

Science 8 Standards of Learning (SOL) Pass Rates for Students with Disabilities Exceed Virginia Accreditation Benchmark after Multilevel Science Teachers Implement SIM™

Literacy and Learning across a Middle School Science Program

- SIM, the Strategic Instruction Model™, is a set of evidence-based practices designed to help students meet the demands of life.
- The Unit Organizer, a SIM Content Enhancement Routine, was implemented across all science classes across all grade levels.
- The Unit Organizer Routine supports students in organizing, understanding, and recalling information.
- On a survey of 42 sixth-eighth grade students, with 2 students at each grade level identified as having an IEP, 99% of students indicated they:
 - Had knowledge of the Unit Organizer with the Expanded Map
 - Could identify benefits of the use of the Unit Organizer.

Approach

Leadership

- Identified targeted goals with science department.
- Empowered teachers in decision making and problem solving.
- Protected and scheduled time for teachers to meet and to participate in coaching.
- Supported the fidelity of implementation through coaching.
- Stated that they believed in the capacity of teachers and students.
- Attributed outcomes to the power of a cohesive staff.

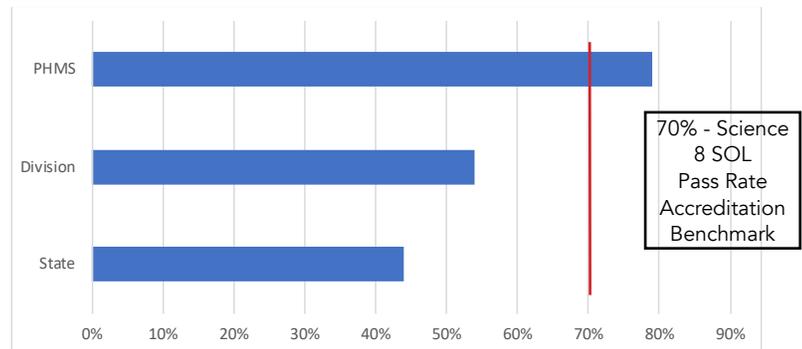
Science Content Knowledge & Assessment Data: Questions Leading the Process

- What categories and critical content were most challenging (e.g. force, motion, energy, and matter) for students?
- What test items appeared most frequently in specific categories, and how had students performed on them?
- What was common content across grade levels (e.g., scientific investigation)?
- What were familiar and challenging vocabulary?
- What additional skills do students need to perform well (e.g., interpreting graphs, scientific notation, reading the periodic table)?

Learning Activities

- All science teachers used the Unit Organizer to agree upon essential science content.
- All science teachers created and facilitated hands-on activities and stations for students

Science 8 SOL Pass Rates for Students with Disabilities in a Middle School Implementing SIM with Comparisons to State and Division Science 8 SOL Pass Rates



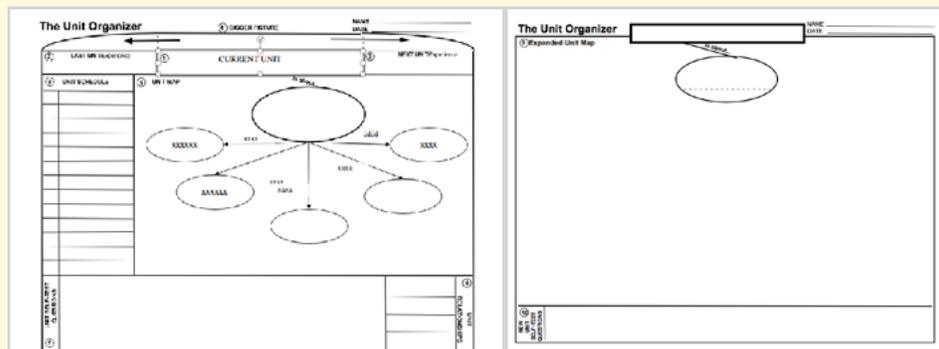
Science 8 Assessment Data: 2017-18 Outcomes

- 70% Accreditation Benchmark Met¹
- PH Middle School achieved FULLY ACCREDITED status
 - 89% Pass rate - ALL students
 - 79% Pass rate - Students with disabilities

- to investigate and learn essential science content.
- Students engaged in higher order thinking and reasoning by:
 - Constructing personal Unit Organizers with Expanded Maps. These helped teachers identify knowledge gaps.
 - Creating new self-test questions for the review.
- Students participated in state released practice test items with the intent of building confidence and stamina prior to the actual state assessment.

Other Pass Rate Comparisons

- Students with Disabilities: Science 8 State Pass Rates:
 - Overall - 44%²
 - One Excellence in Co-teaching Initiative Project School (2 years)³ - 71%
- VTSS Cohort 1 and 2 school performance on the Science 8 SOL:
 - 9/15 of schools met the state accreditation benchmark.
 - 5/13 of schools met the state pass rate for students with disabilities.



PHMS Results were achieved with implementation of the Unit Organizer Routine (shown here)

References

1. Virginia Department of Education. (2018). *Standards of Accreditation: Impact on Schools & Impact on Student*. Retrieved from <http://www.doe.virginia.gov/boe/accreditation/soa-impact.pdf>
2. Virginia Department of Education. (2018). *Virginia's School Quality Profiles*. Retrieved from <http://schoolquality.virginia.gov/schools/prospect-heights-middle#fdtn-desktopTabs-assessments>
3. Virginia Department of Education. (2017). *Virginia's Statewide Inclusion Action Plan*. (Superintendent's Memo No:311-17). Attachment A: Co-teaching Demonstration Sites List.

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