

SESSION 3 | PBS: STRUCTURE, PROCESS, AND EVIDENCE

A Cleft Marks a Step That Did Not Finish

Essential question: What does a cleft tell us about the normal developmental process?

TODAY'S TAKE-HOME A cleft is evidence that a specific developmental join did not finish in its critical window.

Bring yesterday forward

Yesterday: tissues must meet and join on time.

Quick reading

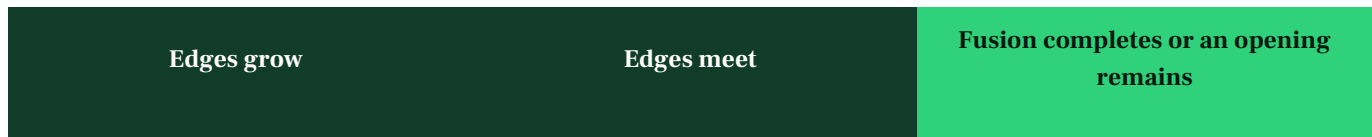
A cleft names an opening that remained after a join did not finish. It tells us the result, not one single cause.

Optional reading: <https://www.nidcr.nih.gov/health-info/cleft-lip-palate>

Deck map

Slides 5-6: study and question the picture | Slide 7: name the rule | Slide 8: read the biology evidence | Slides 9-11: transfer and decide | Slides 12-13: exit and bridge.

The visual in words



Build the idea

Model start: A cleft happens when two tissue edges do not complete fusion during a critical window.

- Use person-first language to describe lip only, palate only, and both.

- Complete: A cleft happens when _____ does not _____ in time.

- List one cell-level process that could interrupt a tissue-level fusion.

Use the analogy, then return to the science

ANALOGY

Zipper

BIOLOGY

An opening is a clue that the teeth did not engage correctly at the needed time.

Apply the model to Mateo

A visible cleft describes a result. It does not by itself prove one gene, one exposure, or one cause.

What can this lesson explain? What cannot it prove?

Exit ticket and next unlock

EXIT

Name one process that could interrupt fusion.

NEXT

Which traveling cells build the tissues that are supposed to meet?

Four truths check

Truth 4: A birth difference can be traced to disrupted developmental processes. Circle the part of today's notes that supports this truth.