2018-2019 Innovation of the Year Application

Final applications must be submitted online.

Principal Applicant

1) First Name: Christina

2) Last Name: Clark

3) Project Title: STeAm Periodic Table

4) College: Glendale Community College (North Campus)

5) Phone: 623-888-7196

6) Email: c.clark@gccaz.edu

Team Members and Photograph

7) Team members – List the team members involved in this project, including yourself. Provide name, job title, and email for each. One person per line.
Christina Clark, Residential Faculty (Chemistry), c.clark@gccaz.edu
Chuck Jeffery, Dean, Glendale Community College-North Campus, charles.jeffery@gccaz.edu
Scott Vogland, Manager of Building Operations, scott.vogland@gcca.edu

Please Upload Team Photo

8) A team photograph including all members must accompany this application. Photograph must be 5"x7" and 300dpi or larger.

9) Create a caption for this photograph Identifying team members (using full names and college) in order of appearance from left to right
STeAm Periodic Table at GCC North Campus with informational card inset (Pictured from left to right: Scott Vogland, GCC; Christina Clark, GCC; Chuck Jeffery, GCC)

Executive Summary

10) Please provide an executive summary (50 words or less)

The STeAm Table at GCC North increases curiosity for the sciences. It's an interactive learning device with informational content and a QR code linking to a digital site. Students collaborate on creating this content allowing the element to become digitalized with dynamic and evolving material in potentially any science field.

Strategic Commitments

11) Select the MCCCD Strategic Commitment best aligned to the project.
___Build a Thriving Community Through Access and Student Success

___Be a Driving Force for Economic and Workforce Development in Arizona

_X__Attain Recognition as an Innovator Among Institutions of Higher Education

12) Explain how the project demonstrates the selected MCCCD Strategic Commitment.

The STeAm Table at GCC North increases curiosity for the sciences. It is innovative since it is an interactive learning device with informational content and a QR code linking to a digital site. Students collaborate on creating this content allowing the element to become digitalized with dynamic and evolving material in potentially any science field. This allows students access to content pertaining to any science field such as biology, geology, and astronomy in addition to chemistry and how these fields interrelate. Students majoring in these science areas in college can learn about their interests in a digital and interactive way that sets GCC apart from any other college. Since the content is linked to a QR code, it can be changed and updated at any time and student collaboration allows them to be a part of this evolving process.

13) Quality: It is evident that the innovation increases "quality" in the course, program, office, or institution.

The student collaboration aspect of the STeAm table allows students to learn more outside the classroom about the chemistry of elements and how that applies to other science fields. This inter-disciplinary learning increases the quality of their learning experience and it allows the chemistry content to become more than just memorization or problem solving. Real-world applications get introduced and students can interact with the display in a very unique way. Honors students have been collaborating on the current content in the STeAm table thus far as one portion of their honor's course grade.

14) Efficiency: There is evidence that the innovation contributes to a more efficient way of doing things.

Since the QR code is added to each informational card in the display, the cards themselves do not need to be changed out or updated. The only changes that need to be made are for the information on the website the QR code is linked to. This allows the digital content to be changed or edited through a computer. New and exciting experiments, discoveries, or anything unique to the science of each element on the periodic table can be added at anytime from anywhere. This also allows the content to never become dated.

15) Cost effectiveness: There is evidence that the innovation adds a value to the institution while at the same time containing or reducing costs.

The only cost is for the cards themselves for each element when they are first printed. There is no cost to the student for collaborating on the STeAm table and the digital content is free to upload and change.

The value comes in the unique interactive experience it provides for students at the institution.

16) Replication: The innovation selected can be replicated in other institutions with a minimum of difficulty.

The schematic diagram for building the STeAm table is available and the table can be built and reproduced at any institution. The endless possibilities lies in what content each institution feels like linking the QR code to for each element. This part of the project could be individualized for different institutions or programs.

17) Creativity: The innovation should be as original as possible or the adaptation should be creative.

Other Periodic Table displays have been created at institutions such as Cal Poly and Griffith Park Observatory in California. They have actual samples of the elements in each box. The STeAm table is different since it has a QR code that makes it digital, interactive and variable.

18) Timeliness: The innovation should not be more than five years old in the institution, but it must have been around long enough to be tested so that it meets most of the criteria.

The STeAm table is less than two years old. The QR code and content is less than one year old.

19) Learning: The results of the innovation have been shared with others for the benefit of students throughout Maricopa.
The table is displayed in a common are in the D building at GCC North so any students taking classes there can use it and interact with it.

20) Collaboration: The innovation successfully demonstrates collaboration, teamwork, and cooperation to ensure continuous process improvement efforts on behalf of students throughout Maricopa.
Honors students have been collaborating on the current content in the STeAm table thus far as one portion of their honor's course grade. Some of the students worked together on their project creating content for several elements in a cluster and created a presentation for the non-honors class about the discovery and history of these elements.
The goal for future work is to have biology, geology, astronomy, and physics students help collaborate on additional content linked to each element through the QR code so that it becomes a table for all the sciences to use for projects, classroom studies, and more. The possibilities are endless!