

Engaging in Computer Science in Non-Traditional Ways



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Today's Intentions

Agenda

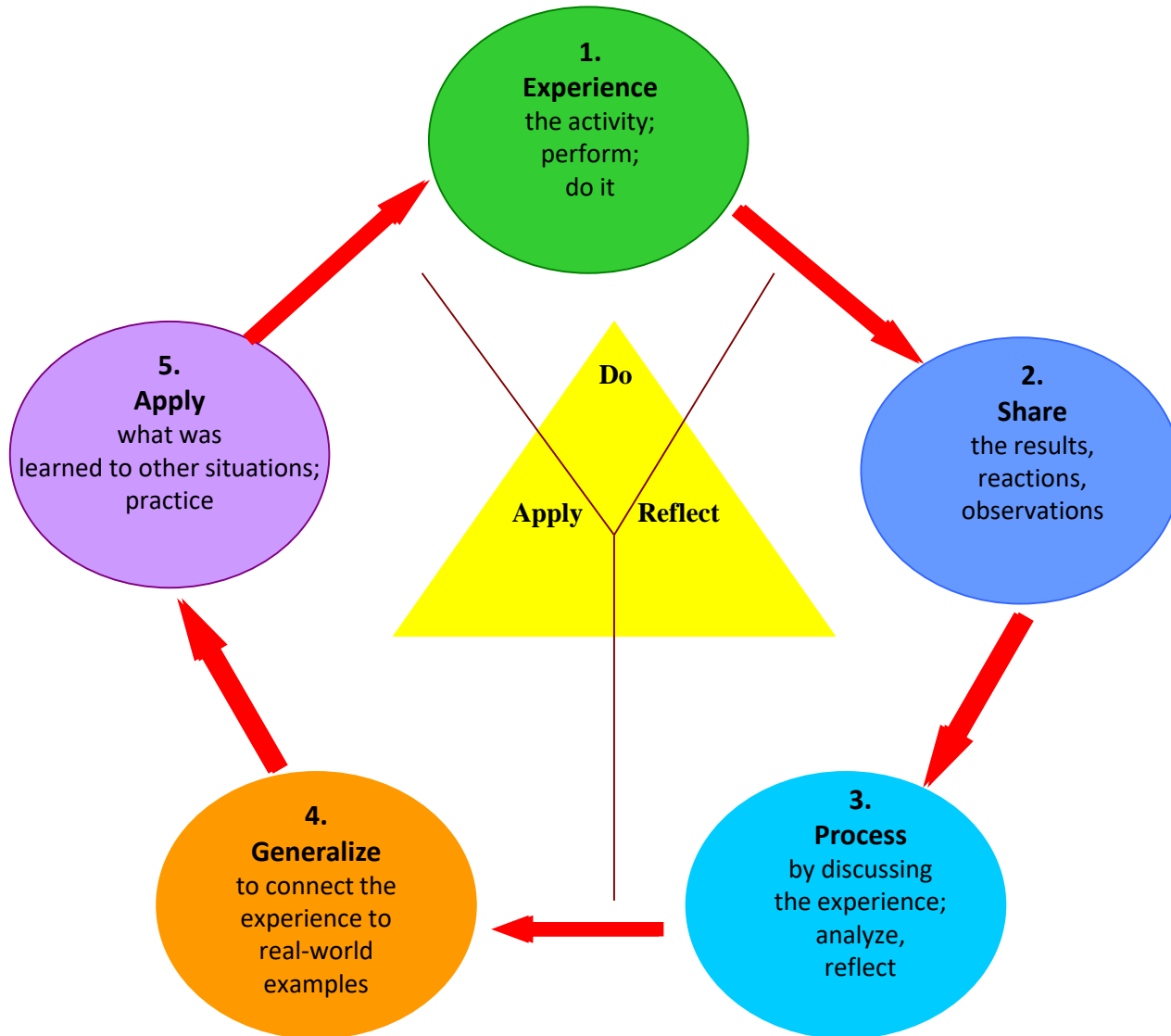
- Icebreaker activity
- Experiential Learning Model
- Computer Science Breakout Activity
- Breakout Report Back
- Wrap up

Icebreaker Activity

**How would you rank your computer science skills or
comfortability in CS?**

1 being the least and 5 being the greatest

Experiential Learning Model



What is the Experiential Learning Model?

Consider that we remember:

- 20% of what we read;
- 20% of what we hear;
- 30% of what we see;
- 50% of what we see and hear;
- 70% of what we see, hear, and discuss;
- 90% of what we see, hear, discuss, and practice

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1. Experience
the activity;
perform;
do it



2. Share
the results,
reactions,
observations

- What did you do?
- What did you see?
- What equipment was needed to complete the task?
- What part of the experience was most difficult? Easiest?

3. Process

by discussing
the experience;
analyze,
reflect

- How did you ...?
- How is your imitation flashlight different than one you would buy in the store?
- What challenges did you have in ...?
- What affect did the challenge have on your project?

4. Generalize
to connect the
experience to
real-world
examples

- What did you learn from the experience?
- How does this relate to other things you have been learning?
- What is another time that you experimented to solve a problem?

5. Apply

what was learned
to other situations;
practice

- When faced with a new problem, like doing a cartwheel, describe some ways that you could figure out the answer.
- How can you relate what you learned in this experience to other parts of your life?

CS ACTIVITIES

- 20 minutes with a host
- Identify a computer science activity
- Prepare to report back 4-5 sentences that describes the activity.
- Turn camera's on, unmute yourself—**ENGAGE!**

**Turn camera on, unmute
yourself—ENGAGE!**

ACTIVITY EXCHANGE

Ozobots

Virtual Reality

**4-H STEM Challenge,
formerly known as 4-H National Youth
Science Day (4-H NYSD)**

Colours by Numbers

Scratch

4-H Discover Code

WRAP UP

Evaluation

https://missouri.qualtrics.com/jfe/form/SV_dhzplcwDbqdN2LP

Any questions?



Resources

Colours by Numbers--

<https://csunplugged.org/en/topics/image-representation/unit-plan/colour-by-numbers/>

4-H STEM CHALLENGES- <https://4-h.org/parents/4-h-stem-challenge/#!past-challenges>

Virtual Reality-- https://edu.google.com/products/vr-ar/expeditions/?modal_active=none

Ozobots-- <https://ozobot.com/>

Scratch--- <https://scratch.mit.edu/>

Discover 4-H Code- <https://utah4h.org/discover/>

Additional resources- <https://curriculum.code.org/csf-19/coursed/3/>

Thank you

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