Using Design Thinking to Bring Computer Science to Your Classroom

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http://bit.ly/EngageOKDesignThinking

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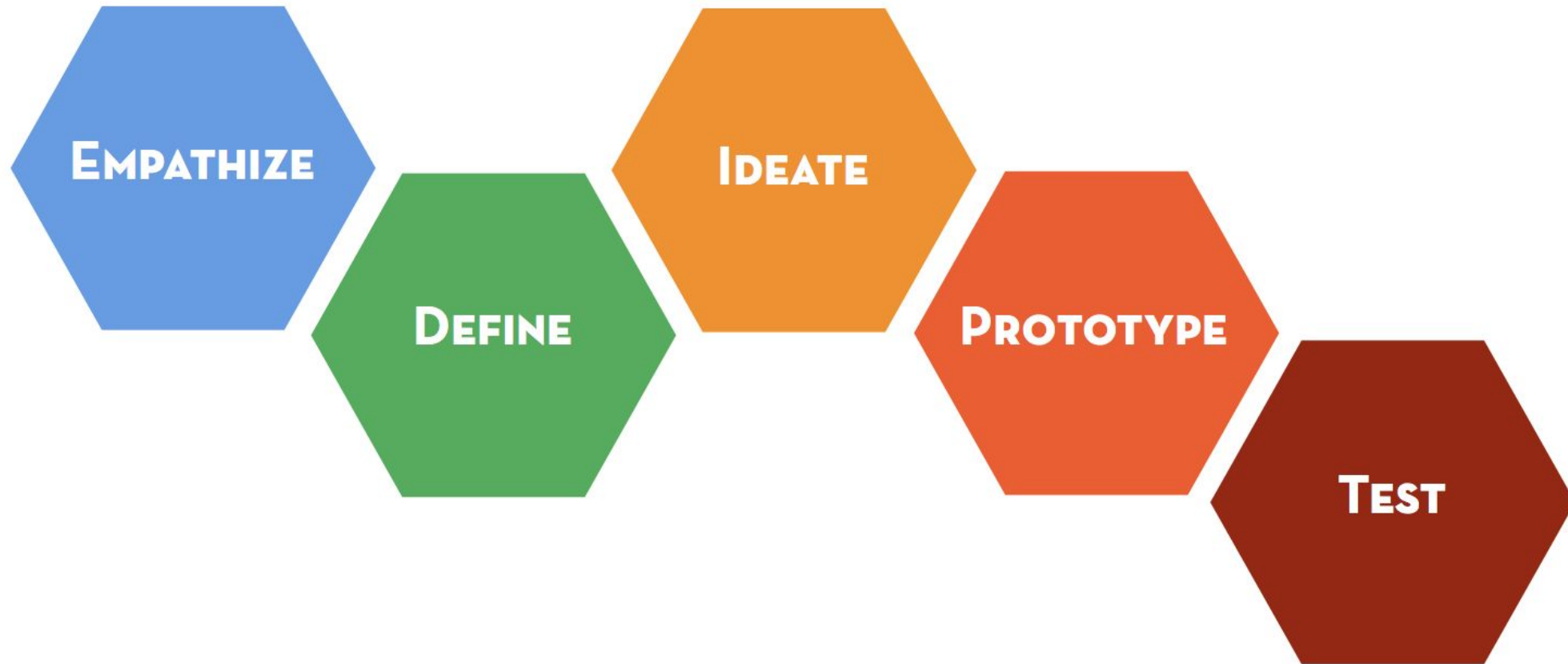405-522-5628

