

Program Update

Kentucky Board of Education
October 2020

- College Readiness Program
- Access to Algebra
- Computer Science Initiatives

Who We Are

Staff, Support, and Partnerships

AdvanceKentucky Staff

Anthony Mires, Executive Director
Annette Williams, Education Program Manager
Monique Rice, Senior Content Director, CS and Math
Lew Acampora, Senior Content Director, Science
Tina Rose, Senior Content Director, English
Aaron Timmons, Content Director, Math
Michael Marshall, Content Manager, Math
Sheri McGuffin, STEM Coordinator
Elizabeth Lavigne, Senior Executive Assistant
Jessica Sanford, Executive Assistant/Data Specialist

Program Support

Terry Samuel, KSTC President
Steve Pelphrey, Chief Financial Officer
125+ Kentucky teachers

Partnerships and Support

- National Math and Science Initiative
- Military Families Initiative
- Appalachian Regional Commission
- Berea Partners for Education
- Code.org
- The College Board
- Brown Foundation
- Charter Communications

Mission

To expand student access to and success in rigorous coursework, particularly among populations traditionally underrepresented in these courses, enabling students to pursue advanced college and career opportunities.

College Readiness Program (AP[®])

Supports middle and high school pre-AP and AP Math, Science and English courses to increase AP participation and success

Access to Algebra

Supports middle school math instruction in grades 6-8 to increase the number of students on track to meet math benchmark by the time they graduate high school

Computer Science (CS) Initiatives

Supports K-12 classrooms by providing professional development opportunities to broaden access to CS courses and manages CSforKY, the state CSforALL campaign



March 13 to March 31

- Constructed and Launched **KYAP2020.COM**

April 1 to May 21

- **67** Live Online Review Sessions; offered statewide
- Restructured eligible mock exams to reflect changes by College Board; offered statewide
- **7,500** participants (teachers and students)

May 21 to July 31

- Adapted all in-person summer PD to be delivered online. (15 courses total across math, science, English, and CS)
- Created Fall testing plans with each middle school that missed the Spring 2020 PSAT 8/9 testing window due to COVID-19
- Developed and Launched 4 new CS initiatives

Present

- **14,000+** online participants since March 13
- **876,000+** meeting minutes
- Online AP Fall Forum scheduled for **Oct. 17** and **Oct. 24**
- Conducting an online AP Chemistry course in partnership with **BAVEL**

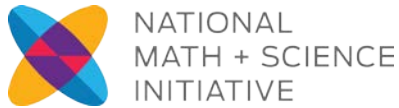
Remainder of School Year

- Prepared to conduct all program elements virtually if necessary but can easily transition back to in-person.

2020-21	Schools	Teachers	Projected Enrollments
College Readiness Program	42 (13+29)*	116	3607
Access to Algebra	33	170	7335
CS Initiatives	72	73	2360
	147	359	13302

**The number of schools indicated includes traditional active program schools funded for math, science, and English plus schools with individual AP MSE teachers in one or more content areas. All numbers reflect program participation as of Sept. 8, 2020.*

