Ohio Math Initiative

Oct. 2020

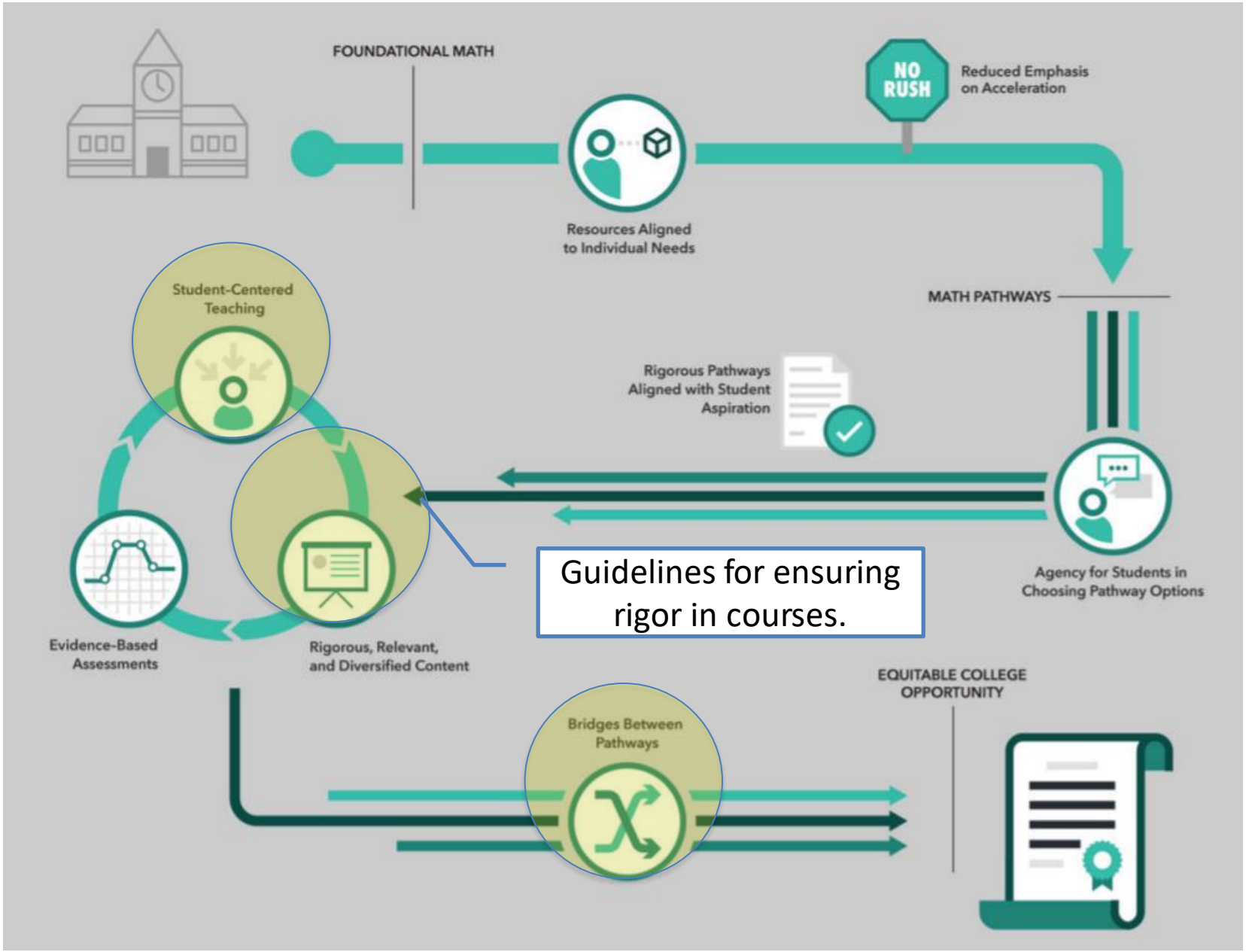
Advisory Council Update

- Creating a position statement of support for the pathways.
- Continue discussing equity
- Mapping out communication plans

