Lesson 22 — The Family Code

Genetics · ages 9–14 · 30 minutes · one screen, the free game, this page

At a Glance

- Game: The Homeschool Climb, Genetics section (free, no login, plays in the browser) — read.globalsovereignuniversity.org/homeschool-climb.html#genetics. Also on the Homeschool hub: globalsovereignuniversity.org/homeschool.
- Ages & time: Genetics · ages 9–14 · 30 minutes · one screen, the free game, this page.
- Prep (2 min): read the Teaching Creed once, open the game to the Genetics section, and gather a few family photos if you have them. That's the whole setup.

Why this lesson

Every child has heard "you have your grandmother's eyes." Genetics explains how that happens: a code called DNA, passed down in genes, about half from each parent. This lesson starts at the family table with traits you can see, uses the climb to teach the words, and ends with the most important idea in the subject: genes are not destiny, because environment and choices shape who you become too.

What the learner will be able to do

- Explain DNA as a set of instructions inside cells.
- Describe how traits pass from parents to children through genes.
- Tell a dominant trait from a recessive one with a simple example.
- Explain why both nature and nurture shape a person.

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)

"Look around the table. Who has whose eyes? Whose laugh? Whose height?" Use the photos if you have them.

Say it like this: *list three traits that run in your family. Include one that skips a generation if you can; it sets up the recessive card.*

Watch for / if it stalls: *if family traits are a sensitive topic, use a famous family, or pets and their litters.*

2 · Play Together (12 min)

Climb the Genetics section together. Read each teach card aloud, then vote. After the dominant and recessive card, look back at your family list: which trait might be hiding?

Two rituals make it work: *(1) read each teach card aloud before the question appears; (2) everyone votes before anyone clicks, so no one just follows the screen.*

Watch for / if it stalls: *on the Mendel card, tell the story: a monk counted thousands of pea plants and found the rules everyone else had missed. Patience made the discovery.*

3 · The Talk (8 min)

1. Why might two brown-eyed parents have a blue-eyed child? 2. What is something about you that genes did not decide? 3. Why did counting pea plants matter so much?

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

- Q1 — each parent can carry a hidden recessive gene. When the child gets both hidden copies, the trait shows.
- Q2 — listen for skills, habits, kindness and effort. Genes load the dice; choices play the game.
- Q3 — Mendel found patterns by careful counting. Science is often patience, not genius.

4 · Solo Climb (5 min)

Answer the questions at your own pace.

Why solo: *understanding your own inheritance is personal. Solo questions check each learner's grasp without the family's help.*

5 · The Takeaway (2 min)

"DNA writes the first draft. You write the rest." · Homework: make a trait chart for three family members — eye color, hair, height and one trait that is a choice, like a favorite skill.

The badge moment: *finishing all five steps earns the Bronze ring of this lesson's badge, The Code Reader. 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 (9–10): focus on visible traits and the recipe-book picture of DNA; save dominant and recessive for later.
- One child: interview a grandparent about which traits run in the family.
- Large co-op: survey the group for simple traits like tongue rolling and tally the results like Mendel.
- Reluctant teen: start with DNA testing kits and what they can and cannot tell a person.

Evidence of learning (no exam)

Look for three things — Tried (made a trait chart for three family members), Noticed (can explain how a hidden trait can appear), Changed (names a strength they built by choice, not by genes). 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 the Climber's Passport, each earned at four depths — the GSU standard Bronze → Silver → Gold → Platinum.

LESSON 22 BADGE — The Code Reader · Bronze — The Climb: finished the 30-minute lesson, all five steps. · Silver — The Try: made a family trait chart that includes one trait of choice. · Gold — The Proof: reached Gold on the Genetics climb and explained dominant and recessive with an example. · Platinum — The Teacher: ran this lesson as host for someone else. The harvest of a teacher is teachers.

The book behind this lesson: Genetics — Homeschool Edition, by Dr. Gene A Constant — Chapter 1 (Discovering Family Traits), Chapter 2 (Genes: The Instructions Inside You) and Chapter 5 (The Science of Inheritance).

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