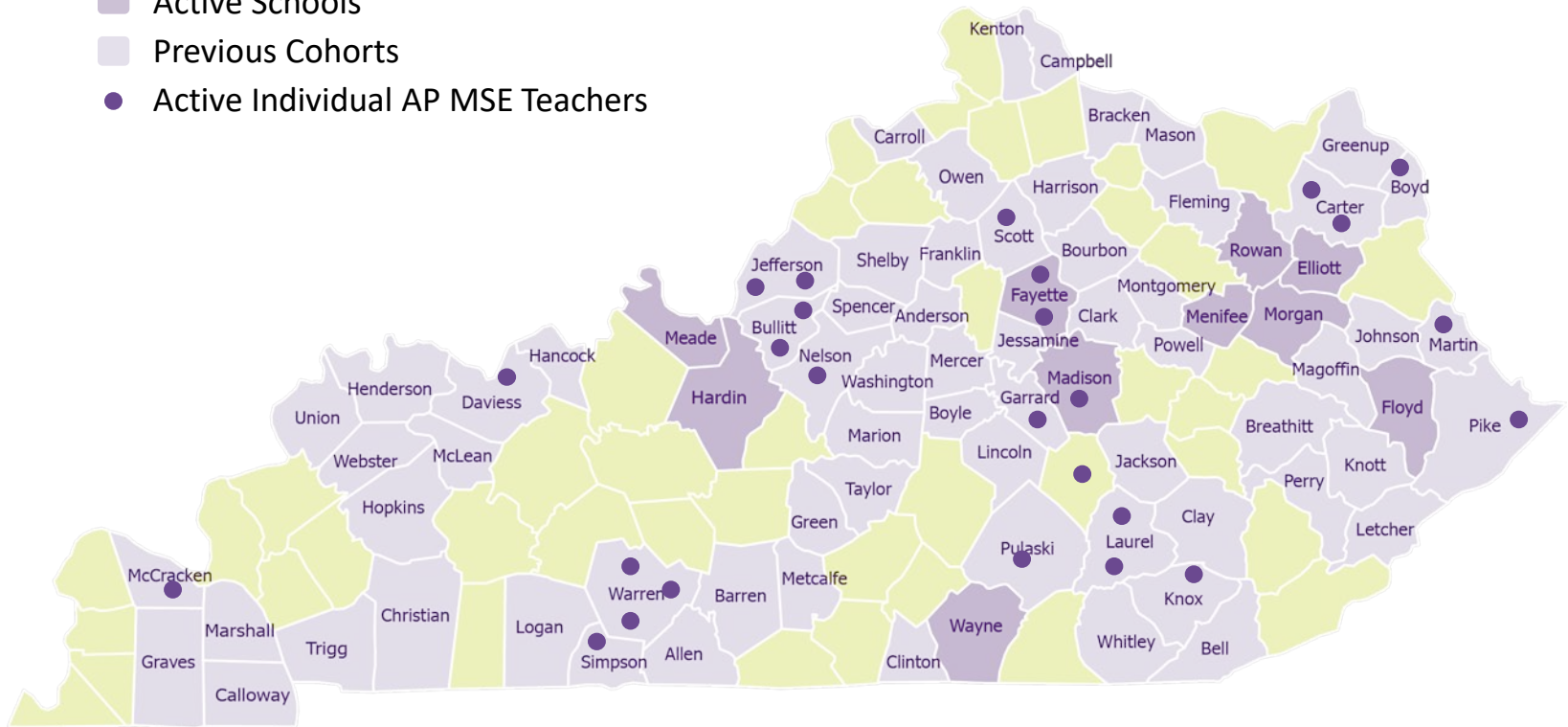
College Readiness Program

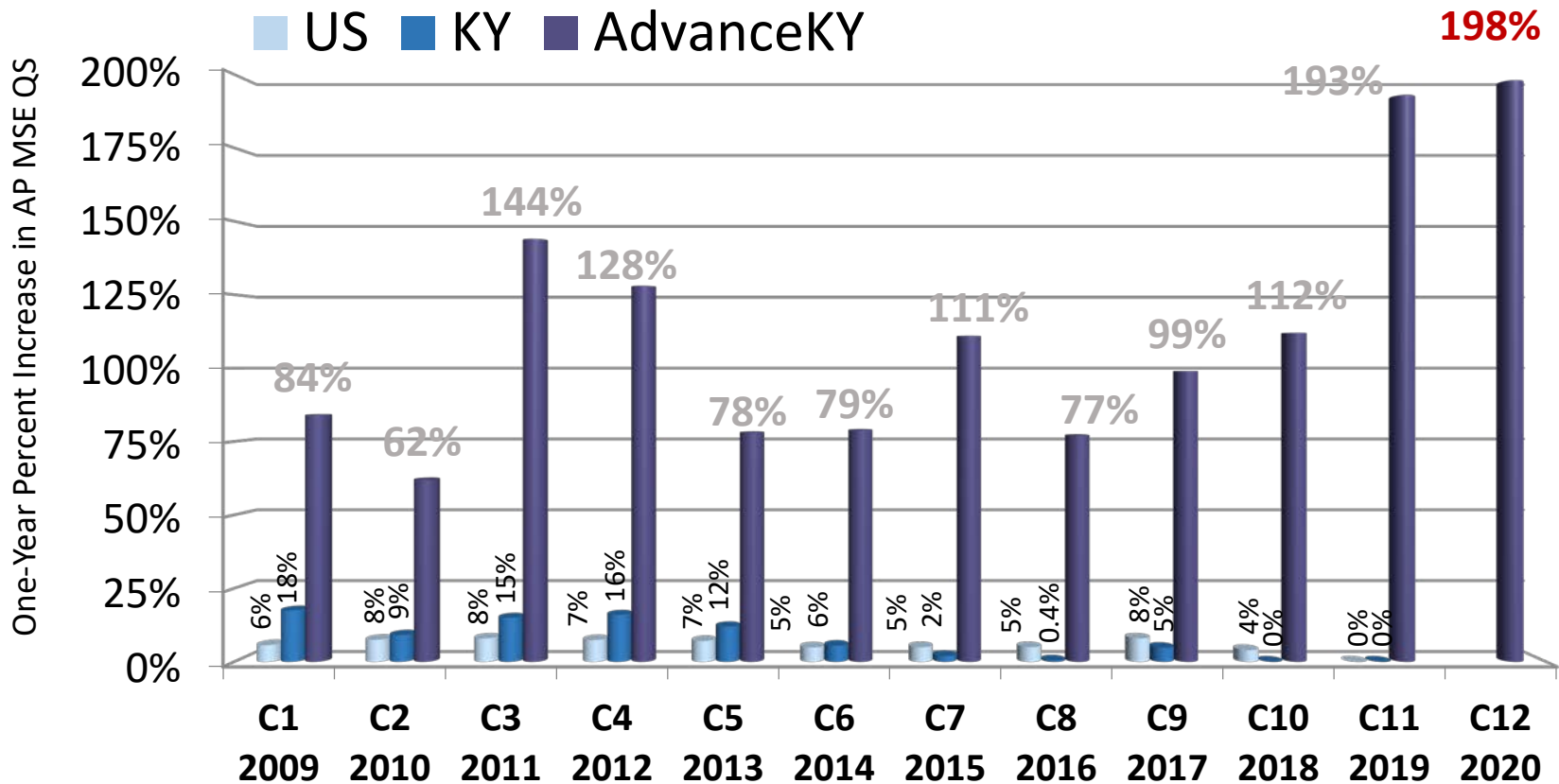


The NMSI College Readiness Program supports improvements in earning qualifying scores (QS) of 3, 4, or 5 (on a 5-point scale) on national AP[®] math, science, and English exams, which may earn college credit.



- Active Schools
- Previous Cohorts
- Active Individual AP MSE Teachers





Source: College Board and AdvanceKentucky

Cohorts 1-9	MSE QS: All Students	MSE QS: FRL Students	MSE QS: Minority Students
Baseline	3013	414	112
Year 3	7102	1417	308
<i>% Change</i>	<i>135.7%</i>	<i>242.3%</i>	<i>175.0%</i>

Source: AdvanceKentucky

College Readiness Program Matched Pair Analysis – AP Participation

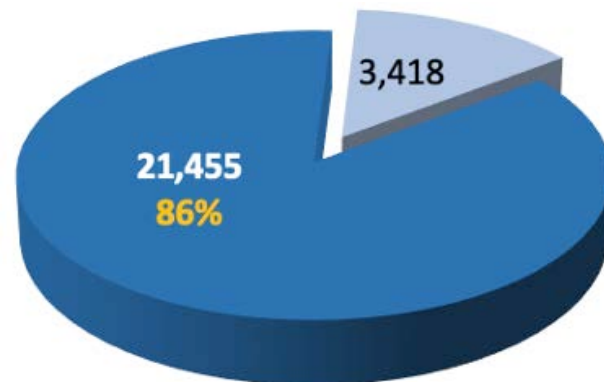
86% of AdvanceKentucky students took one or more AP exams.

- Attempted at least one AP exam
- Did not attempt an AP exam

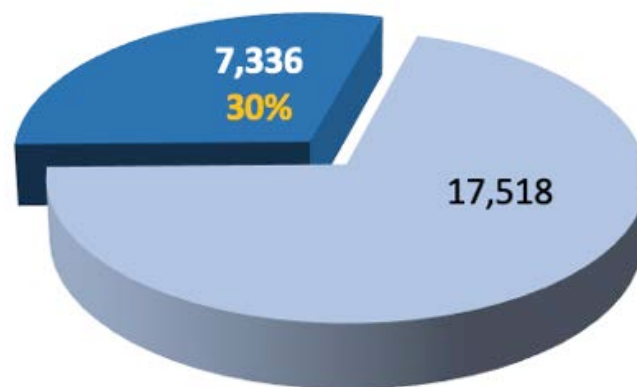
Following high school graduates from 2012 through 2015, significantly more AdvanceKentucky students took one or more AP exams than their control group peers. This broader access through open enrollment demonstrates that with the right support many more students than we traditionally identify persist in AP MSE courses.

Note: Matched pairs were identified based on student ACT Explore scores. All students were enrolled in Kentucky public schools.

AdvanceKentucky



Control Group



Source: KYSTATS

College Readiness Program

Matched Pair Analysis – AP Success

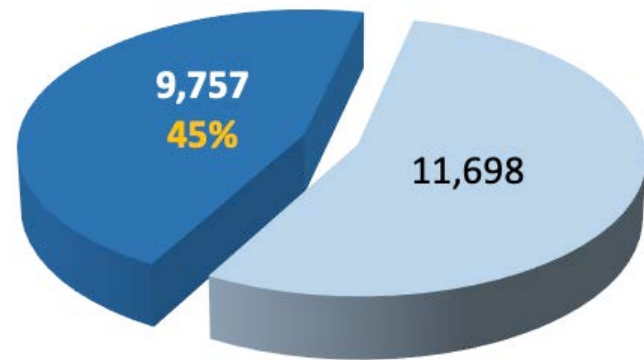
45% of AdvanceKentucky students earned at least one qualifying score.

