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K- 8 Science Module

Program Evaluation

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Science Module Evaluation

Program Evaluation Report

OVERVIEW

This evaluation report describes outcomes from the utilization of commercially-designed science modules in Jefferson County Public Schools' (JCPS) elementary and middle school classrooms. This report was written in response to a request from the JCPS Finance Department for an evaluation of the science modules to support 2013-2014 budgetary decisions being made in early 2013. Science Modules were first introduced to elementary schools during the 2002-2003 textbook adoption year when 37 elementary schools opted to spend 75% of their textbook dollars on science modules. In 2003, JCPS middle schools were introduced to science modules via a four-year science education program conducted by the Louisville Science Center in collaboration with the JCPS. This effort, known as Inquire! Investigate! IMAGINE (I³) was funded by the General Electric (GE) Foundation. In the spring of 2006, the GE Foundation awarded JCPS 24.5 million to redesign math and science instruction – more than 7 million of the initial award went to the purchase of science modules for K-8 students district-wide and to training for 700 elementary and middle school teachers during the summer of 2006. The GE Foundation awarded JCPS an additional 10.5 million during the same timeframe.

A steering committee consisting of classroom teachers, union representatives, and district content specialists selected the science kits, also known as modules, from several high quality inquiry-based curricula that best aligned with the state's standards. The modules are contained in large grade-specific containers that are delivered directly to the classroom. Modules include a teacher's guide, informational reading for students, and materials that support active student engagement in investigation. When the lessons are completed, the modules are picked up by the district science warehouse for refurbishment—made ready for the next classroom. Across all grades, each module addresses a key science concept and allows for in-depth investigation and rigorous exploration. For example, each unit, lasting approximately 8-10 weeks in elementary classrooms and 6-12 weeks in middle schools, addresses either a life, physical, or earth science concept. Focusing on one topic at a time allows teachers to avoid traditional methods of briefly touching upon various concepts and instead, provides students with opportunities for high-level comprehension and understanding. Features such as live specimens for the life science components, non-hazardous chemicals for physical science, and rock samples for earth science, allow for "hands on" learning and real life connections. Additionally, targeted informational reading about each topic is included in the student resource books.

More recently, a movement to implement Common Core State Standards (CCSS) for language arts, literacy, and mathematics has begun at a national scale. Kentucky chose to adopt the CCSS for language arts, literacy, and mathematics for the first release year (2011-2012) and is expected to do the same with science and social studies for the 2013-2014 school year. The National Research Council (NRC) of the National Academy of Sciences developed the framework for the Next Generation Science Standards (NGSS) for all grade levels. The framework has three dimensions: (a) Scientific and Engineering Practices, (b) Crosscutting Concepts that tie science across science disciplines, and (c) Core Ideas in Four Disciplinary Areas. These dimensions will

provide the organizational structure for the development of science standards (see Table 1). This evaluation will focus on the impact of the science modules in JCPS and their potential to support the new NGSS for science which will be released in the spring of 2013.

Table 1. National Research Council's Framework for K-12 Science Education

<p><i>DIMENSION 1: Scientific and Engineering Practices</i></p>	<ol style="list-style-type: none"> 1. Asking questions (for science) and defining problems (for engineering) 2. Developing and using models 3. Planning and carrying out investigations 4. Analyzing and interpreting data 5. Using mathematics and computational thinking 6. Constructing explanations (for science) and designing solutions (for engineering) 7. Obtaining, evaluating, and communicating information
<p><i>DIMENSION 2: Crosscutting Concepts that Have Common Application Across Fields</i></p>	<ol style="list-style-type: none"> 1. Patterns 2. Cause and effect: Mechanism and explanation 3. Scale, proportion, and quantity 4. Systems and system models 5. Energy and matter: Flow, cycles, and conservation 6. Structure and function 7. Stability and change
<p><i>DIMENSION 3: Core Ideas in Four Disciplinary Areas</i></p>	<ol style="list-style-type: none"> 1. Physical Science 2. Life Science 3. Earth and Space Sciences 4. Engineering, Technology, and the Applications of Science

APPROACH

The JCPS Strategic Plan – Vision 2015 Goal/Strategy which relates to this evaluation is:

Goal 1: Every student progresses in his or her learning and meets or exceeds proficiency in all subjects.