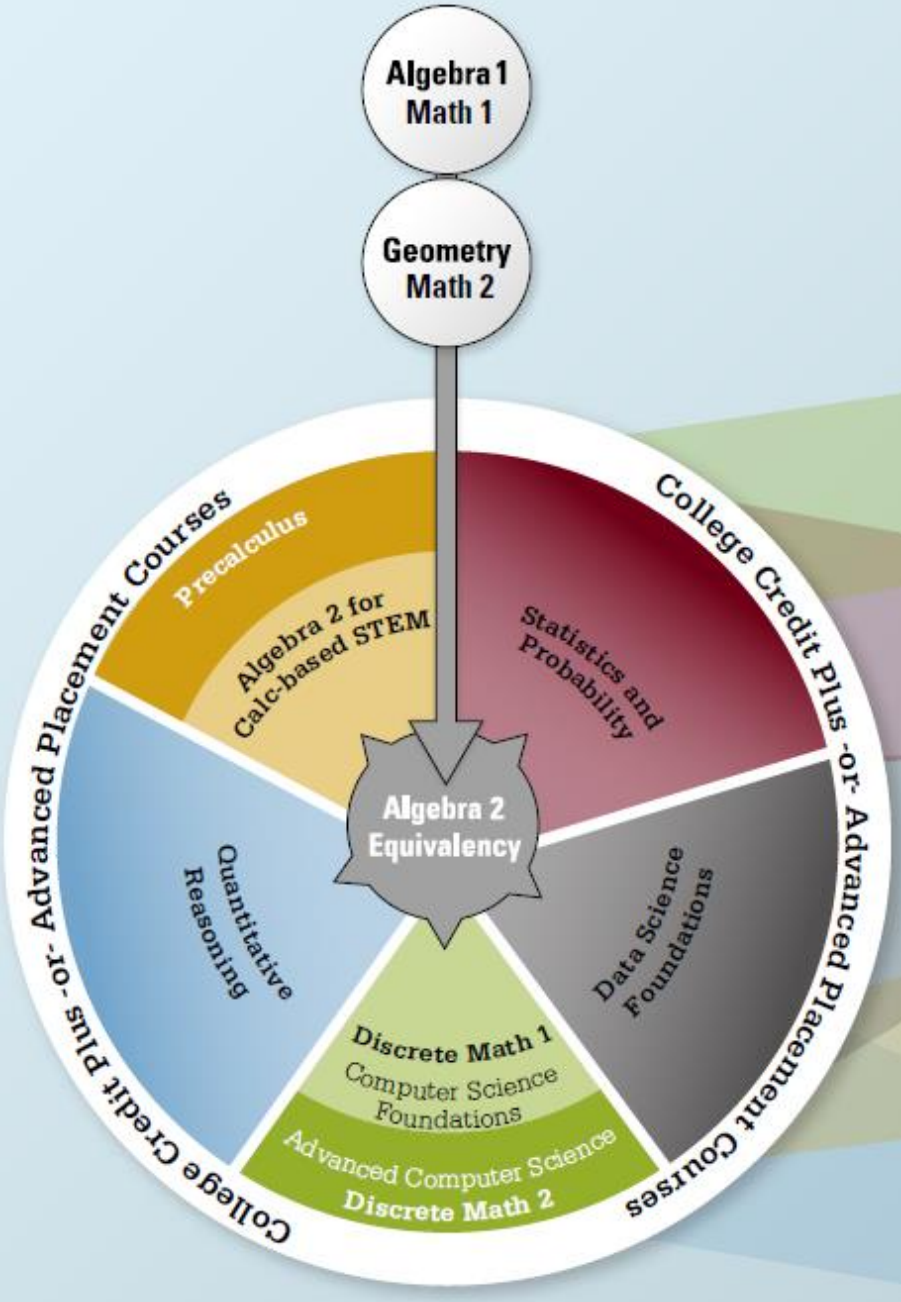
Architects Update

Concise Definition of Rigor: Students use mathematical language to effectively communicate their strategies with clarity and precision. Students explain how, when and why their reasoning is appropriate, thereby answering the question, “How do we know?”

