



Mabry Middle School

Cobb STEAM Walk #3 (Face-to-Face)

12-13/21

Walk Team: Sally Creel, Tania Pachuta, Christian Cali, Michelle Mikes, Chris Ferrell, Holly Frilot, Christopher Croom, Joseph Woodruff, Laura LaQuaglia, Jessica Espinoza, 2 Mableton ES teachers

Parent/Community/Teacher Panel

- Parents:
 - Interests have broadened at home now that arts have been integrated.
 - Son more engaged and more interested in how things work.
 - Appreciate cross-disciplinary approach of STEAM projects; enhancing soft skills/4Cs
- Community:
 - KSU: Cell Biology Outreach; 7th grade projects, science, art, computer science, manufacturing technology; cell structures (2D→3D).
 - Cobb Water: promote environmental outreach; Mabry is one of most engaged schools they work with; STEM Nights; Clean Water Lab; Annual Watershed Day; Creek Study; Water Art
- Teachers:
 - PTSA grants support bringing in artists; STEAM kits, 3D printers
 - Each Tuesday is collaborative planning; Early Release Days are STEAM-focused.
 - 8th grade math did bee pollination project in Learning Commons; exponential numbers.
 - Students becoming more comfortable with being creative.

Debrief

- **Rigorous & Relevant STEAM Learning Culture**
 - Staff buy-in is apparent; even wanting to move forward during the pandemic year with STEAM.
 - Fine arts vocabulary very apparent and students are learning at a deeper level.
 - Peer-to-peer feedback
 - The new math GSE standards have a math modeling component which can support EDP.
 - We saw lots of teacher facilitators today.
 - Students were able to verbalize their challenges w/Haiku
 - Periodic table/French project was a great example of a complex project that required higher level thinking.
- **STEAM Learning Experiences & Outcomes**
 - 4Cs very apparent in all classes.
 - Students using BYOD appropriately (all focused on their projects).
 - For future advanced certifications, they are usually wanting to see a focus on *real-world* problems.

- Bee project: Can you connect with a Citizen Scientist Project for some data collection to tie into investigative research indicator
- Student clubs: upcoming opportunity: <https://cobbrtc.weebly.com/>;
- If pursuing DOE certification, they like to see a scientific journal being used with student “messy thinking.”
- **Teacher Collaboration & Professional Learning**
 - Collaboration charts and process boards are very strong.
 - Dedicated planning time.
 - Evidence of teacher PL being implemented in classrooms.
- **STEAM Community Engagement**
 - Increased community partnerships over the past few years.
 - Continue to engage partners and use their expertise

General Comments

- Kudos to being so active in improving on suggestions from previous walks. Very apparent you took committee’s feedback.
- CONGRATULATIONS for becoming Cobb STEAM certified!!

Mabry Middle School Cobb STEAM Walk #2 (Face-to-Face) 10-27-21

Walk Team: Sally Creel, Tania Pachuta, Christian Cali, Ashley Clody, Chris Ferrell, Pamela Cain, Tamiaka Grizzle (& 2 teachers from Mableton ES), Hannah Oldham, Alana Davis, Barbara Hancock, Stephanie Sanders

Teacher Panel

- Despite the challenges of this year, all staff are on board with STEAM.
- Student input and products are full of detail.
- Learning Commons is always filled to capacity in the mornings.
- STEAM activities helping students “re learn” how to communicate and collaborate with each other after home learning throughout the pandemic.
- Teachers from different subject areas seek help from others to understand standards (i.e. social studies teachers consulting math about economics concepts).
- Dot Day project carried on between two different classrooms. Collaboration amongst teachers and students.
- Teachers are aware of what others are teaching; through CCC meetings and process boards; curriculum maps & making connections; media specialist helps make connections too.; early release time used to planning; process boards have developed over time.
- Excitement about 1:1 technology initiative and allowing students to be technology producers.
- Planning time, PL, having a STEAM leadership team are crucial to a school’s success.

STEM Overview

- Different subject areas have adjusted their own EDP diagram to fit better with their subject.

- STEAM themes each quarter.
- Awesome reference sheets created since last year.