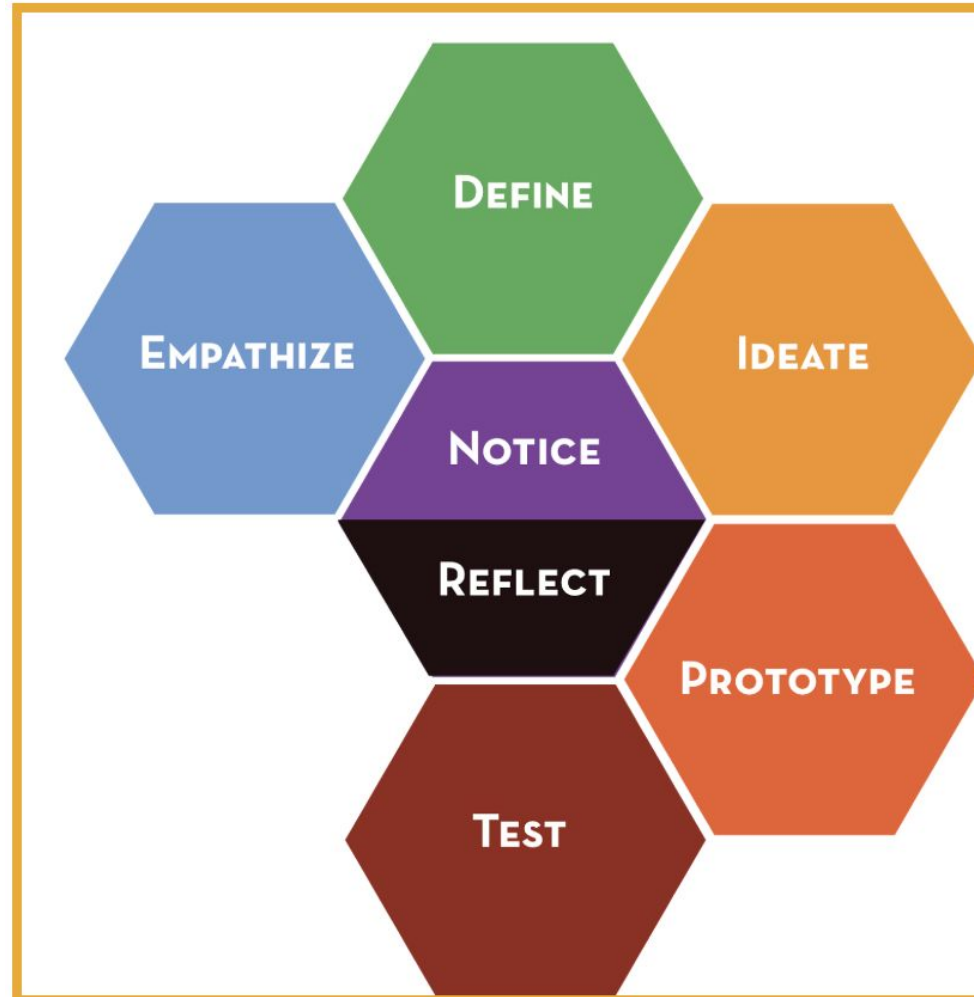@ChristineGoKo

What is Design Thinking?

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How does this connect to Computer Science?

- Breaks the Stereotype
- Real-World Connections
- Empathic purpose for CS
- Integrating CS with other Subjects

- **Applications within our Standard Strands** (Computing Systems, Networks and the Internet, Data Analysis, Algorithms and Programming, Impacts of Computing)

Design Thinking Activity:

The mission: Redesign the gift-giving experience…
for your partner.

1. Empathize
2. Define
3. Ideate

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ON THE ROAD

Empathize

Discover the emotions that drive user behavior.

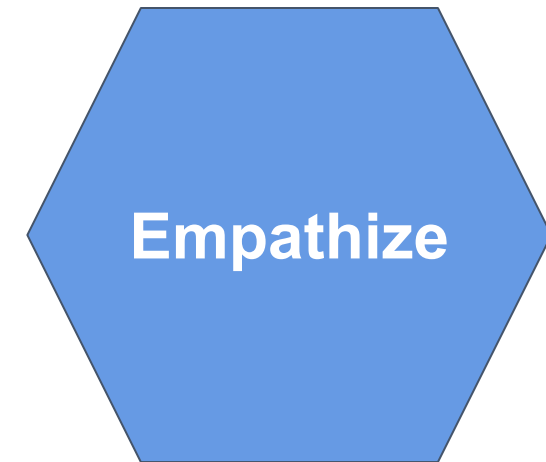**Uncover user needs (which they may or may not be aware of).**

Use your insights to design innovative solutions.

- Observe
- Engage
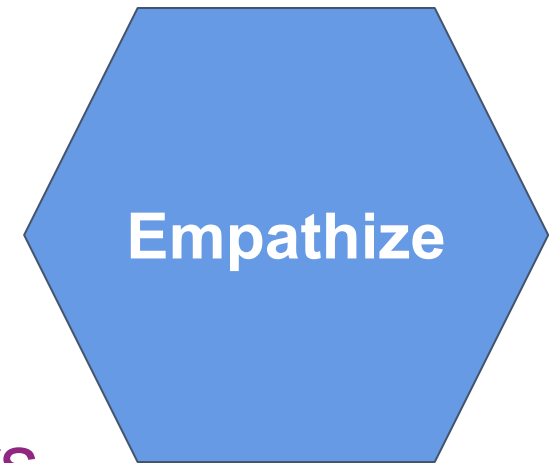- Immerse

Empathize: Interview a partner

Before Interviewing:

- Brainstorm Questions

- Identify and Order Themes

- Refine Questions

Empathize

Empathize: Interview a partner

During the Interview:

- Ask why (even when you think you know the answer)

- Never say "usually" when asking a question

- Encourage stories

- Look for inconsistencies

- Pay attention to nonverbal cues

- Don't be afraid of silence

- Ask questions naturally and don't suggest answers

Empathize

Define

Define your challenge based on new insights gained through your empathy work.

