

# STEM-Centered Learning Newsletter



## STEM-Centered Learning Definition:

STEM-centered learning focuses student thinking and discussion around real-world phenomena, problems, issues, or events across all content areas with the purpose of students collaborating in order to make sense of the world and persevere in solving problems.



## Indicators of Success:

- Wonder
- Sense Making
- Problem Solving
- Creativity
- Collaboration
- Communication
- Critical Thinking
- Grit

## What is STEM-Centered Learning?

STEM traditionally stands for Science, Technology, Engineering, and Math. In Davis School District (DSD), STEM has been refined to incorporate eight key indicators: wonder, sense making, problem solving, creativity, communication, collaboration, critical thinking, and grit. Together, these eight indicators shape instruction in DSD to support student success and growth.

Teachers guide students to wonder about the world around them by engaging them in real-world problems, tasks, natural phenomenon, issues, or events allowing student questions to drive the learning. Students engage in exploratory inquiries, gain an understanding of gathered information, and assign meaning to perceived randomness. Additionally, students will focus on patterns for prediction to understand phenomenon. In DSD problem solving is a collaborative process of discovering solutions to difficult or complex issues.

When students work together on a problem they must think critically and creatively while also building self-awareness, self-management, and personal responsibility to the group. The problem-solving process requires students to utilize prior knowledge, analyze facts and gather data. By engaging students in creative problem solving we will equip students with vital skills for future success.

*This year has been full of challenges and setbacks, but the STEM team is pressing forward. STEM-centered learning provides students the skills to innovate and thrive while being able to work through unknown real-world problems. The STEM newsletter will be sent out monthly and focus on the indicators of success and communicate the latest information about STEM-centered learning and opportunities in DSD.*

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## STEM Indicator of the Month

### Wonder

When teachers ask intentional questions to expand student thinking and help students explore concepts, learning is enriched and curiosity grows. Teachers asking intentional questions are nurturing student's sense of wonder and the result is a classroom full of students engaged in joyful and appropriately challenging learning.

When students wonder about their world, they experience a feeling of surprise mingled with admiration. We strive for students to experience something beautiful, unexpected, unfamiliar, or inexplicable every day. Teachers guide students to wonder about the world around them by engaging them in real-world problems, tasks, natural phenomenon, issues, or events allowing students to drive the learning.

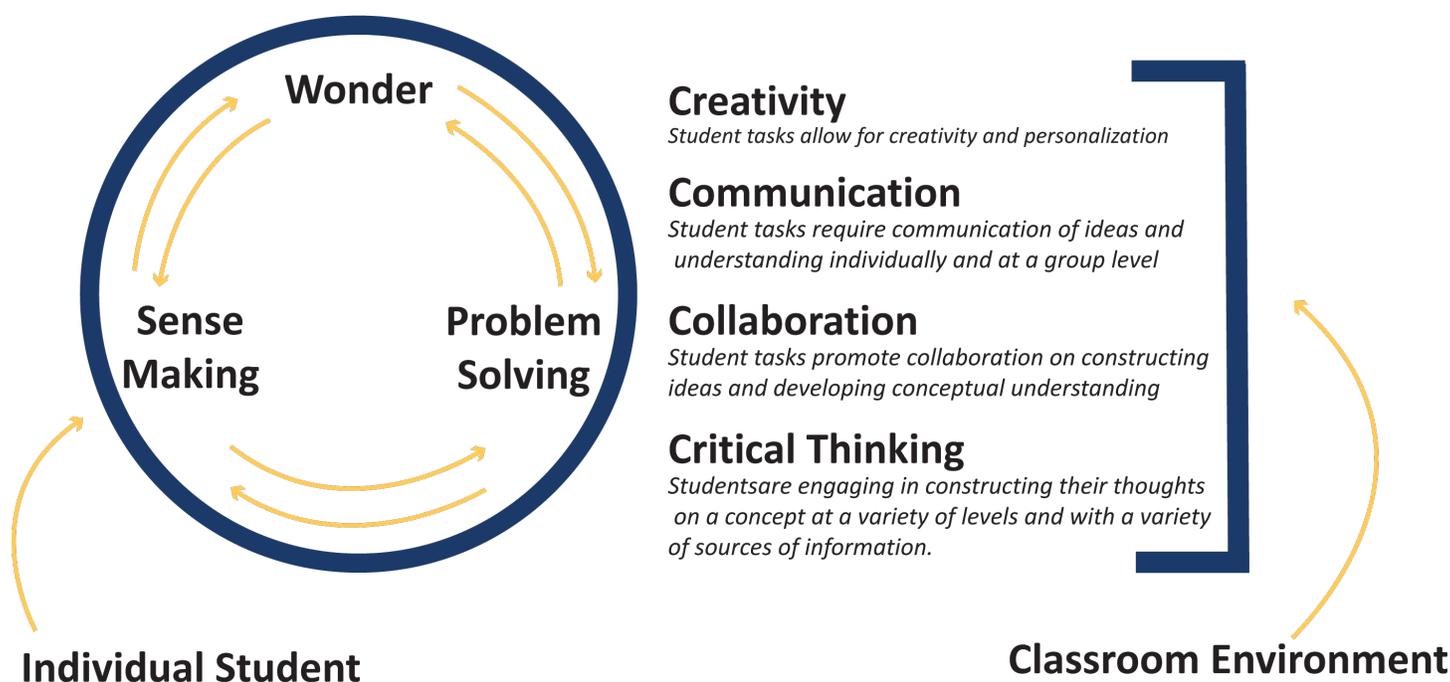


Figure 1. Student-centered model that drives STEM learning opportunities in Davis School District.

## Upcoming STEM Professional Learning Opportunities

- 10/8/20- Utah Science Teacher Association Conference
- 10/22/20- Math Endorsement Class
- 10/29/20- Math Endorsement Class
- 11/5/20- Math Endorsement Class
- 11/2/20- STEM Prep Specialist Share-a-Thon
- 11/4/20- Computer Science Prep Specialist Share-a-Thon
- Ongoing- Utah Science with Engineering Education (SEEd) Standards K-12 Online Course  
[tinyurl.com/OnlineSEEdPD](http://tinyurl.com/OnlineSEEdPD)

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