Glow

- Branding on the walls, “showing off” the boards and student work is very well done. Showing progress and how everything is a “work in progress.”
- Collaboration boards in grade level rooms are powerful example of ongoing collaboration.
 - Next steps: use a key or label to show which sticky notes were from what subject; would be easier for “outsiders” to understand.
- Integration in most classrooms.
- Teacher collaboration is strong; culture in place with protected planning time.
- Body systems & social studies analogy lesson was a very unique example of making interdisciplinary connections.
- STEAM leadership team strong and adds to STEAM culture in school.
- Showcase your veteran staff and the culture built over time that has helped with retention.
- Students were able to articulate connections between subject areas.
- Student clubs are strong.
 - CTAE has CTSOs that may be an opportunity.
- Strong focus on vocabulary.
- Technology integration is a strength.
- Rubrics & checklists for both students & teachers!
- Your walk schedule today was at a good pace and flowed nicely.

Grows

- For next walk: having lesson plans handy outside classrooms so it’s more obvious to observers which standards were being integrated, such as fine arts (making sure all 4 domains of fine arts are incorporated in some way--emphasize use of **fine arts vocabulary**, in particular)
- Math integration was not always clear (particularly what standards were being used, such as with Bridge Building activity).
- Interdisciplinary connections in Connections classes weren't as apparent.
- Increase variety and number of partnerships.
 - Bridge project: could connect with an engineer to “Skype in” for students to consult with about their designs.
 - Can you harness those “helicopter parents” to find guest speakers? :)
- Note in your portfolio that teachers are using their PL in their instruction (MIE certification→ use of O365 with student projects).
- Next step: collaborative PBLs between/amongst classes (not just single activity in a single class that integrates a different domain’s standards).

Cobb STEAM Walk #1 (Virtual) 2-26-21

STEAM Indicators Form Results

- [Synchronous Classroom Observation](#) (Mabry Walk Team)

- [STEAM Cobb Indicators](#) (STEAM Review Committee)

Teacher Panel

- The Flipgrid introduction to the teacher panel portion was a GREAT addition that we haven't seen before. Really gave us a good feel for their feelings on STEAM and the culture at Mabry.
- Collaboration boards in workrooms have been in use for years and are in an easily seen area to be referenced daily.
- Chorus & Visual Arts teachers went through and identified readily available Fine Arts standards that would easily apply to the content areas.
- Time set aside during CCC meetings for STEAM integration.
- Early Release Days are dedicated to STEAM PL and collaboration.
- Teachers talk to kids and start making connections that way too.
- STEAM team is invested across the grade levels and subject areas. Build capacity with more and more staff each year. Participation in several Innovation Academies.
- The Engineering Design Process is used across subject areas (using subject-relevant terms) such as the writing process and creative design process.

Student Panel

- Flipgrid videos of students were great and showcased their voice in how STEAM matters to them.
- Students shared many examples of how STEAM is happening across the building and in their classes.

Parent Panel

- STEAM is evident through projects and products students bring home.
- Lessons are connected across subject areas.
- **Suggestions from parents:**
 - Get parents in different career fields to focus on how STEAM supports success in their day to day job. STEAM Career Day. Associate things that students are learning with what is done in each career on a daily basis.
 - Weekly featured STEAM Career... monthly would be more reasonable to begin with.
 - Make more community outreach connections to lessons and projects (not isolated to classroom and single lesson).
 - To build capacity for serving underrepresented students in STEAM:
 - Mentorship program (Kathy Tira has a program for HS students at her work).
 - Mr. Tanner noted that their morning announcements highlighted notable African-Americans with important contributions to STEAM (for Black History Month).
 - Adam Casey (Tritt ES) mentioned that they do "STEAM Stars" to highlight careers - people from community and their own building!

Portfolio Review

- *1. Rigorous and Relevant STEM Culture*
 - Videos from teachers were very supportive of this.
 - Learning target format is very relevant, and all levels of kids can internalize that.
 - Framed art helps set the tone for a STEAM school by highlighting student's artwork.
 - Criteria on rubric is how the portfolio is organized; this is very detailed and impressive for a first STEAM walk.
 - Mabry is the first school in the district offering media arts as a content area - brand new area with standards in GA! Going above and beyond!

