

Lesson 11 — The Four Sciences Climb

Science basics · ages 10–adult · 30 minutes · one screen, the free game, this page

At a Glance

- Game: The Four Sciences Climb (free, no login, plays in the browser) — read.globalsovereignuniversity.org/four-sciences-climb.html. Also on the Homeschool hub: globalsovereignuniversity.org/homeschool.
- Ages & time: Science basics · ages 10–adult · 30 minutes · one screen, the free game, this page
- Prep (2 min): read the Teaching Creed once, open the game, keep this page beside you. That's the whole setup.

Why this lesson

Science is not a list of facts; it's a way to catch yourself being wrong — and that habit can be installed at a kitchen table. This lesson runs the room across physics, chemistry, biology, and earth science while a four-column tally exposes the family's strong and weak science. The game supplies the questions; you keep the tally honest, because the weak column is the homework and the strong column is the confidence.

What the learner will be able to do

- State the one thing a scientific claim must be able to do — be tested, and possibly fail.
- Identify their personal weak science from the tally evidence.
- Name one law of nature being obeyed within arm's reach.
- Test one small everyday claim and report the result, especially if wrong.

The 30-Minute Climb

How to read this: the gold box in each step is your lesson, word for word — run it exactly. The notes beneath are optional support. "The room/the group" = your family; "host" = you.

1 · The Hook (3 min)

“Everything in this room is obeying laws right now — gravity, chemistry, biology, energy. Name one law being obeyed within arm's reach.”

Say it like this: 'within arm's reach' is the constraint that makes it real — gravity on the cup, chemistry in the coffee, biology in the hand holding it. Take three answers, no more.

Watch for / if it stalls: if the room freezes, touch something: 'why doesn't this table float?' Concrete objects unlock abstract laws.

2 · Play Together (12 min)

Climb ten questions across the four sciences; keep a four-column tally (physics / chemistry / biology / earth) of where questions land — the room discovers its strong and weak science. Play together: the group votes before anyone clicks, and every explanation is read aloud — the explanation is the lesson.

Two rituals make it work: (1) everyone votes before anyone clicks, so no one just follows the screen; (2) the explanation is read aloud — the reason, not the right answer, is where the learning is.

Watch for / if it stalls: the four-column tally is the diagnosis — keep it visible and keep it honest. The room discovering 'we're strong in biology, blind in physics' is the lesson paying out.

3 • The Talk (8 min)

1. What makes science different from opinion — what's the one thing a scientific claim must be able to do? (Be tested — and possibly fail.) 2. Which of the four sciences explains most of your daily life? Defend it. 3. What's something “everyone knows” that you suspect is wrong?

You're not fishing for a right answer — you're listening for depth:

- Q1 — testable-and-possibly-false is the whole demarcation line. Contrast 'this crystal heals' with 'this kettle boils at 100°C at sea level' — which one can lose?
- Q2 — defending a science forces synthesis. Chemistry usually wins (cooking, cleaning, digestion), but the defense matters more than the verdict.
- Q3 — the everyone-knows question is where intellectual courage gets built. The host offers one debunked belief they once held; the room follows.

4 • Solo Climb (5 min)

Five questions in the group's WEAKEST column.

Why solo: five questions in the WEAKEST column turns diagnosis into treatment on the spot — nobody strengthens a weakness by climbing their strength.

5 • The Takeaway (2 min)

“Science isn't a list of facts; it's a way to catch yourself being wrong.” · Homework: Test one small claim this week — actually test it — and report the result, especially if you were wrong.

The badge moment: finishing all five steps earns the Bronze ring of this lesson's badge, The Scientist. Mark it on the Passport now; the homework is how Silver and Gold are earned during the week.

The Teaching Creed

You are not the expert; the game is. Your job is to vote last, read aloud well, and ask "why?" one more time than feels natural. Celebrate wrong answers loudly — in here, wrong is where the lesson lives.

GENO — the GSU tutor you can actually TALK to, free, 24/7, understands 70+ languages (32 fully optimized) — can explain any answer a second way.

Adapt It & Measure It

Differentiation

- Younger / preteen: they run the tally marks — column-keeper is a real job — and answer every 'within arm's reach' hook question first.

- One child: parent and child predict each question's column before answering it; classifying the question is its own science skill.
- Large co-op: four corners of the room become the four sciences; learners physically walk to the column they think each question belongs to.
- Reluctant teen: open with the homework promise — 'this week you get to prove something everyone believes is wrong.' Permission to debunk is irresistible.

Evidence of learning (no exam)

Look for three things — Tried (tested one small claim and reported honestly, including a wrong prediction), Noticed (can state the testability rule unprompted), Changed (named their weak science and climbed it solo). Those three words are the whole rubric, and they map onto the badge tiers below.

Gamify It — The Campus Climb

Every GSU lesson is one badge on a 17-badge Climber's Passport, each earned at four depths — the GSU standard Bronze → Silver → Gold → Platinum. All 17 completes the campus.

LESSON 11 BADGE — The Scientist · Bronze — The Climb: finished the 30-minute lesson, all five steps. · Silver — The Try: tested one small everyday claim and reported the result honestly. · Gold — The Proof: reported a test where their OWN prediction was wrong — and said so plainly (the scientist's badge of honor). · Platinum — The Teacher: ran this lesson as host for someone else. The harvest of a teacher is teachers.

"Every person on Earth is born with an American spirit: an untamed yearning for a better tomorrow." — Dr. Gene A. Constant

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