



Creating Course Pathways for Advanced Students: An Example from the NGSS



Achieve

Welcome



POLL QUESTION

With which group do you identify?



About Achieve



- ◆ Committed to ensuring all students graduate from high school “college and career ready” so students are academically prepared for next steps after high school.
- ◆ Work with states to raise academic standards and graduation requirements, improve assessments, and strengthen accountability systems.
- ◆ Partner with state governments, reform agencies, policy organizations, and other stakeholders to conduct research, provide technical assistance on policy execution, develop advocacy resources, and communicate results.



Presenters



Ellen Ebert

Ellen Ebert is the Science Director in the Teaching and Learning Program at the Office of the Superintendent of Public Instruction in Olympia, WA. She serves as President for the Council of State Science Supervisors. Ellen holds a PhD in Science Education and a MEd in Educational Technology. She was honored to receive several awards including the Presidential Award for Excellence in Science Education. Ellen's current focus is on implementing the Next Generation Science Standards in Washington State.



Sean Elkins

Sean Elkins is the instructional coach at Boone County High School in Florence, Kentucky. In his previous role as a science consultant with the Kentucky Department of Education, Elkins coordinated Kentucky's involvement in the development of the Next Generation Science Standards. He is a 27 year veteran of public education and holds certifications in chemistry, physics, and earth science.



Eric Koser

Eric Koser loves teaching high school students in south central Minnesota where he has 22 years of experience teaching physics and AP physics. Eric serves as an MnSTA board member, conference manager, and webmaster. He enjoys exploring systematic ways to organize science teaching and the use of technology and has been involved in several teacher education projects around Minnesota. He was honored to receive the Presidential Award for Excellence in Science Education.



NGSS Accelerated Model Course Pathways



POLL QUESTION

Have you already read the NGSS Accelerated Model Course Pathways document prior to this webinar?



NGSS Accelerated Model Course Pathways



- **Why we developed this document**
 - To help students maximize high school course experiences to allow for scheduling flexibility to take AP and/or elective courses
- **How we developed this document**
 - A team of experienced AP teachers and curriculum leaders worked together to determine potential course pathways for acceleration



Typical NGSS Courses



Middle School Standards

Grades: 6 7 8 9 10 11 12

High School Standards

Grades: 6 7 8 9 10 11 12



NGSS Accelerated Model Course Pathways



Accelerated NGSS Model Course Maps: Five-Year Conceptual Model

Middle School Standards
Grades: 6 7 8 9 10 11 12

Grades: 6 7 8 9 10 11 12

High School Standards
Grades: 6 7 8 9 10 11 12

Four-Year Conceptual Model

Grades: 6 7 8 9 10 11 12

High School Schedule Model

Grades: 6 7 8 9 10 11 12

Additional Option:
Considerations for Advanced Placement Courses



Accelerated NGSS Model Course Maps (ANMCM)



Key Assumptions

1. ANMCM are starting points, not finished products
2. The design of the ANMCM was built on the model course sequences found in the NGSS Appendix K
3. The acceleration process can begin in middle school
 4. “All standards, All students”
 5. ANMCM are not curriculum
 6. Engineering for all
7. ANMCM \neq Advanced Level Science Coursework



Course Pathways



POLL QUESTION

Does your school or district currently offer an acceleration option starting in middle school?



State Perspective



- **Advisement – Local control state**
 - ◆ Districts, schools, and educators ask about advanced classes built in conjunction with NGSS and as part of a larger program for gifted studies
- **Long term – Planning**
 - ◆ Moving towards College and Career Readiness
 - ◆ Identification of Resources
 - ◆ Teacher professional learning needs
 - ◆ Identifying best pathway and supports for choice
- **Higher Education – Preparation of pre-service and in-service educators**
- **Grants – Support for local efforts, Connector for opportunities**
- **Identify exemplars for other schools and districts**
- **Emphasize Equity – Underserved students**



District Perspective

- Establishes a precedent for acceleration
- Provides a framework for conversations between middle school and high school
- Helps establish professional learning needs and resource allocation



School Perspective

- A model to support students that are ready for acceleration
- Our current model in Mankato Public Schools
 - 6 General – 7 Life – 8 Earth – 9 Physics – 10 Chemistry – 11 Biology
- Model Course Maps as starting point for course design – but not a curriculum
- Planning
 - Curriculum – systems level
 - Instruction – classroom level
- Model Course Maps support vertical conversations in Collaborative Teams
- Model Course Maps support best practices in instruction





Panel Discussion



Course Pathways



POLL QUESTION

Have you used the Accelerated NGSS Model Course Pathways document?



Course Pathways



Q&A



Thank you for joining us for our webinar on

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