- Earned at least one qualifying score
- Did not earn a qualifying score

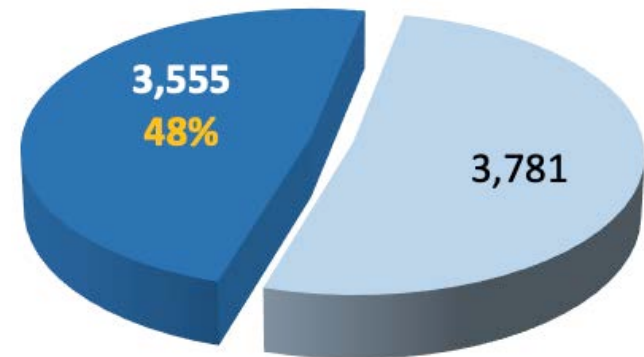
Even with the significant increase in the number of students taking one or more AP MSE courses and completing the AP exam, the percent of AdvanceKentucky students earning one or more AP qualifying scores was highly competitive with their peers.

Note: Matched pairs were identified based on student ACT Explore scores. All students were enrolled in Kentucky public schools.

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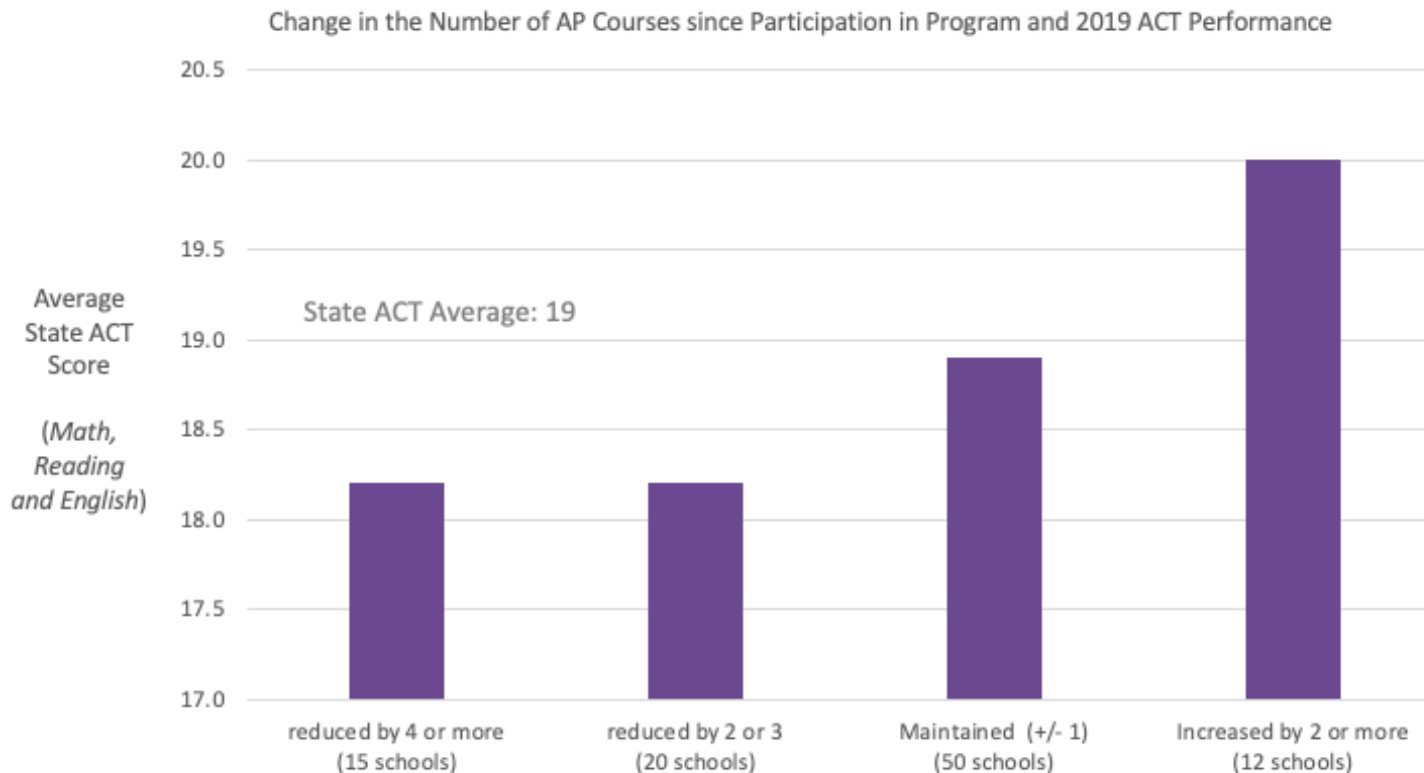
Control Group



Source: KYSTATS

College Readiness Program

Sustainment of AP Courses and ACT Performance



64% of schools from Cohorts 1 through 10 have either maintained or increased the number of AP courses offered since active in the program.

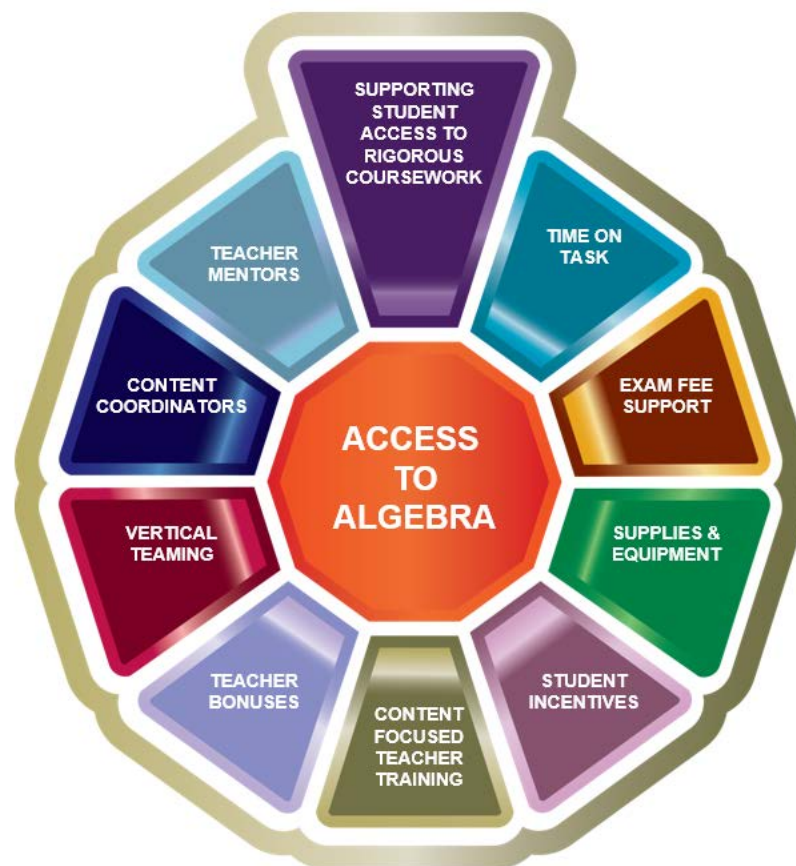
2018-19 ACT performance by AdvanceKentucky schools correlated to AP course offerings after participation

