

SESSION 2 | PBS: DEVELOPMENT OF BODY STRUCTURES

How a Face Is Built

Essential question: If we could film development, what would we see from weeks 4 to 12?

TODAY'S TAKE-HOME The face is assembled when growing tissues move, meet, and join during brief windows of time.

Bring yesterday forward

Yesterday: careful observation becomes a testable question.

Quick reading

The early face is built from tissue regions that grow, move, meet, and join during short time windows. Timing is part of the mechanism.

Optional reading: <https://pmc.ncbi.nlm.nih.gov/articles/PMC3039913/>

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

Grow toward the midline

Meet on time

Join into one structure

Build the idea

Model start: The tissues that help build the upper lip grow toward each other and meet during a short window around weeks 6 to 7.

- Label frontonasal, maxillary, and mandibular prominences on the class diagram.

- Mark the lip window and palate window on a week 4 to 12 timeline.

- Explain why growth alone is not enough for two tissues to join.

Use the analogy, then return to the science

ANALOGY

Bridge build

BIOLOGY

Two crews must reach the same place at the same time for the connection to close.

Apply the model to Mateo

Mateo's case directs our attention to which tissues were supposed to meet and when that should happen.

What can this lesson explain? What cannot it prove?

Exit ticket and next unlock

EXIT

Explain why timing matters during facial development.

NEXT

If two tissue edges do not join, what does the opening that remains tell us?

Four truths check

Truths 2 and 3: Development sculpts and moves tissue on a schedule. Circle the part of today's notes that supports this truth.