SCED 542 The E in STEM: Meaningful Content for Engineering
Comparative Analysis of Design Models
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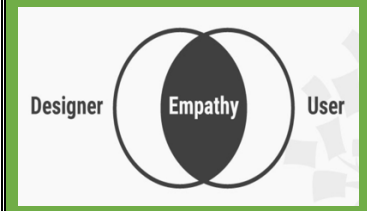
Usable Design Process	**1. Investigate** * Mindset: Empathize * Analyzing problem * Research ideas * Resource	**2. Design** * Mindset: Be daring! * Brainstorming with a team * Divergent and convergent thinking * Apply STEM concept	**3. Create** * Growth mindset: Early failure lead success * Build a working model or rapid prototype * Build to think	**4. Evaluate** * Mindset: test to learn * Evaluate solution through testing * Engage in Ideation process to improve design * Getting feedback	**Suitable for IB elementary students**
 **Nasa Engineering Design Process**	1. Ask* 2. Image*	3. Plan	4. Create	5. Experiment* 6. Improve*	**Engineering focus**
 **IB Design Cycle**	**1. Inquiring* and analyzing***	2. Developing ideas	3. Creating the solution	4. Evaluating	**Inquiry-based learning**
 **Stanford d.school Design Thinking Process**	1. Empathize* 2. Define	3. Ideate	4. Prototype	5. Test	**User-centered**