

AP Math/CS Vertical Teams

Why Create an AP Vertical Team?

- To raise standards
- To foster greater inclusion
- To encourage innovation
- To bring about coordination
- To allow for empowerment
- To stimulate enthusiasm

Who Should Join an AP Vertical Team?

- Be as inclusive as possible
- All mathematics content along the curriculum leading to AP should be represented: algebra, geometry, precalculus, etc.
- Teachers that attended Laying the Foundation Training (LTF)
- Participation should be voluntary
- Middle school teachers are a vital part of the team
- It is optimal to have at least one AP Vertical Team member from each grade level on the team.
- Curriculum coordinators, school counselors, or administrators may be part of the team but are not a requirement. There should be clear administrative support of the team.

Standard Vertical Team Meeting Format (4 per year)

- Each vertical team meeting should be 1.5 – 2 hours long but can be embedded into existing PLC or department meetings.
- Each vertical team should meet four times per school year
 - Before school starts or early in the school year
 - Before semester end/winter break
 - Winter (around President’s Day)
 - End of year – remember to consider end of year activities when deciding to schedule last meeting. Plan to have this meeting before May 1.
- Vertical team meetings are the responsibility of the school’s AP teachers, in cooperation with administrators and colleagues.
- AP CSP teachers may attend vertical team meetings in any content area.

Administrative Support

- Creating time for APVT to meet
- Coordinating meetings involving educators from several different schools
- Providing central meeting rooms, supplies, professional development resources, and technical support
- Supporting ongoing professional development

Action Plan

- Organize a group of interested educators and select a leader.
 - Identify standards and expectations of the AP program
 - Leader conducts meetings, keeps notes of proceedings, distributes notes to team members, schedules future meetings. May be content coordinator but not required.
- Raise awareness and understanding of the AP program within the teamed schools. Discussion may include the AdvanceKentucky College Readiness Program and its requirements.
- Work with Administrators to provide support for an APVT. Administrators can assist by:
 - Creating time for APVT to meet
 - Coordinating meetings involving educators from several different schools
 - Providing central meeting rooms, supplies, professional development resources, and technical support
 - Supporting ongoing professional development
- Include school counselors in the education process about the AP program and AP Vertical Teams

Possible Five-Year Vertical Team Agenda

At the first meeting every year, take some time out to evaluate the previous year's progress and adjust your team's goals if necessary.

Discuss how to recruit and retain students in higher-level classes, including AP, during at least 1 meeting. Projected enrollments for AP classes for the next school year should take place during the winter meeting to allow time to develop recruitment plans if projections are low.

YEAR ONE

- Meeting 1 – Overview of AdvanceKentucky, AP mathematics program, and the purpose of the Vertical Team
- Meeting 2 – Analysis of Piecewise Functions
 - LTF Day 1
 - AP Calculus Free Response Questions: 2003 AB 4 BC 4, 2003 AB 5 BC 5 Form B
- Meeting 3 – Area and Volume
 - LTF Day 2
 - AP Calculus Free Response Questions: 2006 AB 1 BC 1, 2006 AB 3
- Meeting 4 – Graphical Data Displays
 - LTF Day 4
 - AP Statistics Free Response Questions: 2008 – 1 Form B, 2004 – 1

YEAR TWO

- Meeting 1 – Discuss and Develop a Calculator Policy for all Mathematics Courses
- Meeting 2 – Rates of Change
 - LTF Day 3
 - AP Calculus Free Response Questions: 2004 AB 1 BC 1, 1998 AB 3
- Meeting 3 – Accumulation
 - LTF Day 5
 - AP Calculus Free Response Questions: 2002 AB 2 BC 2, 2000 AB 3
- Meeting 4 – Probability
 - LTF Day 6
 - AP Statistics Free Response Questions: 2004 – 1, 2003 – 2 Form B

YEAR THREE

- Meeting 1 – Develop common teaching strategies and vocabulary
- Meeting 2 – Position/Velocity/Acceleration
 - LTF Day 7
 - AP Calculus Free Response Questions: 2005 AB 5 BC 5, 2004 AB 3
- Meeting 3 – Limits
 - LTF Day 8
- Meeting 4 – Linear and Non-linear Bivariate Data
 - LTF Day 10
 - AP Statistics Free Response Questions: 2003 – 4, 2002 – 1 Form B

YEAR FOUR

- Meeting 1 – Develop Strategies for Parent and Community Outreach
- Meeting 2 – Optimization
 - LTF Day 9
 - AP Calculus Free Response Questions: 2005 AB 4, 2002 AB 1 BC 1
- Meeting 3 – Transformations
 - LTF Day 11
- Meeting 4 – Data Gathering
 - LTF Day 13

YEAR FIVE

- Meeting 1 – Discuss “Having Students Write Justifications” and develop a common approach
- Meeting 2 – Related Rates
 - LTF Day 12
- Meeting 3 – Curve Sketching
 - LTF Day 14
- Meeting 4 – Simulation
 - AP Statistics Free Response Questions: 2001 – 3

OTHER POSSIBLE TOPICS

- Creating Multiple Representations
- Adapting AP Questions for Pre-AP
- Common Assessments for Mathematics Courses
- Presentations Standards for Student Work
- Solving Problems Involving Tables
- Reasoning from Graphs
- Analysis of Hard Topics (What Students Continue to Find Difficult in Mathematics Classes)

AP Teacher Responsibilities

- With administrative support, set up meeting dates and times with local teachers. Include middle school teachers if possible.
- Lead or coordinate with other teachers to lead the meeting.
- Communicate with AdvanceKentucky Content Director and mentor
- Complete online reporting of Vertical Team Meeting (includes date, location, attendance, and agenda)