Source: KDE Open House and AdvanceKentucky

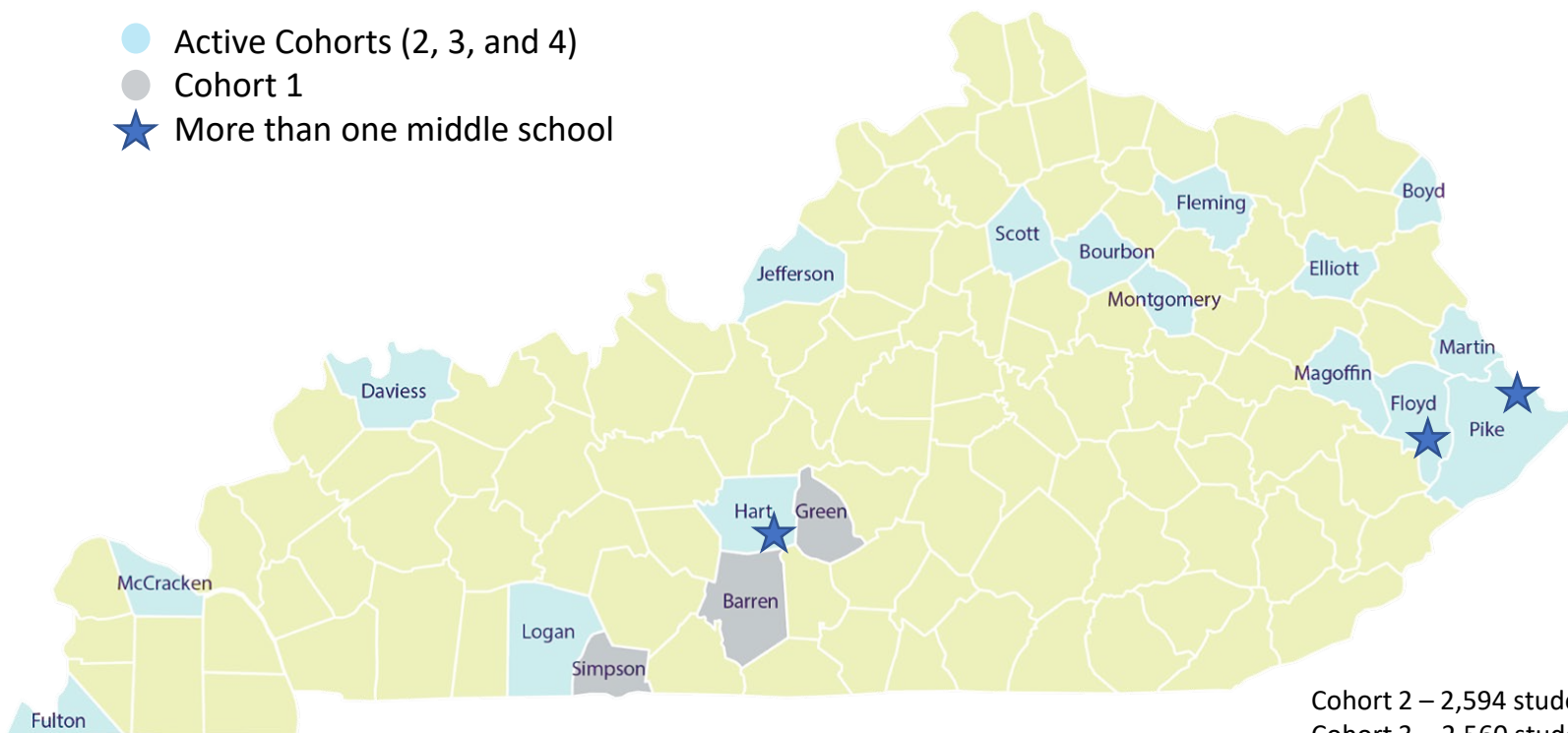
Access to Algebra

Access to Algebra seeks to increase the number of students on track to meet college readiness math benchmarks by the time they enter high school, providing increased opportunities for advanced STEM coursework and careers.

The program centers around all students being given access, opportunity, and preparation to succeed in Algebra I.