Strategy **1.8:** Use program evaluations to measure, monitor, and manage program adoption, improvement, implementation, expansion, or termination.

The evaluation consisted of the following: (a) reviewing state and national assessment data, (b) administering a science teacher survey, (c) estimating science module utilization via warehouse re-stocking records; and (d) calculating cost information. Several meetings were held with the district science content specialist and the lead resource teacher for science module management at the warehouse. Their input and assistance was invaluable in refining the evaluation approach and accessing key information that informed this report. Specific evaluation questions are:

1. What is the trend data for academic performance in science? How does implementation affect the trend?
2. To what extent do teachers value the science modules?
3. What is the annual district cost to provide science modules?

FINDINGS

Academic Performance

State Assessment

The Kentucky Performance Rating for Educational Progress (K-PREP) reflects Kentucky's new approach to Next Generation Learning which features achievement, gap, growth, and career readiness components in an accountability model which is aligned with the CCSS for reading and math in 2012 and will be updated in 2013 for science and social studies. Unlike reading and math, the science assessment will not change until 2013 permitting comparisons to previous assessment years.

JCPS students take the state assessment in science in grades 4, 7, and 11. The 2005-2006 is the official baseline year for science modules; however, the state assessment changed significantly and comparisons between subsequent test years and 2005-2006 were discouraged by the Kentucky Department of Education (KDE). Thus, this report will focus on trend data beginning with the 2006-2007 school year shown in Figure 1. The percent of elementary school students testing at the proficient or distinguished level in science shows a 2.6% improvement for the state and a .7% improvement for the district over the 5 year period. The middle school gains for the state and JCPS are more similar with the state showing a 5.8% gain and JCPS showing a 4.4% gain.

For the 2012 school year, the state showed a one-year decline in science for both elementary and middle while JCPS showed a slight gain at each level. Looking more closely, Table 2 shows the 2012 data disaggregated by student groups. Three of the five student groups showed a reduction in the percent of novices, with novice reduction the greatest for elementary school african american students (-2.5%) and middle school LEP students (-4.8%). African American students at the elementary level also had the highest gain in the percent of proficient/distinguished scores (2.6%) while students on free or reduced lunch had the highest gain at the middle school level (1%).

