

Q&A

Contextual Learning: Integrating Math & CTE to become Future Ready

Registration

How do I register?

[Registration is now open!](#)



The Q&A below is designed to give you an idea of how other schools have implemented this program. However, there is flexibility in how the courses are implemented so they can match the needs of your school.

General Program Questions

Question	Short Answer	Details
What is Contextual Learning?	A contextual approach to teaching the standards of the entry-level courses of Algebra I and Geometry at their intended level of rigor while providing authentic, highly engaging application in introductory Career and Technical Education (CTE) courses, generating interest in a variety of pathways. It is an innovative way to blend math and CTE to increase student engagement and mastery within both subjects.	<ul style="list-style-type: none">• Contextual Learning
Why do we need this now?	NAEP secondary math achievement data has remained stagnant at a national level for over 15 years, and Iowa Postsecondary Readiness Reports indicate that 25% of GWAEA high school graduates enrolled in a remedial math course at a postsecondary institution in 2018. The Condition of College & Career Readiness 2019 Iowa Key Findings found that 44% of Iowa graduates met the ACT Math College Readiness Benchmark in 2018, indicating over half of Iowa students did not. According to a 2018 Gallup Poll, only 33% of high school students report high levels of engagement in school. The data indicates there is a gap with current practices, and this unique approach may be the connection students need.	<ul style="list-style-type: none">• Achievement Scores• 2010-2012 Initial Data Report
Does this even work?	According to Contextual Learning Concepts, observed outcomes are increased attendance, higher homework completion rates, increased enthusiasm (both student and teacher), decreased disciplinary incidents, cross-curricular allies, and more students choosing to enroll in subsequent math courses. Check out the links for the study details showcasing achievement scores for enrolled students compared to other populations.	
How does this program align with CTE, CTSOs and Future Ready Initiatives?	Contextual Learning Concepts is an excellent method to leverage all of these initiatives in meaningful ways that will have a direct impact on student success. See the link for details to align CLC with each!	<ul style="list-style-type: none">• Connections between Contextual Learning and Current CTE & Future Ready Initiatives
Do you have promo videos I could share with others in my district?	<ul style="list-style-type: none">• Promo: NBC Nightly News• CBS News Story & Video• CBS AMPED Story & Video• AMPED on Algebra Video• GIC Video	

Content Related Questions

Question	Short Answer	Details
What math and CTE topics will be taught in the AMPED on Algebra course?	AMPED on Algebra is aligned to national math standards for a high school Algebra I course. The CTE component embeds manufacturing and business processes; it is flexible and can be adapted to correlate with Business, FCS, Applied Science, or Ag courses. Sample courses could include: introductory business, metals, independent living.	<ul style="list-style-type: none"> • AMPED Overview • Algebra Standards by Unit
What math and CTE topics will be taught in the GIC course?	Geometry in Construction is aligned to national math standards for a high school Geometry course. Construction topics are aligned to state standards and embed entry level structural development skills. Specific project selection is flexible and can be modified to fit with facility, material, or budget constraints.	<ul style="list-style-type: none"> • Geometry in Construction Overview • Geometry Standards by Unit
What would a course description look like for AMPED?	The description can be flexible to highlight the implementation plan your team has developed. Descriptions should include the content covered as well as the unique approach to instruction that your district has chosen. See the link for an example!	<ul style="list-style-type: none"> • Course Description AMPED
What would a course description look like for GIC?	The description can be flexible to highlight the implementation plan your team has developed. Descriptions should include the content covered as well as the unique approach to instruction that your district has chosen. See the link for an example!	<ul style="list-style-type: none"> • Course Description GIC
Do we have to build a house in GIC? What are other schools building or what are some other ideas?	No! The project is flexible and can be designed to fit within your school's needs. Other successful projects that have been implemented include sheds, playhouses, corn hole boards, saunas, chicken coops, bunk beds, and more. Projects can be sold to raise funds for the course, donated to groups in need, or even used within the school building.	<ul style="list-style-type: none"> • Do I Have to Build A House?
How does this course work towards Strengthening Education For ALL Kids?	Through a contextual approach, students will not only gain access to critical grade level standards, but also the professional skills that are in such high demand in today's workforce. In a 2018 Iowa Workforce Needs Assessment Survey, 17% of employers noted that applicants lacked applied mathematics skills, but 33% noted that applicants lacked critical/analytical thinking skills. Additionally, over 36% of employers identified motivation, dependability, and time management as skills that current applicants do not have. While core knowledge is important in today's careers, professional skills are clearly a major need as well. Contextual learning creates a pathway to blend the two in an applicable and engaging way for students.	<ul style="list-style-type: none"> • Strengthening Education for ALL Kids
How can I help high school kids be ready for this level of work?	Selecting the right project and planning the course strategically can make a huge difference in student engagement and success. As entry level CTE courses, some of the processes and tools utilized may need to be more basic than in advanced coursework, and the projects need to be achievable within the timeframe allotted. The link includes additional suggestions to plan the course in a way that allows all students to access the learning and skills.	<ul style="list-style-type: none"> • Kidify