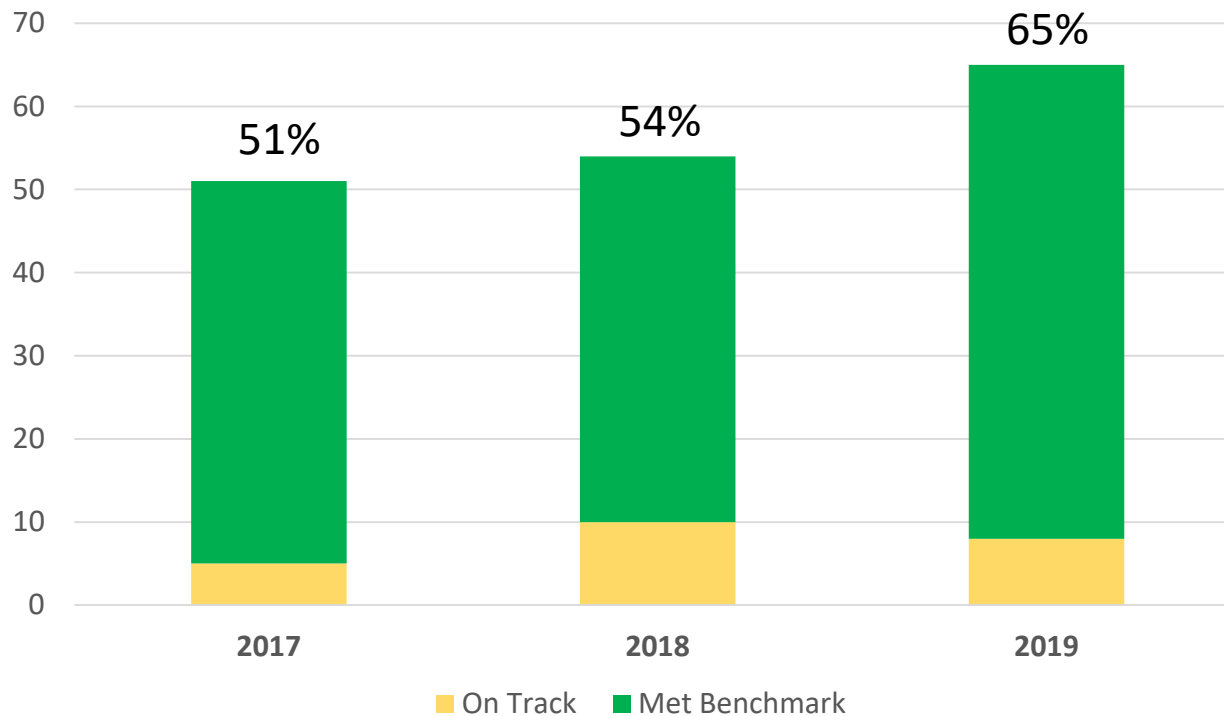


- Active Cohorts (2, 3, and 4)
- Cohort 1
- ★ More than one middle school



Cohort 2 – 2,594 students
Cohort 3 - 2,560 students
Cohort 4 – 2,181 students
Total Number of Teachers – 170
Total Number of Students – 7,335

Percentage of Eighth Grade Students on Track to Meet Math Benchmark

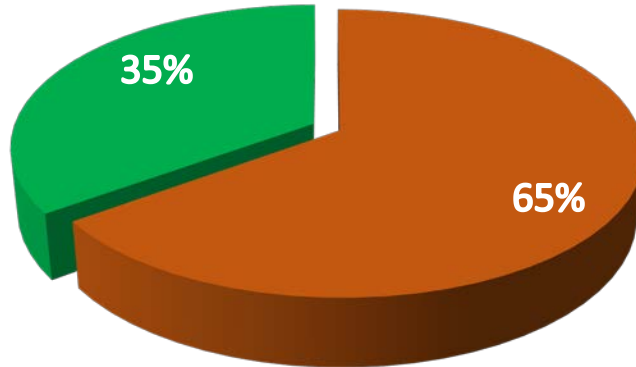


Source: AdvanceKentucky and College Board

Access to Algebra

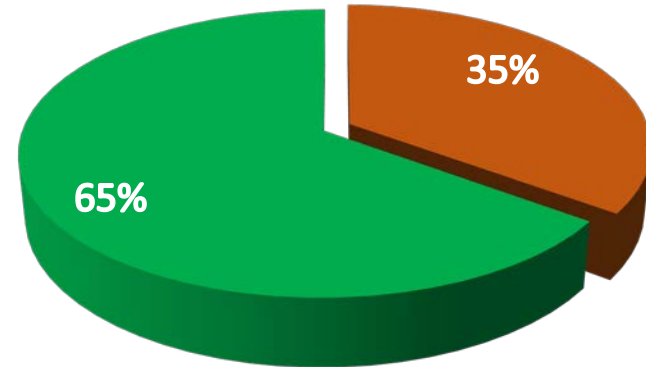
Cohort 1 Longitudinal Performance

2018
Seventh Grade



- More Than One Year Below Grade Level
- On Track or at Grade Level Benchmark

2019
Eighth Grade



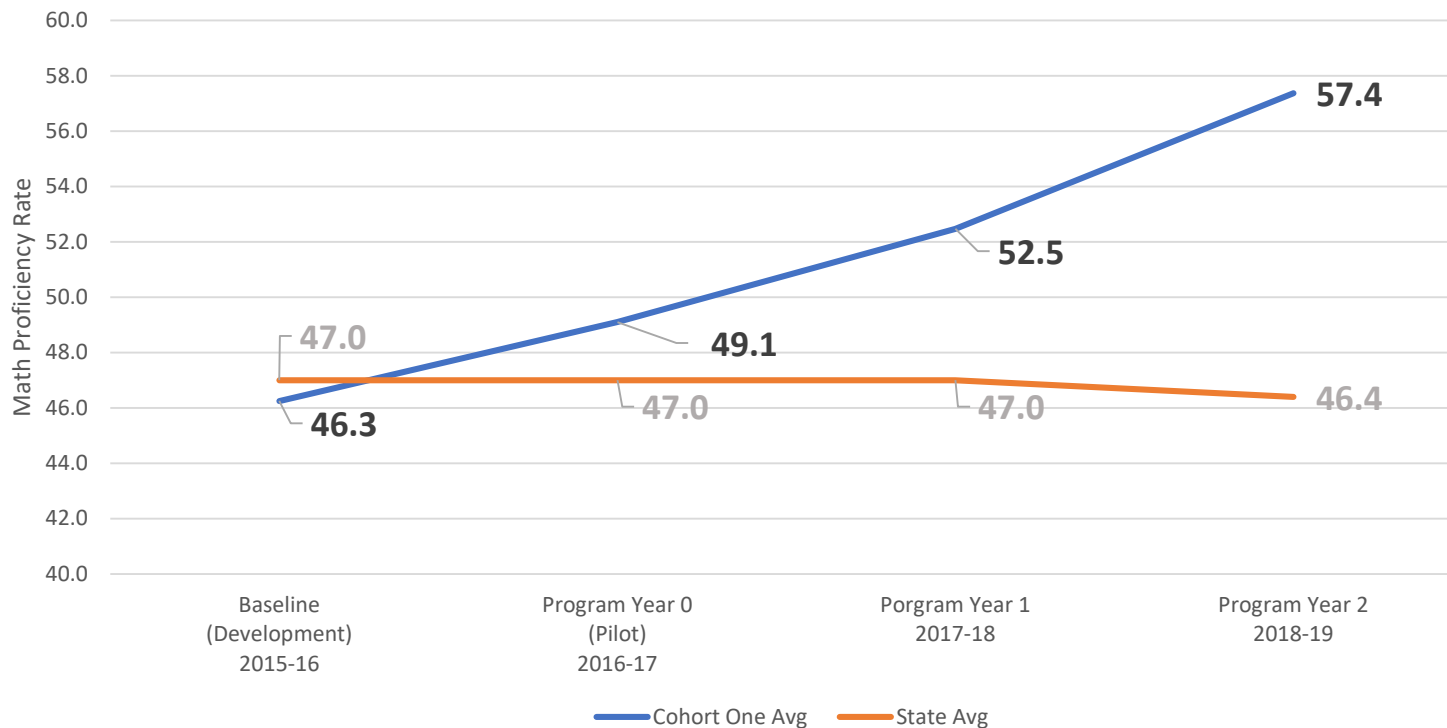
- More Than One Year Below Grade Level
- On Track or At Grade Level Benchmark

Note: Students in seventh grade identified as more than one year below grade level are 30 or more points below eighth grade benchmark.

Source: AdvanceKentucky and College Board

KPREP Math Proficiency Rate by Program Year

Cohort 1 Weighted Average vs. State Average



After 3 years in the program Cohort 1 schools saw a **24%** increase in KPREP math proficiency rates.