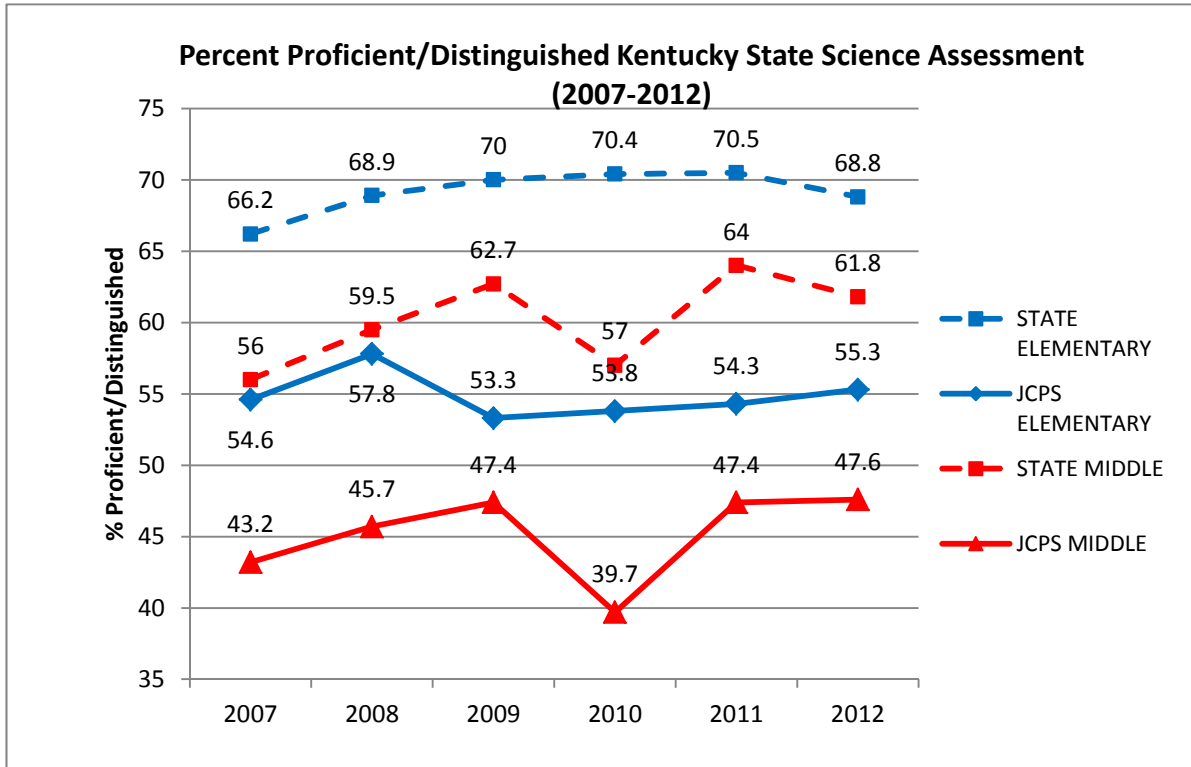


Figure 1. 5-year trend data for state science assessments.

Table 2. Student Group Science Data Comparisons for JCPS Elementary and Middle Schools

Elementary						
	2010-2011 %Novices	2011-2012 %Novices	Difference	2010-2011 %Proficient/ Distinguished	2011-2012 %Proficient/ Distinguished	Difference
All students	13	12.3	-0.7	54.3	55.3	1
African-American	23	20.5	-2.5	34.3	36.9	2.6
Hispanic	9	10.9	1.9	54.2	51.1	-3.1
LEP	21	19.7	-1.3	29.3	25.4	-3.9
Free/Reduced	18	16.6	-1.4	41.8	43.7	1.9
Disability	34	37.9	3.9	28.3	27.2	-1.1
Middle						
All students	20	19.7	-0.3	47.3	47.6	0.3
African-American	32	30.5	-1.5	27.9	28.3	0.4
Hispanic	16	18.3	2.3	47.6	48.5	0.9
LEP	43	38.2	-4.8	17.6	15.8	-1.8
Free/Reduced	28	25.7	-2.3	33.9	34.9	1
Disability	50	50.3	0.3	19.0	17.9	-1.1

NAEP

Another source of academic progress is provided by the 2009 National Assessment of Education Progress (NAEP) scores. Until the advent of the KPREP assessment, NAEP was the best way for JCPS to have a measure of its ranking in science relative to the other major urban school districts. JCPS with an average score of 150 was one of six large city districts that significantly outperformed the overall national average large cities for 4th grade students in science. JCPS was one of only three large city districts that did not significantly differ from the overall national average for 4th grade students. Following is a list of NAEP results for 4th grade JCPS students in 2009:

- JCPS average score (150) was higher than the average score for large cities (135)
- District-to-state comparison showed a lower overall score than for Kentucky
- Results for lower-income students showed no significant difference in the average score compared to lower-income students in the nation
- Results for racial/ethnic groups showed
- Higher scores for black students and those on free/reduced lunch compared to large cities
- Higher percentage at or above Basic compared to large cities
- Higher percentage at or above Proficient compared to large cities