Scheduling and Logistics

Question	Short Answer	Details
What are the different ways this program could be implemented?	<p>There are several ways to bring this to your students!</p> <ul style="list-style-type: none"> • Co-taught block (two teachers, courses scheduled back to back with identified cohort of students) • Collaboration among two courses (two teachers, courses run at same time, teachers build in collaboration at points throughout the year) • Blend strategies into existing courses (one teacher; instructional change vs schedule change) 	<ul style="list-style-type: none"> • Logistics Options
What are the scheduling needs to run these courses?	<p>Scheduling needs vary depending upon the implementation model your district selects. Review the link for details.</p>	<ul style="list-style-type: none"> • Schedule Needs of Contextualized Courses
What types of support will my teachers need to be successful?	<p>Co-Taught: Implementation requires coordination among the teachers and course-work. Teachers will need additional time to create this system and implement it with fidelity. Options could include additional planning time, stipends, or out of contract pay for planning sessions outside of the school day. Additionally, Grant Wood AEA will coordinate ongoing cohorts of those teachers implementing throughout the 22-23 school year.</p> <p>Blend Strategies Into Existing Course: Consultants will coordinate opportunities to support teachers in thinking about how to increase the rigor of math in CTE courses and/or the level of authentic applications in math courses.</p>	<ul style="list-style-type: none"> • Keys for Co-Teaching
How can we recruit students to sign up?	<p>Recruitment can happen in a variety of ways! Creating awareness among counselors and teachers is a critical step to ensure conversations happen with students and provide clear information about the course(s). Developing a brief flyer or video can also share information in an efficient and accurate way. Embedding the course(s) into a CTE pathway is another option to show the progression of learning and courses that could be taken next to continue the sequence. Check out the link for more ideas used by teachers around the country!</p>	<ul style="list-style-type: none"> • Recruitment
How do we encourage girls to sign up for GIC?	<p>This course is for EVERY student! Recruiting non-traditional students is an important factor to maximize the impact of this unique approach. Educating counselors, teachers, and parents is an important first step - often we are unaware of the language we use when talking with students about a construction class or even the images we use within our marketing materials. Click the link to learn about strategies that were successful in recruiting all students.</p>	<ul style="list-style-type: none"> • Female Enrollment

Teaching and Implementation

Question	Short Answer	Details
What do effective cooperative groups look like?	<p>Creating a culture for effective group work takes planning and ongoing support. Strategically developing the groups and providing guidance for communication and success can make a huge difference in the student experience. Take a look at the link for quick tips on how to establish and maintain cooperative groups that work.</p>	<ul style="list-style-type: none"> • Checklist for Effective Cooperative Groups

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How can I get donations to help fund our program?	Finding partners to support you is a great way to engage the community and sustain the program. Community partners can be helpful by providing materials or funding, but also as mentors, advisors, and advocates for the program. Reaching out to ask is a great way to start - check out the link for tips to help you connect effectively with businesses in your area!	<ul style="list-style-type: none"> • Tips for Donations
How do I form Partnerships with Nonprofits?	Nonprofit groups can be a natural fit to support the work completed in these courses. Brainstorming potential gaps in implementation needs (materials, space, etc.) and goals as a district are great ways to start identifying possible partners. Check out the link for guidance on how to connect with nonprofits and bring them on board!	<ul style="list-style-type: none"> • Forming Partnerships with Nonprofits
How can I enhance my classes with volunteers?	Volunteers are a great addition to these courses, and there are many ways a volunteer can engage within the framework of the course. Check out the link	<ul style="list-style-type: none"> • Enhancing AMPED and Geometry in Construction with Volunteers
How can I celebrate the course at the end?	Celebrating student success is a great way to recognize students and teachers, as well as increase awareness of the course to recruit future students. Recognition can be as simple as certificates, short awards ceremony in class, or pictures in a hallway, or as elaborate as an awards banquet or community event. Districts can determine their goals for the celebration and plan accordingly. See the link for ideas about an awards banquet!	<ul style="list-style-type: none"> • End of the Year Banquet

Training Details

Question	Short Answer	Details
When does the training take place?	National training session will take place June 19-22, 2023 – 8:00 am-4:30 pm each day.	<ul style="list-style-type: none"> • CTE Flyer (PDF)
Where will the training take place?	Kirkwood Community College – Room TBD There will be a working lunch in order to meet the credit requirements. Participants will be responsible for bringing their own lunch.	<ul style="list-style-type: none"> • CTE Flyer (PDF)