Source: AdvanceKentucky and KDE Open House

Computer Science Initiatives



Think CS.



Teach CS.



Do CS.

Recommended Pathway of District CS Development and Implementation to meet Kentucky's CS Standards

Think CS.



Teach CS.



Do CS.

Engage in a District-wide **CSforALL SCRIPT** workshop to create an inventory of your current CS opportunities, identify goals, and establish a pathway to achieve those goals.



Time:

Flexible, 1-2 day virtual or in-person workshop conducted in district

Find the right professional development for your teachers to create CS pathways that align with your specific school goals and provides students with the foundation to take advantage of opportunities within your community.



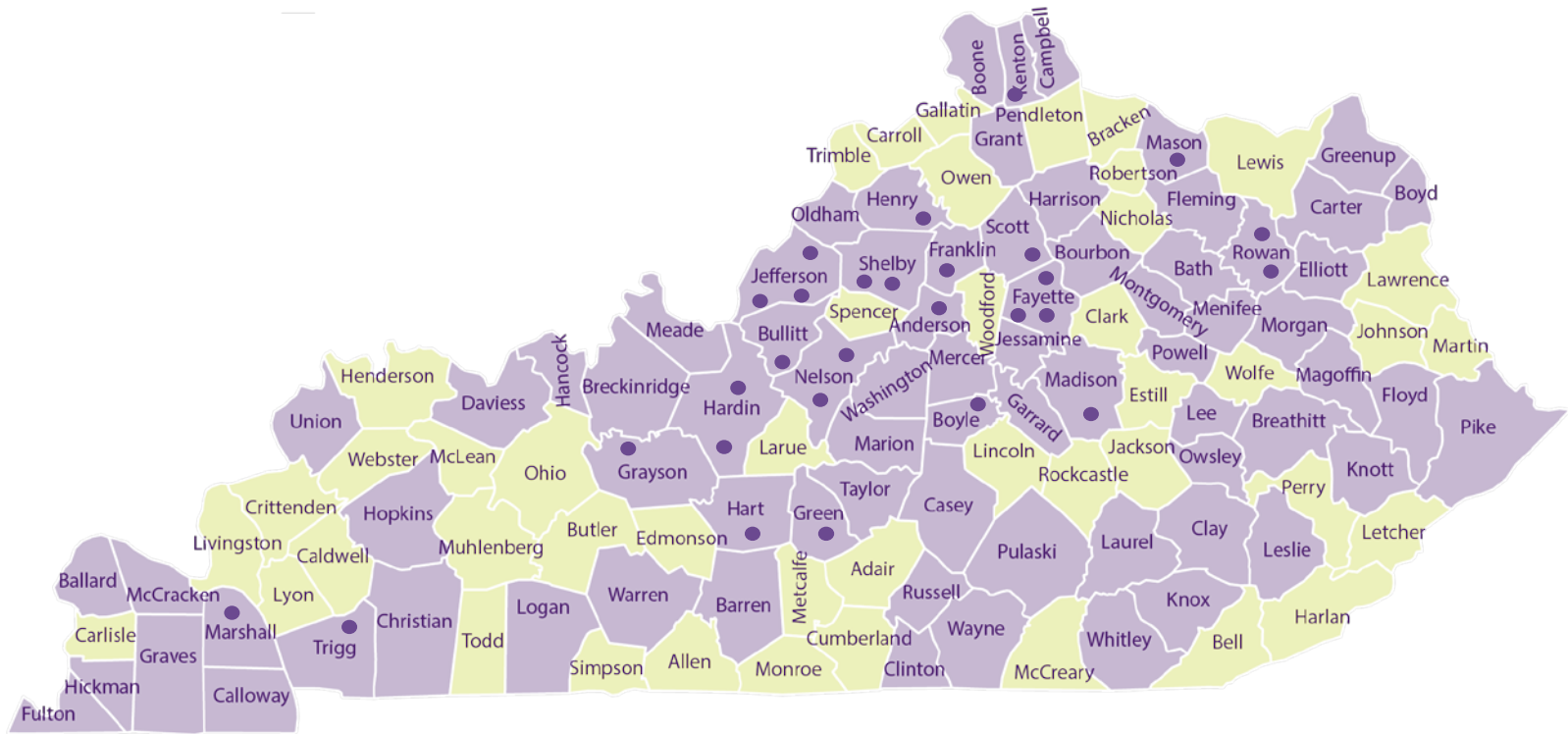
Time:

Commitments vary by program, but most are offered either online, in-person or as blended learning options

Provide opportunities for your students to create authentic CS projects and earn college credit and valuable industry certifications.



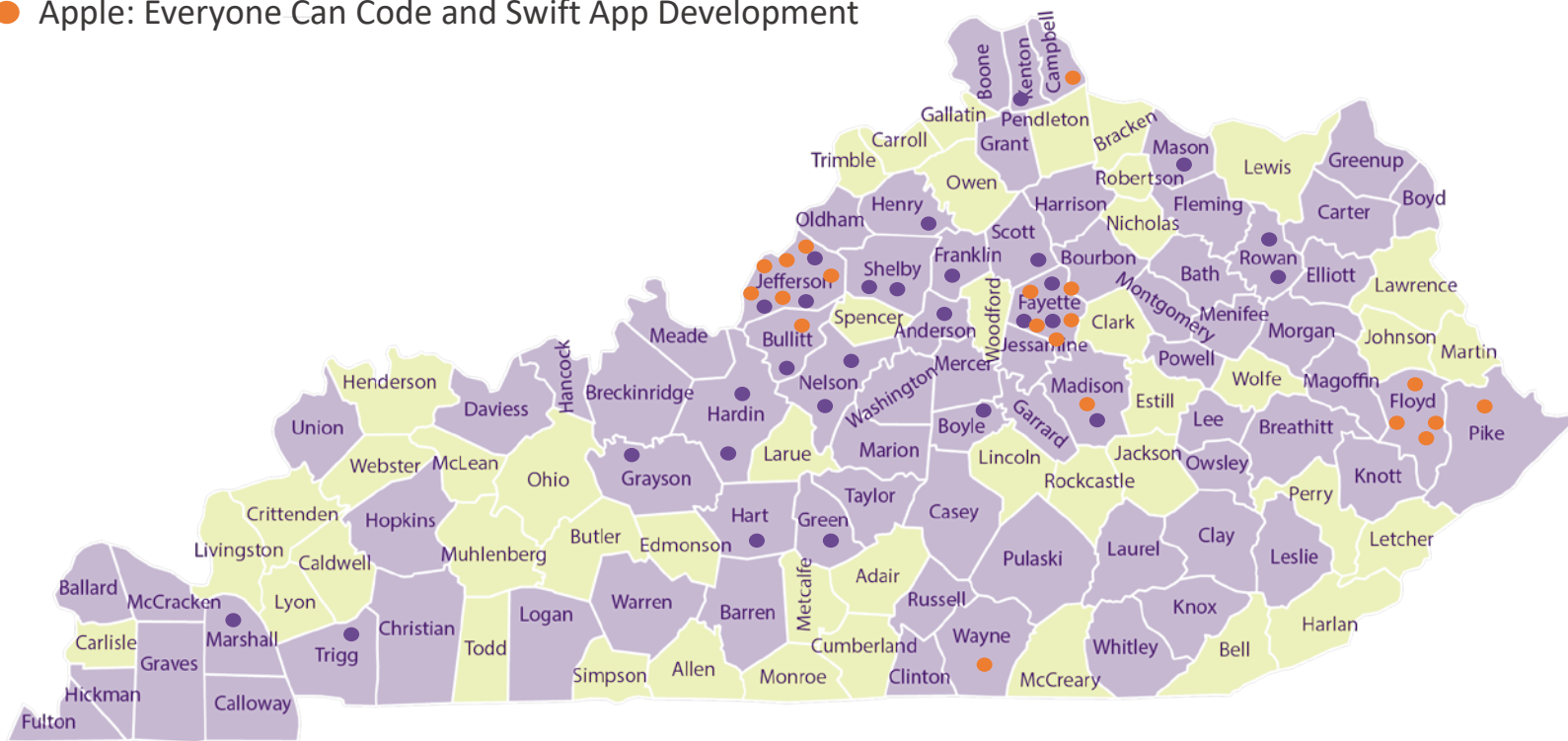
- Code.org AP CS Principles and CS Discoveries