Develop your Point of View (problem statement) to use as a solution- generating springboard.
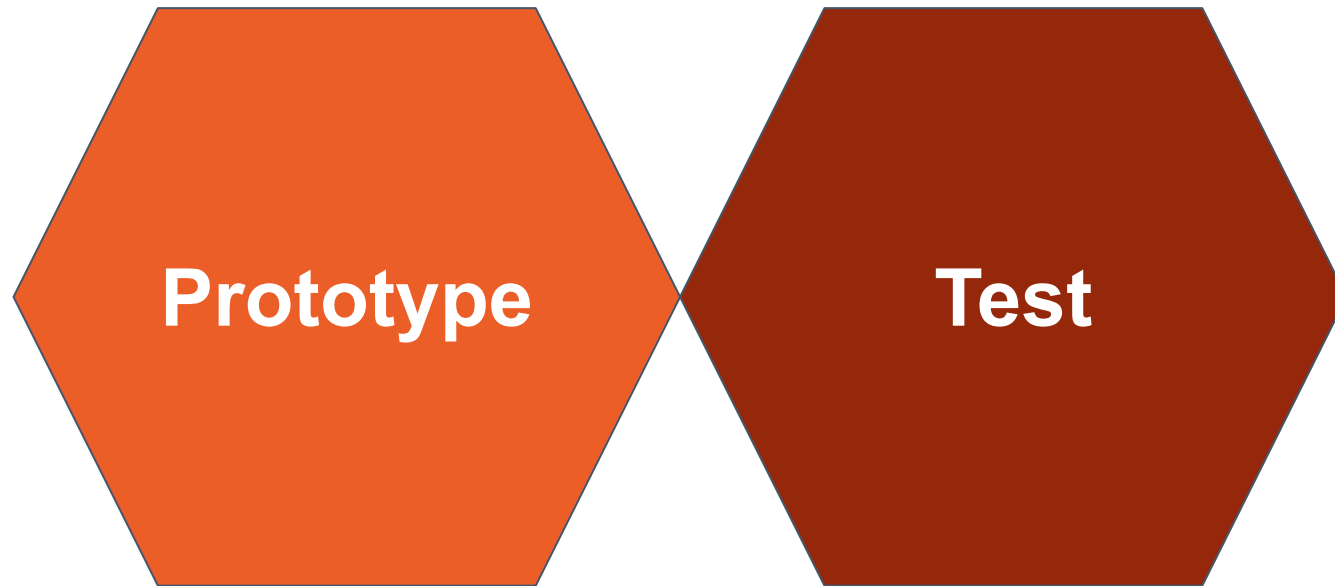
- Capture
- Reframe

Ideate

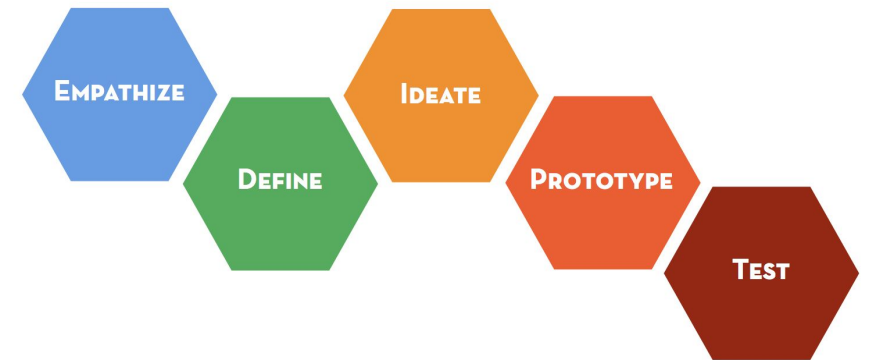**Create and explore possible solutions for your users.**

Don't be afraid to be "out there": some of the best solutions come from the most outrageous ideas.

- Harness
- Uncover
- Create

Next Steps

Prototype

Test

Test

Rework

Empathize

Define

Ideate

Prototype

Test

Resources

Alignment to Oklahoma Academic Standards for Computer Science, K-12

- [Crafting a Design Thinking Class: Planning Guide](#)
- [Design Thinking Definitions and Activities Deck](#)
- [Overview of Design Thinking Process](#)
- [Liberatory Design Process Card Deck](#)
- [Leveled stages of Design Thinking mindsets](#)

Exit Ticket:

1. One takeaway from this session

2. One idea you want to see expanded on in the fall

3. One idea you'll be using in your planning/instruction

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it should take no more than 1-2 minutes.

Thank you, and have a great day!

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