Making Space for Equity: Student Initiated Pathways

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WARM UP

WHY IS STEM/STEAM EDUCATION IMPORTANT TO YOU AS A 21ST CENTURY EDUCATOR?

using a sticky note document your answer. one answer per sticky
Please use the notecard on your table to make a table tent name tag so we know a little bit about you!

*In the bottom right corner please put an S / T / E / A / M to indicate your greatest area of expertise or passion.
● Share the Air- Step Up, Step Back
● Solution Focused- Think of possibilities not limitations
● Take, Toss, Tweak- Open source
● Two Feet- Your feet work, Your seat does not have a seat belt, take care of your needs.
GRAND RAPIDS PUBLIC MUSEUM HIGH SCHOOL
Museum School Video
The State of America’s Workforce

**UNITED STATES**

40% of U.S. companies report difficulty in filling positions because of a lack of STEM skills.¹

**INTERNATIONAL**

$2.5 Trillion
The U.S. would gain an extra $2.5 trillion in Gross Domestic Product between now and 2050 if its students scored at the international average on math and science tests.²

27% of the new high-skills jobs related to agriculture that will be created in the next five years will require a STEM education.³

86% of engineers and 74 percent of computer professionals are men.⁶

21% STEM employees earn 21% more than individuals in non-STEM fields.⁷

14% of the engineering workforce is made up of women.⁴

10% Underrepresented minorities hold only 10% of science and engineering jobs despite making up over a quarter of the U.S. population age 21 and older.⁵

Sources:
2. Washington Center for Equitable Growth, January 2015
4. CBO analysis of U.S. Census Bureau report on STEM college graduates, 2014
WHAT IS YOUR EXPERIENCE WITH EQUITABLE ACCESS TO STEM ENVIRONMENTS?
From the mouth of Museum Students (and Nate, Theme Teacher)
If..Then, Yes...but, Yes...and Protocol

Take a walk around the room.

When you find a statement that you agree with write “yes...and” adding another thought that confirms the author’s thought.

ex: Yes...and when STEM experiences are supported by the administration it can be golden!

When you find a statement that you disagree with write “yes...but” adding a thought that differs from the author’s thought.

ex: Yes...but what happens when there is not money in the budget for materials?

When you find a statement that challenges your thinking write “if ...... then” adding a thought that helps you wrap your head around the thought.

ex: if there were more resources for STEM experiences at my school I think I could do them.
CONSTRAINTS | AWARENESS IS ESSENTIAL
Note: write your word or phrase as if a hashtag

Word Cloud
Before we start take a 10 minute break.
GOAL: To brainstorm ways of overcoming common constraints to designing student initiated pathways with STEM experiences for the betterment of the group.

PRODUCT: A 1 minute share out of your ideas in a theatrical or non-theatrical way.
BRAINSTORMING PROTOCOL:
-- Defer judgement: every idea is a good idea.
-- Write it down...your memory is not as good as you think.
-- More than 10. The best ideas come after your 10th.
-- Share the air: Let everyone's genius shine.

→ 3 MIN to Brainstorm
→ 2 MIN to Narrow to 3
→ 3 MIN to scheme your share out.
Before we start take a 10 minute break.
Presentations

Before we start take a 10 minute break
Before we start take a 10 minute break.
[Student Voice]

Before we start take a 10 minute break
ITERATION 1 | STUDENT VOICE MEETS COMMUNITY VOICE
[ITERATION 1 | MAKER MONDAY- Maker Bot]
ITERATION 2 | MAKER MONDAY - Laser Cutter
[MAKER MONDAY | WOODSHOP TOOLS]
[Student Reflections] Before we start take a 10 minute break.
Take AWAYS!
Thank you!