Note: Dots represent teachers actively participating in a CS program in SY 2020 -21. Purple shaded counties represent areas of past participants.

Source: Code.org and AdvanceKentucky

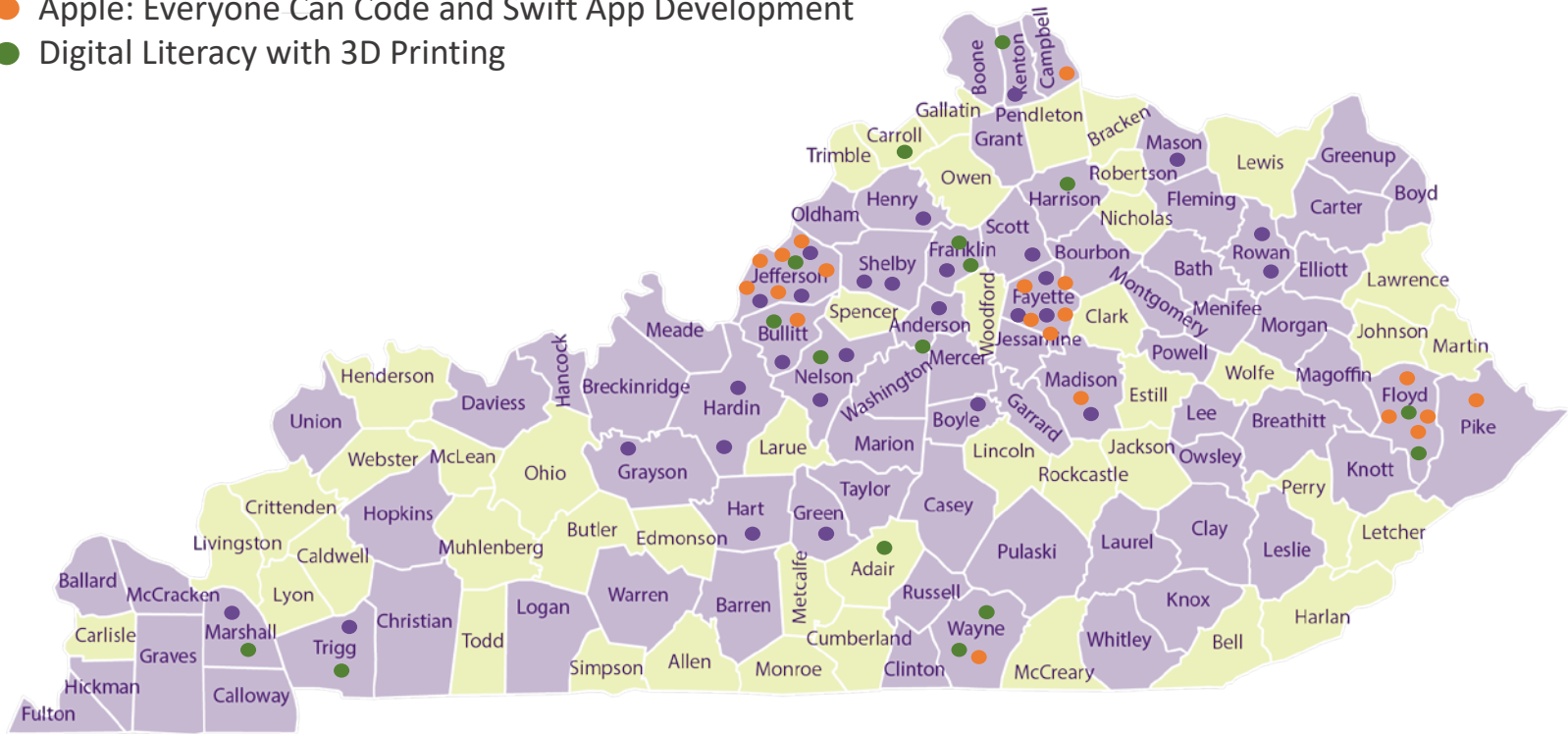
- Code.org AP CS Principles and CS Discoveries
- Apple: Everyone Can Code and Swift App Development



Note: Dots represent teachers actively participating in a CS program in SY 2020 -21. Purple shaded counties represent areas of past participants.

Source: Code.org and AdvanceKentucky

- Code.org AP CS Principles and CS Discoveries
- Apple: Everyone Can Code and Swift App Development
- Digital Literacy with 3D Printing



Note: Dots represent teachers actively participating in a CS program in SY 2020 -21. Purple shaded counties represent areas of past participants.

