Engineer a better future: How human-centered design thinking connects with Units of Inquiry

Alpine Elementary IB World School, Longmont, CO
Dede Frothingham – Principal,
Amber Marselek – IB Coordinator
Axel Reitzig – STEM Coordinator
Jennifer Tatham – PE Teacher
Tuning in
Purpose

- Inquire into how the *human-centered design thinking process* can support the PYP in developing internationally-minded citizens who can compete in tomorrow’s job market.

*(IB + STEM = ?)*
Today’s game plan

• Experience each step of the design thinking process.

• Draw connections between the design thinking process and the action cycle.

• Understand how to use a Unit of Inquiry central idea to craft a design challenge.

• Brainstorm ways a design challenge could be used as a provocation, inquiry-based learning opportunity, or assessment.
Design Thinking Process:
Stanford Design School

Empathize
Define
Ideate
Prototype
Test
Empathize

• Understand the nature of a problem or challenge.

• Through research, identify a problem’s constraints and requirements.

• Connect with how the client feels or thinks in order to effectively design for them.
Empathize

- Reflect on the perspectives presented in the video.
  - Who is the client?
  - What do you see and hear?
  - What are problems or challenges?

- Consider additional research
Empathize

- Video: Building Empathy
Define

• Frame the problem or challenge in a clear way.

• State the problem or challenge in a way that encourages action.

Consider the following central idea: *Personal choices and access to resources contribute to our individual health.*

**Challenge:** Design a movement-based classroom break so that students will stay healthy and engaged.
Ideating Gone Bad

- Video: Ideating Gone Bad
Ideate

• Brainstorm as many solutions as possible to the design challenge

• Creativity and open-ended thinking are encouraged
Ideate

- Ground rules for ideation:
  - Accept all ideas – Anything goes!
  - Fill up your page
  - Use pictures or headlines
  - Build on the ideas of others

Design a movement-based classroom break so that students will be healthy and engaged.
Prototype

• Move from “think” to “thing.”

• Choose the best idea, and draft a 2D iteration.
Test

- Present your prototype and solicit feedback from the client or other interested parties
- Team with another group to present your movement prototype

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<thead>
<tr>
<th>+ Positives</th>
<th>Δ Changes</th>
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<td>? Questions</td>
<td>Additional Ideas</td>
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Drawing Connections

• How is the Design Thinking Process connected to the Action Cycle?

• Brainstorm ways a design challenge could be used as a provocation, inquiry-based learning opportunity, or assessment.

• How might this process contribute to student development of the essential elements of the PYP?
Samples of Design Thinking

• Music: Design a playlist for a client for a public event. Choose one song to perform.
Samples of Design Thinking

• Third Grade Unit of Inquiry: Understanding cycles helps us to make predictions about the natural world.

• Video: How can young engineers solve problems related to a 500 year flood?
Planning for a UOI

Using your favorite current UOI, create a design challenge that would engage your students.

What perspectives could be considered?
Questions?

frothingham_deanna@svvd.org
marsolek_amber@svvsd.org
reitzig_axel@svvsd.org
tatham_jennifer@svvsd.org

Empathy clip from *Ferris Bueller’s Day Off*