



**PROGRAM
SPOTLIGHT**



EDGEWOOD COLLEGE

Office of Science Outreach, Madison, WI

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The Edgewood College team in Madison, WI has a well-established model of family empowerment: parents and caregivers participate in a three-year fellowship program to develop science and leadership skills to support their children to pursue STEM pathways. 2022 marks the graduation of the first STEM Fellows cohort, and the Edgewood College team wondered how the graduates could support the next cohort. To this end, the team created a new level of its program called “Engaged Fellows” so the graduates lead the next cohort. An additional goal was to help current STEM Fellows achieve a more in-depth understanding of STEM concepts and practices by extending workshop sessions and including “mini-projects” that allow parents/caregivers to engage in STEM with their children at home.

The Family Engagement Plan

For their first goal, the Edgewood team asked three Engaged Fellows to design, plan, and implement STEM education-focused professional development (PD) events for the 12 current STEM Fellows. The team provided a budget to plan two events, and although the Engaged Fellows required no oversight, the staff met with them monthly to provide guidance and support. To ensure participant voice would be considered, the team asked the Engaged Fellows to consider their own interests/experiences and those of the current STEM Fellows. The Engaged Fellows implemented the first STEAM-themed session in January 2023, which included a tower engineering competition (with shaving cream and popsicle sticks) and an envisioning activity to express ideas as art (in a studio of the campus art building). For their second goal, the Edgewood team re-designed their workshops, replacing a one-time event with four “mini-projects”: technology and map-making, geology and rock formation, microbiology, and engineering. Each mini-project includes two STEM expert-led workshops, with a home-based STEM activity to practice skills between sessions.

The A-Ha Moment

For the new Engaged Fellows program, the Edgewood team realized they need to balance giving the Engaged Fellows enough autonomy and providing enough guidance. “It is a good learning experience in figuring out how to best empower the Engaged Fellows. As someone with experience in organizing and planning events, how can I guide them to do the same? ...I want to take care of it myself, but that is the opposite of the point. It’s about finding the right balance. Where do I need to give them a push, and where can I empower them to take care of the details on their own?” The Edgewood team also recognized the need for a growth mindset and wants to share more of the Planning Tool with the Engaged Fellows: “A little bit of each of the four [domains: Connect, Act, Reflect, Empower] has been planted with the Fellows, but I would want to plant those seeds further if that make sense. They’ve gotten a little bit of these things during our conversations, but they could absolutely be getting more...Slowly but surely, we are growing the seeds of empowerment with the Fellows, with both science and leadership skills...”



Family Engagement Strategies Reimagined

The Edgewood team thought more intentionally about the cultural relevance of their programs: “We have had a lot of discussions about making science culturally relevant... This definitely stuck to me when we talked about this as a group, and...during the training sessions. I feel it was too late to implement [cultural relevance]... It did make me think in the future, this is something to keep in mind...activities that are more culturally relevant.” Additionally, the team reflected on the effect of their own assumptions: “[Empowering Engaged Fellows] has been very challenging because I realize I make certain assumptions. I assumed that everyone knows what...a professional development event is... Just because they are clear to me, they shouldn’t be clear to everyone else.” Edgewood now focuses more on practicing STEM outside of the workshops: “[Doing science] at home is the very novel part of this. The point is [the CARE Domain] Act is always present in sessions all the time. The workshops have always been hands-on. Encouraging doing stuff at home is very new. [The CARE Domain] Reflection has been more of a conscious choice being in this project. ‘Act’ may have happened organically.” The team hopes to learn from the experiences of parents/caregivers and youth: “Yes, there are a lot of elements of the planning tool that had me thinking about this mini-project in different ways... Maybe we should talk to the kids too about how they feel about the Fellows [their parents/caregivers] doing the science and doing it at home.”



Evidence of Success

The first PD session and workshops/mini-projects were successfully planned and implemented, and in both, the Edgewood team observed hands-on and minds-on engagement from the STEM Fellows. They heard comments like **“Wow, I can do this [science skill/practice] beyond this session... my kids are going to see me doing science homework.”** The Edgewood team shared that one parent always brings her daughter to the STEM Fellow workshops, and the daughter paid close attention to her mother’s interest in science: “My mom was really into this, adding detail to the map.”