Source: Code.org and AdvanceKentucky

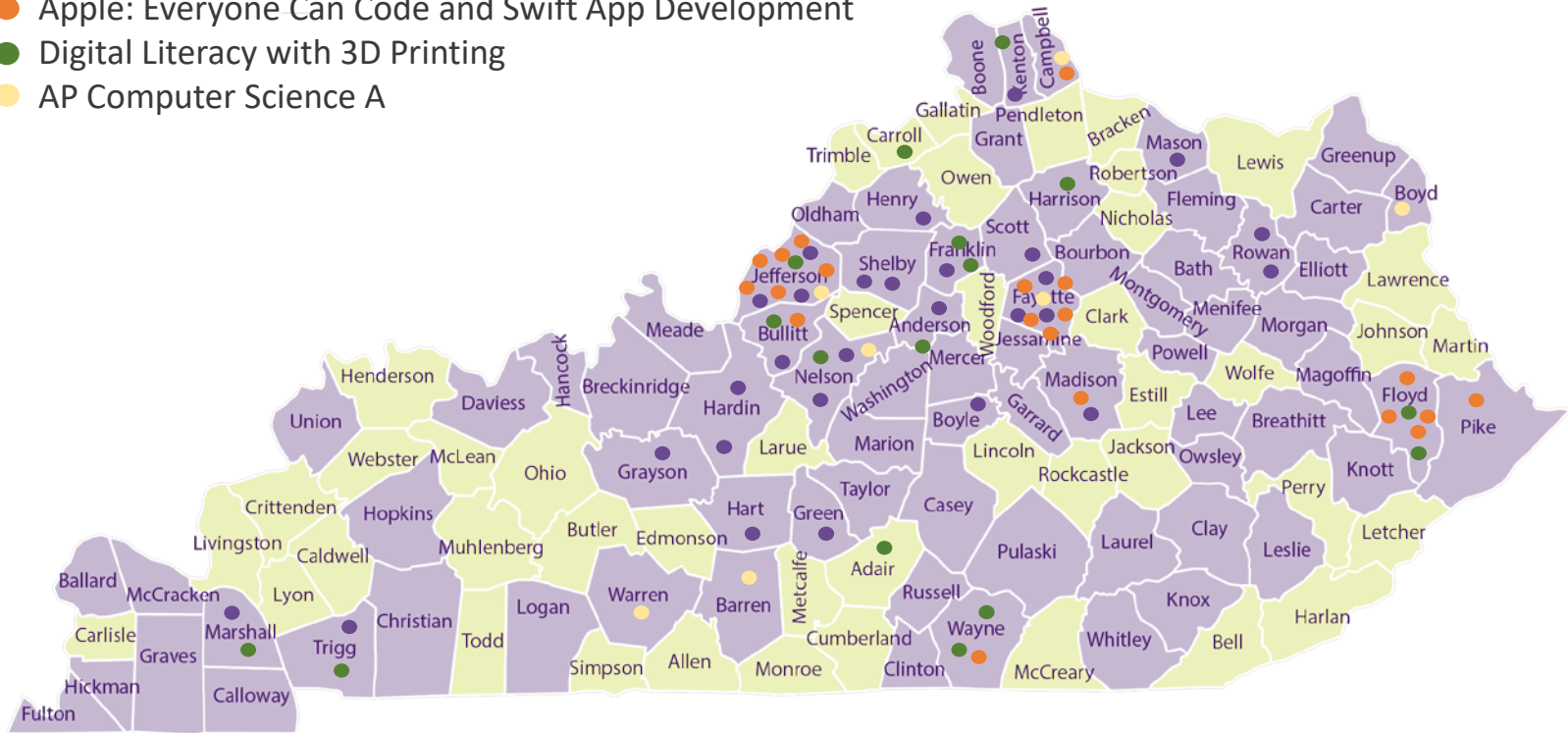
AdvanceKentucky

an initiative of Kentucky Science and Technology Corporation

Computer Science Initiatives

2020-21 Cohorts – AP CS A

- Code.org AP CS Principles and CS Discoveries
- Apple: Everyone Can Code and Swift App Development
- Digital Literacy with 3D Printing
- AP Computer Science A



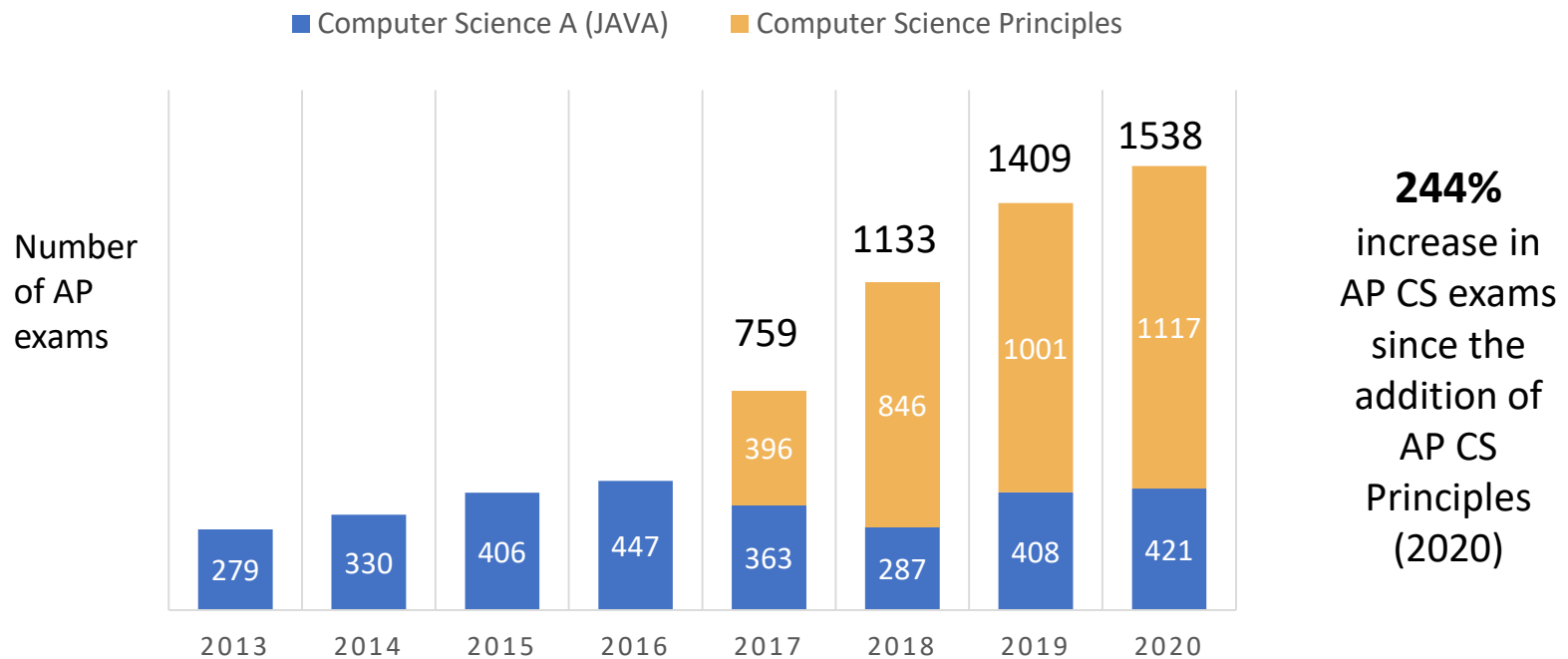
Note: Dots represent teachers actively participating in a CS program in SY 2020 -21. Purple shaded counties represent areas of past participants.

Source: Code.org and AdvanceKentucky

Computer Science Initiatives

Statewide Growth of AP Computer Science (Public high schools, all students)

Number of AP CS Exams (Public)



Source: College Board

Thank you!
Questions?