
ROOSEVELT MIDDLE SCHOOL SCIENCE CURRICULUM RECOMMENDATION

COMMITTEE OF THE WHOLE MEETING

APRIL 4, 2023

MIDDLE SCHOOL SCIENCE PILOT TEAM

Teacher	Grade Level
Will Whitlock	5th
Charlie Juister	6th
Cory Kadlec	7th
Alex Mendralla	8th
Amy Rains	5th-8th

GOALS FOR THE CURRICULUM EVALUATION PROCESS

- Engage in a collaborative team process
- Guide decision-making through an evidence-based analysis
- Conduct an intensive study of curriculum (April 2022 – February 2023)
- Complete a "read/analysis/rubric/criteria" process to "paper screen" materials
- Pilot materials in the classroom setting



PILOT PROCESS LIMITATIONS

- Only one unit from each program was implemented in classrooms
- Units cover different strands of content not allowing for "apples to apples" comparison
- One unit may not highlight the range of strengths and/or weaknesses of each program
- Imbalance of familiarity with materials
 - Amplify – new program
 - IQWST – in use at Roosevelt since 2016



Expected goals for learning



Student reflection on learning



Teacher reflection of student learning



Team reflection of student learning by program



Evidence and scores for student learning and teacher support

PILOT TOOLS AND DATA COLLECTION

MATERIALS PILOTED IN CLASSROOMS

IQWST (6-8)

- Developed by science education, literacy, and learning specialists from the University of Michigan, Northwestern University, Michigan State University, and the Weizmann Institute of Science
- Literacy focus: reading, writing, discussion, and engaging in science practices
- Lessons are organized into thematic units
- Supports students to build an understanding of core ideas as well as understand and apply scientific practices

Amplify (K-8)

- Developed by science education experts at University of California, Berkeley's Hall of Science and Amplify's digital learning team
- Engages students in relevant, real-world problems where they investigate scientific phenomena
- Engages students in collaboration and discussion
- Supports students to develop models or explanations to arrive at solutions to problems

PILOT RESULTS

IQWST

Student Learning

Reflection Rubric 84%

Teacher Support 76%

Amplify

Student Learning

Reflection Rubric 68%

Teacher Support 76%



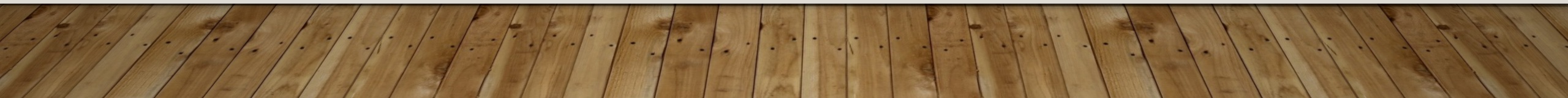
CLASSROOM PILOT RESULTS: IQWST

Student Learning

Strengths:

- Engagement in authentic science as reflected in the Next Generation Science Standards
- Student-centered to foster development of the Science and Engineering Practices
- Inspired future interest in science topics and learning

Limitations/Next Steps:

- Visible progress monitoring of student learning and metacognition opportunities
 - Incorporation of newly released resources and/or program supplements
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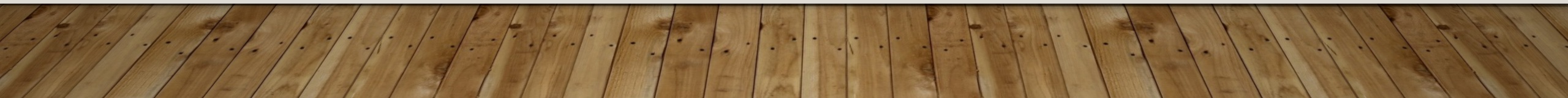
CLASSROOM PILOT RESULTS: IQWST

Teacher Support

Strengths:

- Integration of Science Practices with core ideas of science content
- Background information on the clear presence of phenomena (driving question for student learning)
- Potential strategies for differentiation

Limitations/Next Steps:

- Increase variety of assessments and integration of reading
 - Continue to develop and codify necessary modifications
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CLASSROOM PILOT RESULTS:AMPLIFY

Student Learning

Strengths:

- Strong integration with interactive animations (sims)
- Emphasis on scientific explanations and science literacy

Limitations:

- Limited/narrow ways for students to make sense of materials
- Student experiences with scientific practices were very limited
- Lack of math integration,
- Lack of student generated data and analysis

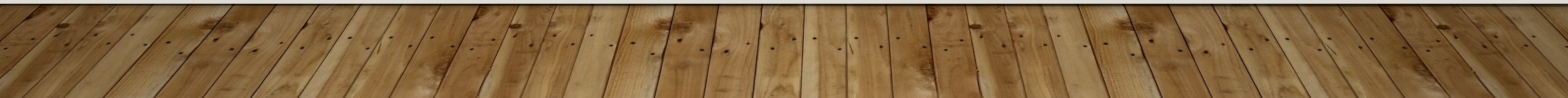
CLASSROOM PILOT RESULTS:AMPLIFY

Teacher Support:

Strengths:

- Extensive scripting for teachers to use in delivering lessons
- Explicit ties to the three main Next Generation Science Standards components

Limitations:

- Lack of actionable suggestions for differentiation to support range of student needs
 - Differentiated groups were limiting to students as the learning progressed
 - Limited support to challenge and extend student thinking
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STUDENT FEEDBACK:AMPLIFY

- Found simulations entertaining
- Felt content was repetitive and/or redundant
- Frustrated by the pace of the program
- Ability to collaborate was limited
- Found investigation questions predictable

STUDENT FEEDBACK: IQWST

- Recognized the use and application of science concepts through hands-on activities
- Valued the variety of ways to show their understanding
- Built their confidence in understanding science concept and ideas
- Found greater challenge with IQWST
- Recognized the depth in each unit

ROOSEVELT SCIENCE TEAM MATERIALS RECOMMENDATION

- Science team recommends a six-year renewal of the IQWST science program
- Renewal will also include refresh of relevant supplies
- Next renewal: 2028-2029 school year

NEXT STEPS

Increase variety of assessments and integration of reading

Continue to develop and codify necessary modifications

Incorporate newly released resources and/or program supplements

Questions