Following is a list of NAEP results for 8th grade JCPS students in 2009:

- JCPS average score (145) was higher than the average score for large cities (134)
- District-to-state comparison showed a lower overall score than for Kentucky
- Results for lower-income students showed no significant difference in the average score compared to lower-income students in the nation
- Higher scores for black students and those on free/reduced lunch compared to large cities
- Achievement-level results showed no significant difference in the average score compared to lower-income students in the nation
- Higher percentage at or above Basic compared to large cities
- Higher percentage at or above Proficient compared to large cities

Academics and Implementation

Another research question concerns the relationship between implementation of the science modules and academic performance. Unfortunately, the only available measures of implementation are indirect – no observational data of science module implementation in the classroom has been collected in the last several years. One indirect measure of implementation was a comparison of the percent of modules delivered to a school against the percent of modules returned with evidence usage. A worksheet containing this data was provided to the evaluator by the district resource teacher who manages the warehouse operations for the science modules. Several analyses were run comparing the life science module utilization against 5-year gains on the state assessment and one-year gains on the state assessment. Schools that ranked in the top quartile for 2012 gains in science proficiency had no difference in level of “implementation” when compared to schools in the bottom quartile (88% vs. 87% implementation) of 2012 gains. This does not mean that level of implementation has no impact on academic performance – it is more likely that using warehouse module replacement data as a proxy for implementation is not a reliable approach. Another proxy measure for implementation is derived from the teacher survey data which is discussed in the following section.

Teacher Perspectives

In October 2012, JCPS elementary and middle school teachers were asked to complete an on-line survey which asked them to rate the effectiveness of science modules and textbooks in supporting effective instruction on a variety of dimensions. It is estimated that there are 1620 elementary teachers and 216 middle school science teachers working at JCPS regular schools. Elementary schools were instructed to only have teachers of science complete the survey if they were departmentalized. The overall response rate for the survey was 538 elementary teachers and 108 middle school teachers. Response rates did vary by survey item and the exact response rate, along with each item, can be found in the tables included in Appendix A. Also, to simplify the finding, responses were grouped in terms of “% Agree”. This category reflects the percent of responses that fell into either the category “Strongly Agree” or “Agree”. Response options also included “Strongly Disagree”, “Disagree”, and “Neutral”. Some items included an “N/A” option.

Self-Reported Science Module Implementation

Figure 2 shows that the vast majority of elementary (77.7%) and middle school (85.2%) JCPS teachers of science responded that they used the science modules either almost exclusively or exclusively in their instruction. Only 3.2% of elementary teachers and 1.9% of teachers responded that they never use the science modules in their instruction. An analysis was conducted to test for a significant correlation between self-reported implementation for elementary schools and the one year science gain in percent of students proficient or distinguished between 2011 and 2012 on the state assessment. The analysis did not support a significant relationship between self-reported implementation and one-year proficiency gains in science. This analysis was limited by the fact that state assessment score at the elementary level only reflect knowledge gains for that year’s 4th grade students (i.e., one year only and different set of students each year) and teachers were not asked to report which grade they were currently

teaching (to provide degree of anonymity) so teachers of all grades are included in the average implementation score for each school.