**They also have a chart that they made.*



Just Equations' report, [The Mathematics of Opportunity: Re-Thinking the Role of Math in Education Equity]



Potential Careers

- Computer Programmer
- Database Developer
- Research Analyst
- Cybersecurity Analyst
- Logistics Coordinator

- Nutritionist
- Social Worker
- Financial Analyst

- Marketing Analytics
- Healthcare Analytics
- Finance
- Law Enforcement

- Chemist
- Engineer
- Economist
- Physicist

- Graphic Designer
- Marketing Executive
- Journalist
- Musician
- Firefighter

Note: Districts may offer one or more courses.

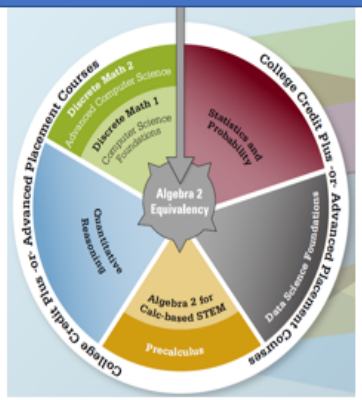
Process

Goal: Improve students' mathematics achievement and attainment, especially in STEM related areas including computer science, by creating, developing and implementing relevant and coherent math pathways.

High School

Advisory Council

Align systems and structures



Architects

Align mathematics

Postsecondary College and/or Career

Workgroups

Create standards and supporting resources

Workgroups

Develop high-quality curriculum *(QR, DSF, CSDM)*

Pilot courses *(QR, DSF, CSDM)*

ESCs

Help districts select high-quality curriculum *(A2, SP)*

Outcome

Schools implement math pathways statewide thereby increasing student achievement and attainment.

Timeline

Fall 2020

- Course Development
- Apply for 2021 QR and DSF pilot (November).

Fall 2021

- Guidance about Algebra 2 equivalency courses and pathways is posted.
- QR and DSF are piloted.
- CSDM is pre-piloted.
- Apply for 2022 QR, DSF, and CSDM pilots (November).

Fall 2022

- Schools implement pathways and Algebra 2 equivalency courses.
- Pilots are expanded in phases across the state.

How do we ensure rigor is maintained?

