: _____

Full teaching, delayed checks and source links: <https://arktikeducation.org/academic-recovery/biology.html>