

## Appendix A: PUHSD Middle School Science Materials Adoption 2020 - Overview

### Teacher Evaluation of Instructional Materials (based on NextGen TIME evaluation process)

Teachers reviewed the instructional materials using a selection process modified from the NextGen TIME pilot evaluation program. Teachers also received feedback from students to help in their evaluations. At district training days the teachers from both schools discussed the programs, compared experiences, and provided feedback on the programs.

### Straight program preference voting results (not accounting for scores based on evaluated criteria)

- **Discovery Education:** First Choice = 72%, Second Choice = 28%, Third Choice = 0%
- **STEMScopes:** First Choice = 28%, Second Choice = 36%, Third Choice = 36%
- **Amplify:** First Choice = 0%, Second Choice 36%, Third Choice = 74%

The following charts show how the programs were rated on 5 major points: 1. Adherence to NGSS phenomena based lessons; 2. effective use of three-dimensional instruction; 3. access to differentiated instruction for EL and special needs students; 4. formative and summative assessment to drive instruction, and 5. authentic lessons providing coherence and logical sequences across the curriculum. Teachers also evaluated access to digital/print material, instructional and technical support from publisher, and laboratory activities support.

[Table A: Amplify](#)

[Table B: Discovery Education](#)

[Table C: STEMScopes](#)

Categories were evaluated on a scale of 1-5 and the average calculated for the overall program score. The scoring, teacher comments, and preference vote were all taken into account. Discovery education scored an average of 3.9/5.00 and had no ratings of 1 for any of the categories. STEMScopes scored an average of 3/5.00, with ratings more evenly distributed from 1-5. Amplify scored an average of 2.7/5.00, with more unfavorable scores than Discovery or STEMScopes.

Quantitative and qualitative data collected throughout the course of the pilot are overwhelmingly in support of adopting the Discovery Education Science Techbook program for the middle school science courses.

**Table A: Amplify**

Breakdown of individual scores by category (5 = high quality, 3 = medium quality, 1 = low quality)

<b>Criteria</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>Ave</b>
TS 1: Phenomenon/Problem Driven Three Dimensional Learning - Phenomena included in learning sequences and supports student understanding of content; rationale for how phenomena supports all three dimensions (DCI, SEP, CCC); three dimensions integrated into lessons.	0	2	11	1	1	2.93
TS 2: Coherence - strategies link student learning experiences across lessons to support sense-making; connections to other science domains/ELA/Math	0	2	6	7	0	2.73
TS 3: Effective Teaching - materials provide authentic learning with meaningful phenomena across all three dimensions; promote reasoning, literacy, challenge thinking, metacognitive abilities; a variety of strategies available to enhance activities.	0	1	8	6	0	2.67
TS 4: Support for Students with Diverse Learning Needs - support provided to differentiate instruction, provides access to strategies that supported targeted learning goals and performances, language support for non-English speaking students.	0	1	6	7	1	2.6
TS 5: Support to Monitor Student Progress: access to effective summative and formative assessments provided, support for providing feedback and modifying instruction, digital grade monitoring	0	3	9	2	1	2.87
Student Learning Experience: high quality investigations, support materials, opportunities to make learning visible, support of NGSS 3-D.	0	2	9	3	1	2.8
Lab Materials: access to lab kits for each imbedded lab, easy to follow instructions and materials list for consumables and equipments	0	2	4	7	2	2.5
<b>Overall Score</b>						<b>2.73</b>

**Table B: Discovery**

Breakdown of individual scores by category (5 = high quality, 3 = medium quality, 1 = low quality)

<b>Criteria</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>Ave</b>
TS 1: Phenomenon/Problem Driven Three Dimensional Learning - Phenomena included in learning sequences and supports student understanding of content; rationale for how phenomena supports all three dimensions (DCI, SEP, CCC); three dimensions integrated into lessons.	6	6	3	0	0	4.12
TS 2: Coherence - strategies link student learning experiences across lessons to support sense-making; connections to other science domains/ELA/Math	6	3	6	0	0	3.94
TS 3: Effective Teaching - materials provide authentic learning with meaningful phenomena across all three dimensions; promote reasoning, literacy, challenge thinking, metacognitive abilities; a variety of strategies available to enhance activities.	5	5	5	0	0	3.94
TS 4: Support for Students with Diverse Learning Needs - support provided to differentiate instruction, provides access to strategies that supported targeted learning goals and performances, language support for non-English speaking students.	7	5	3	0	0	4.19
TS 5: Support to Monitor Student Progress: access to effective summative and formative assessments provided, support for providing feedback and modifying instruction, digital grade monitoring	3	6	3	1	0	3.69
Student Learning Experience: high quality investigations, support materials, opportunities to make learning visible, support of NGSS 3-D.	7	3	4	1	0	3.94
Lab Materials: access to lab kits for each imbedded lab, easy to follow instructions and materials list for consumables and equipments	4	4	5	2	0	3.63
<b>Overall Score</b>						<b>3.92</b>

**Table C: STEMScopes**

Criteria	5	4	3	2	1	Ave
TS 1: Phenomenon/Problem Driven Three Dimensional Learning - Phenomena included in learning sequences and supports student understanding of content; rationale for how phenomena supports all three dimensions (DCI, SEP, CCC); three dimensions integrated into lessons.	2	3	4	4	2	3
TS 2: Coherence - strategies link student learning experiences across lessons to support sense-making; connections to other science domains/ELA/Math	3	3	4	3	2	3.19
TS 3: Effective Teaching - materials provide authentic learning with meaningful phenomena across all three dimensions; promote reasoning, literacy, challenge thinking, metacognitive abilities; a variety of strategies available to enhance activities.	3	2	6	2	2	3.19
TS 4: Support for Students with Diverse Learning Needs - support provided to differentiate instruction, provides access to strategies that supported targeted learning goals and performances, language support for non-English speaking students.	1	2	5	4	3	2.69
TS 5: Support to Monitor Student Progress: access to effective summative and formative assessments provided, support for providing feedback and modifying instruction, digital grade monitoring	1	2	5	5	2	2.75
Student Learning Experience: high quality investigations, support materials, opportunities to make learning visible, support of NGSS 3-D.	4	1	4	2	2	3.25
Lab Materials: access to lab kits for each imbedded lab, easy to follow instructions and materials list for consumables and equipments	4	1	6	2	2	3
<b>Overall Score</b>						<b>3.01</b>