SESSION 6 | HBS: TISSUE FORMATION AND REMODELING

Fusion Requires Sculpting, Not Just Growth

Essential question: How do two growing palatal shelves become one continuous structure?

TODAY'S TAKE-HOME **Fusion succeeds when tissues grow together and then actively remodel the seam between them. Removal is part of construction.**

Bring yesterday forward

Yesterday: signals help cells choose a specialized fate.

Quick reading

Palatal shelves must grow, contact, and remodel a temporary seam. A finished structure requires active sculpting, not growth alone.

Optional reading: https://pmc.ncbi.nlm.nih.gov/articles/PMC3 552 505/

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

Shelves grow	Edges contact	Seam remodels	One continuous palate

Build the idea

Model start: Palatal shelves must grow, elevate, contact, and then remodel their temporary seam to make a continuous palate.

- Put growth, elevation, contact, and remodeling in order.

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- Describe why the seam is temporary.

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- Explain why more growth cannot repair every fusion failure.

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- Use the word sculpting in a one-sentence explanation of fusion.

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Use the analogy, then return to the science

ANALOGY	BIOLOGY
Bridge scaffolding	Temporary supports help make a connection, then must be removed so the finished pathway is open.

Apply the model to Mateo

Students use the process map to distinguish problems of arrival, growth, contact, and seam remodeling without assuming one cause.

What can this lesson explain? What cannot it prove?

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Exit ticket and next unlock

EXIT

Explain why removal is part of construction.

NEXT

What molecular instructions help cells build and remodel at the right time?

Four truths check

Truth 2: Development is sculpting, not just growth. Circle the part of today's notes that supports this truth.