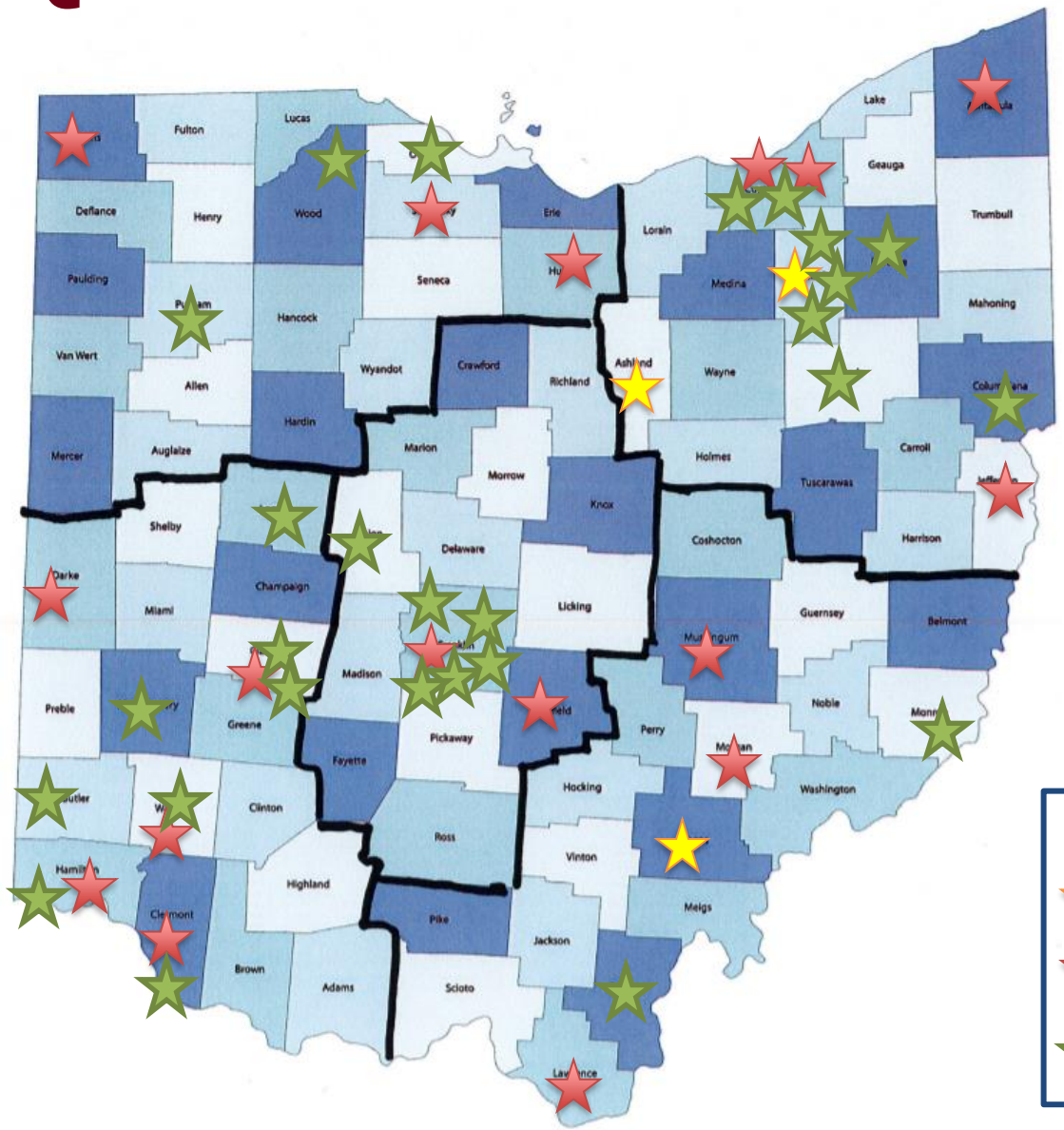
MMR Pilot

Who will take this course?

Curriculum is being modified with target student in mind?

Less linear functions and more advanced functions (college bound)	More advanced statistical concepts	Greater ACT/SAT alignment (college focus)	More financial lessons (career focus)	Integrate Excel Credential	Future Conversation: Align lessons to QR careers?

Quantitative Reasoning Pilot



Key:

- Cohort 18 (pre-pilot)
- Cohort 19
- Cohort 20

Selected Schools

	Rural		Small Town		Suburban		Urban		Other	Total
Typology	1	2	3	4	5	6	7	8		
NW	1		1	3		1				**6**
NE	1	1		1	3	1	2	3	1	**13**
C		2		1				4	2	**9**
SW	1		3	2	3	2	1	1		**13**
SE	2	2		1					1	**6**
Total	5	5	4	8	6	4	3	8	4	**47**
Total Schools	**10**		**12**		**10**		**11**		**4**	
Summary	**Cohort 18:** 3 Schools; **Cohort 19:** 17 Schools; **Cohort 20:** 27 Schools									

Where to Apply for QR Pilot?

Apply in November!

http://education.ohio.gov/Topics/Learning-in-Ohio/Mathematics/Resources-for-Mathematics/Mathematics-Modeling-and-Reasoning-Course-Pilot

Data Science Founda

Plan to Pilot Fall 2021

The *Data Science Foundations* course is anticipating using a modified version of UCLA's *Introduction to Data Science* (IDS) curriculum that is modified for Ohio's students. It teaches students to reason with, and think critically about, data in all forms. The Ohio Learning Standards for Mathematics (OLS) relevant to data science are taught along with the data demands of good citizenship in the 21st century. Additionally, the course provides access to rigorous learning that fuses mathematics with **computer science through the use of R/RStudio**, an open-source programming language/environment that has long been the standard for academic statisticians and analysts in industry. The course directly addresses Ohio's High School **Statistics and Probability and Modeling standards**.

Where to Apply for Data Science Foundations Pilot?

Information Coming in November 2020!