THE STANDARD

Body as System of Interacting Subsystems

Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells.

ANCHORING PHENOMENON

The Stair Sprint

A student sprints up two flights of stairs and stops at the top. Heart pounding. Breathing fast. Legs burning a little. Sweat starting on the forehead. Watch it on video, then go do it. Inside that 30-second event, at least five subsystems are talking to each other. The body that walked away from the stairs is the same body, but every system is in a different state than 30 seconds earlier.

> DRIVING QUESTION
>
> *"Which body systems are talking to each other when you sprint up stairs, and how do you know?"*

INVESTIGATIVE 1

The Sandwich Trip

A student takes one bite of a sandwich and chews. The food disappears into the body and the student keeps going about their day. Inside the next several hours, that bite is going to get broken down, sorted, and delivered to cells all over the body. Use this one to sharpen the hierarchy lens the anchor is pushing on: groups of cells, tissues, organs, systems, all working in sequence.

> DRIVING QUESTION
>
> *"How does one bite of food turn into energy for cells all over your body, and how many systems does it take?"*

INVESTIGATIVE 2

The Stubbed Toe

A student walks past a coffee table and slams their pinky toe into the leg. They yank the foot back before they even think about it. A second later, they say "ow." The reflex happened before the conscious thought. Two different systems doing two different things, both triggered by the same event. Same body, two different system responses, almost on top of each other.

> DRIVING QUESTION
>
> *"Why does your foot move before you feel the pain, and what systems are doing the work?"*