- **Opportunities:**
 - Science standards have science & engineering practices built into each standard (verbs). Make sure teachers across contents are aware of and capitalize on this.
 - Many lesson examples were from one course and pulled in standards from others. Shine a spotlight on larger projects that involve multiple classes to complete them.
- *2. STEM Learning Experiences & Outcomes*
 - We heard the “4C’s” when talking with the students.
 - **Opportunities:**
 - Incorporate more investigative research.
 - In future walks, make sure to highlight how the STEAM block and special STEAM courses provide access to STEAM across grade levels.
 - Strong, comprehensive student STEAM journals for “messy thinking” and learning over time.
- *3. Teacher Collaboration & Professional Learning*
 - (Not able to verbally discuss due to time constraints. Please see feedback in electronic form results from the review committee.)
- *4. STEAM Community Engagement*
 - (Not able to verbally discuss due to time constraints. Please see feedback in electronic form results from the review committee.)

Lesson Plan Review

- Glows
 - Kudos for having the STEAM team do the learning walks, collecting data, providing feedback, etc.
 - Inclusion of Connections teachers.
 - At-a-glance, all grade levels and subjects are on board. Data in form is from all subject areas.
 - Passion Projects are very career-focused. Great job providing structure to what could be a very nebulous project.
- Asynchronous comments from CCSD **Math** Supervisor, Dr. Michelle Mikes:
 - I reviewed the math lessons/STEM lessons that were shared in the portfolio (I went back to check the 6th grade lesson and the lessons are no longer there?). From what was shared that was in the portfolio yesterday I gleaned:
 - 8th Algebra/Geom.: good real world application of the tie in to the math standards of functions with science, art, dance, and social studies (populations, zombie activity, art).
 - Access to the actual lessons/activities would be helpful to see the integration
 - 7th Grade?
 - 6th Grade: there is a STEAM activity with art loosely tied to geometric figures, but it appeared to be related to elementary standards (can’t see the actual activity); the rest of the week was practice problems
 - Access to the actual lessons/activities would be helpful to see the integration
 - Rather than practice problems, could the lessons be creating a box for an object that includes criteria of decorations on the box with certain areas of geometric figures for review instead?
 - STEAM Passion Projects: focus on the arts
 - Could there be a description of the careers/problem that explains the STEM components-how is the S, T, E, M represented?
 - I did not see a math club or math team

- Could there be a math counts team? And/or:
- Virtual Math Challenges were offered by the district this year for individual and teams of students to earn badges based on accurate completion of math problems

I can give stronger feedback when I see the full lesson/activities provided. Technology integration is well represented. Providing reflection or activity questions on math considerations within projects would help to increase the math integration or highlight the math being used. I would be glad to collaborate with teachers when needed.

Update on 3/1/21:

After reading over the 7th grade plans, I am not sure what STEAM integration is actually occurring without seeing the activities. It appears that the percent math standards are being taught Monday-Thursday with the creation of a menu on Friday that integrates art and a final activity of writing up an order and determining tax/tip. There is a note at the bottom of each day about the standards being vital for STEAM, but what STEAM components did they work on each day? What pops into my mind initially is how there are percentages of solutions in Science, percentages of color in art designs-printing in multiple colors on t-shirts, taxes on supplies purchased for creation of STEM projects, commission/profits made by the vendors etc. I wonder if this week could have consisted researching a Restaurant of popularity and the students *having daily tasks* on the aspects of the art, business, profits, taxes, tips etc. to teach the math standards regarding this business. The time it would take to design a menu for STEM's sake would take more than a class period to do it justice: researching the actual cost of food components to determine pricing/profit/tips; researching menus for art designs and related costs to print in color; determining the amount to pay employees based upon the average tips received etc. It could be a great learning experience for students and engagement of the daily lessons. Just brainstorming...

General Comments for Growth

- Some ratings on the synchronous walk data were disparate. 1 vs. 4 ratings. Opportunities for collaborations within teams to see why that difference exists.
- Opportunities for arts integration PL for teachers & leaders to understand how arts integration fits into the engineering design process itself; not that the students always have to produce something. Fine Arts team willing to provide more PL on this. See Laura LaQuaglia & Jessica Espinoza.
- What kind of data can we be collecting to show the efficacy of the STEAM program?
- Partner with community theater experts to make theater and dance have more of a presence in lessons. They usually aren't as highly represented as visual arts, for example. The four domains of fine arts are visual, musical, theatre, dance.