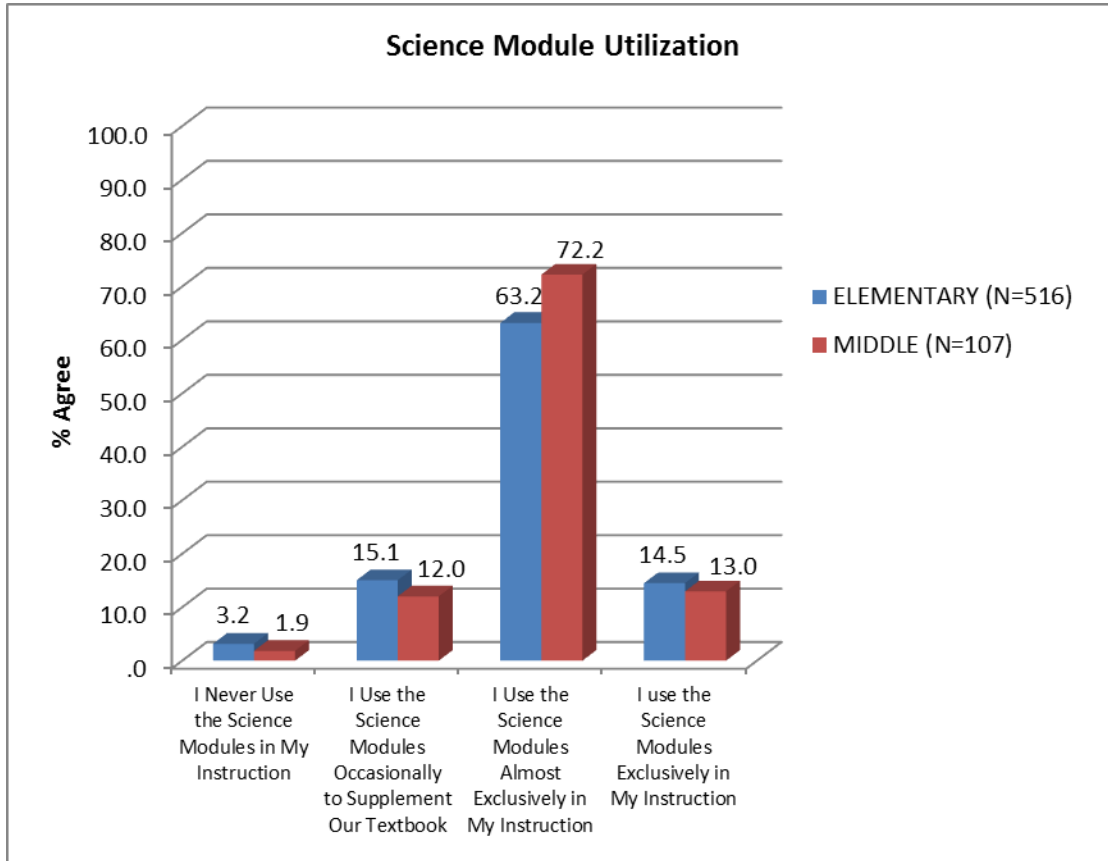


Figure 2. JCPS teacher self-reported science Module utilization for instruction.

Effectiveness Ratings of Science Modules and Textbooks Related to NGSS

The first major section of the survey was comprised of items concerning the NRC’s *Dimension 3: Core Ideas in the Four Disciplinary Areas of Physical Science; Life Science; Earth and Space Science; and Engineering, Technology, and Applications of Science* shown in Table 1. Teachers were asked to indicate the extent to which they agreed that science modules and textbooks effectively support highly effective teacher instruction and deep conceptual student learning for each area. The teacher responses shown in Figure 3 show that both middle school and elementary teachers had a higher rate of agreement for science modules supporting highly effective teacher instruction and deep conceptual student learning for all disciplinary areas. The physical and life sciences were seen as best supported by the modules for both levels with life sciences receiving the highest rating (78.2%) from middle school teachers.

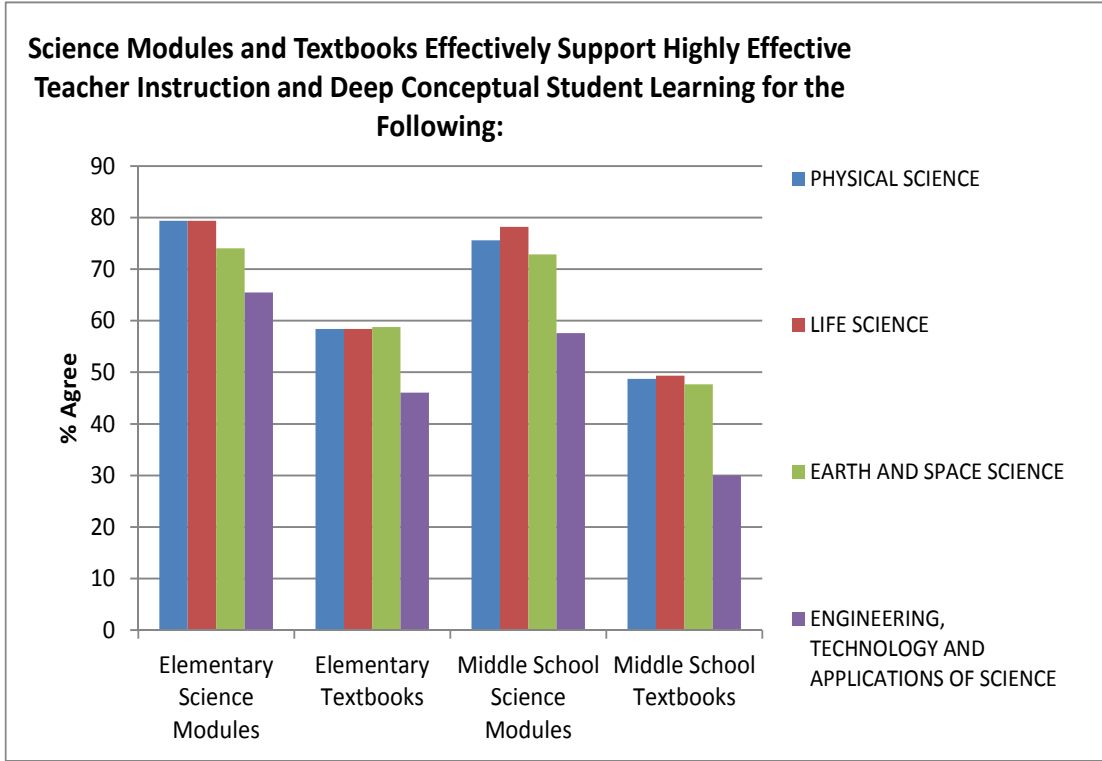


Figure 3. Teacher ratings of science modules and textbooks to support core ideas in physical science; life science; earth and space science; and engineering, technology, and applications of science.

The next section of the survey asked teachers to indicate the extent to which they agreed that science modules and textbooks effectively support teachers in implementing KY highly effective science teaching and learning characteristics. Figure 4 shows that both sets of teachers had a higher rate of agreement that science modules, compared to textbooks, effectively support highly effective teaching and learning. For instance, Figure 4 shows that 89% of elementary teachers and 87.7% of middle school teachers agreed that science modules are effective (compared to 39.9% for elementary teachers and 39.8% middle school teachers for textbooks) for “Create Learning Environments Where Students are Active Participants (Individually and in Groups) in Questioning, Hands-on Experiences, Discussing, Reasoning, and Analyzing Scientific Problems”.

More teachers agreed that science modules (73.8% elementary and 76.4% middle school) are effective for “Uncovering Students’ Prior Knowledge of Concepts and Addressing any Misconceptions” better support effective teaching than textbooks (47.6% elementary and 38.8% middle schools).

Following the same trend, 81.2% of elementary and 80% of middle school teachers agreed that science modules effectively support “Orchestrating Effective Classroom Discussions, Questioning, and Learning Tasks that Promote Higher-Order Thinking compared to the same rating for textbooks (48% elementary and 43.1% middle school).

Finally, teachers were asked to indicate the extent to which they agreed that science modules and textbooks effectively support the integration of KCAS for english language arts & literacy in science into classroom instruction. This item received the lowest level of agreement for science modules from teachers but was still higher than the rating it received for textbooks.

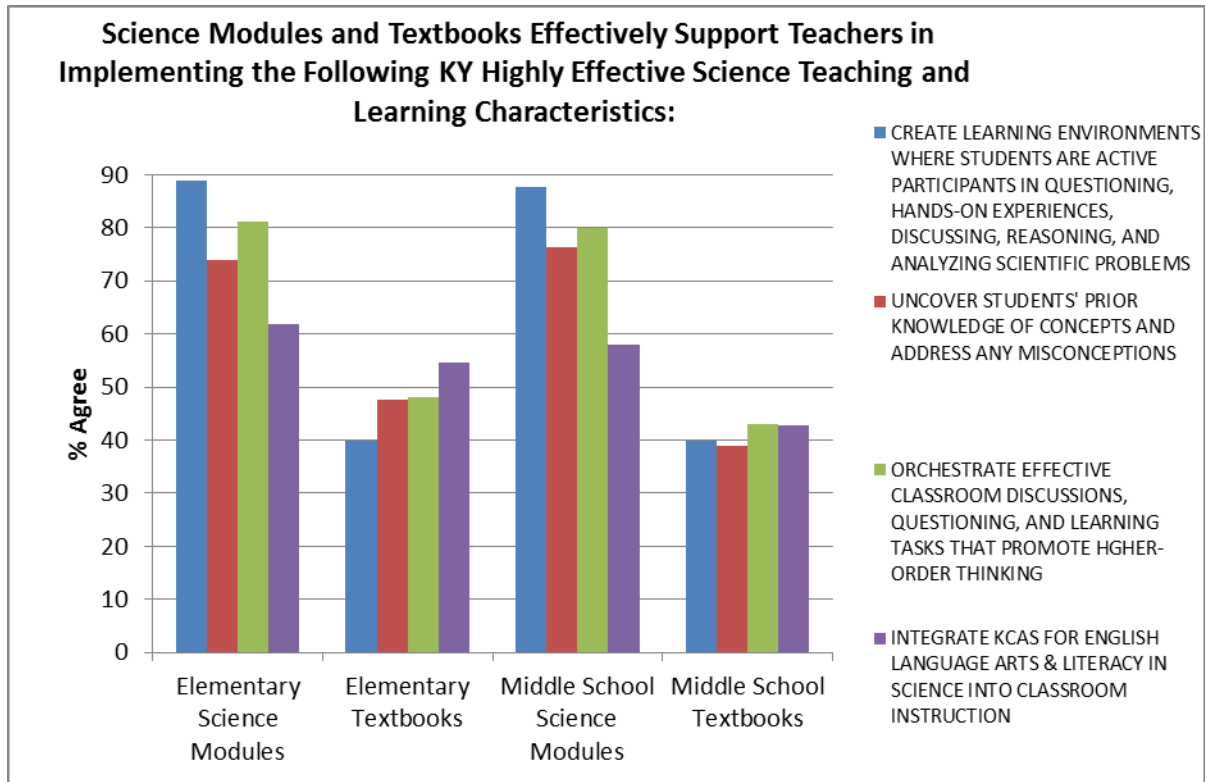


Figure 4. Teacher ratings of science modules and textbooks to effectively support teachers in implementing KY highly effective science teaching and learning characteristics.

Next, teachers were asked to respond to items designed to assess the effectiveness of science modules and textbooks for NRC's *Dimension 1: Scientific and Engineering Practices*.

- Asking questions (for science) and defining problems (for engineering)
- Developing and using models
- Planning and carrying out investigations
- Analyzing and interpreting data
- Using mathematics and computational thinking
- Constructing explanations (for science) and designing solutions (for engineering)
- Obtaining, evaluating, and communicating information

Again, science modules showed a higher rate of agreement for each of the eight practices for both elementary and middle school teachers to effectively support students in becoming proficient in Next Generation Science Standards Practices than textbooks (see Figure 5). The only non “practice” listed was journaling which is an integral component of the science modules, most likely contributing to its high rating for modules.

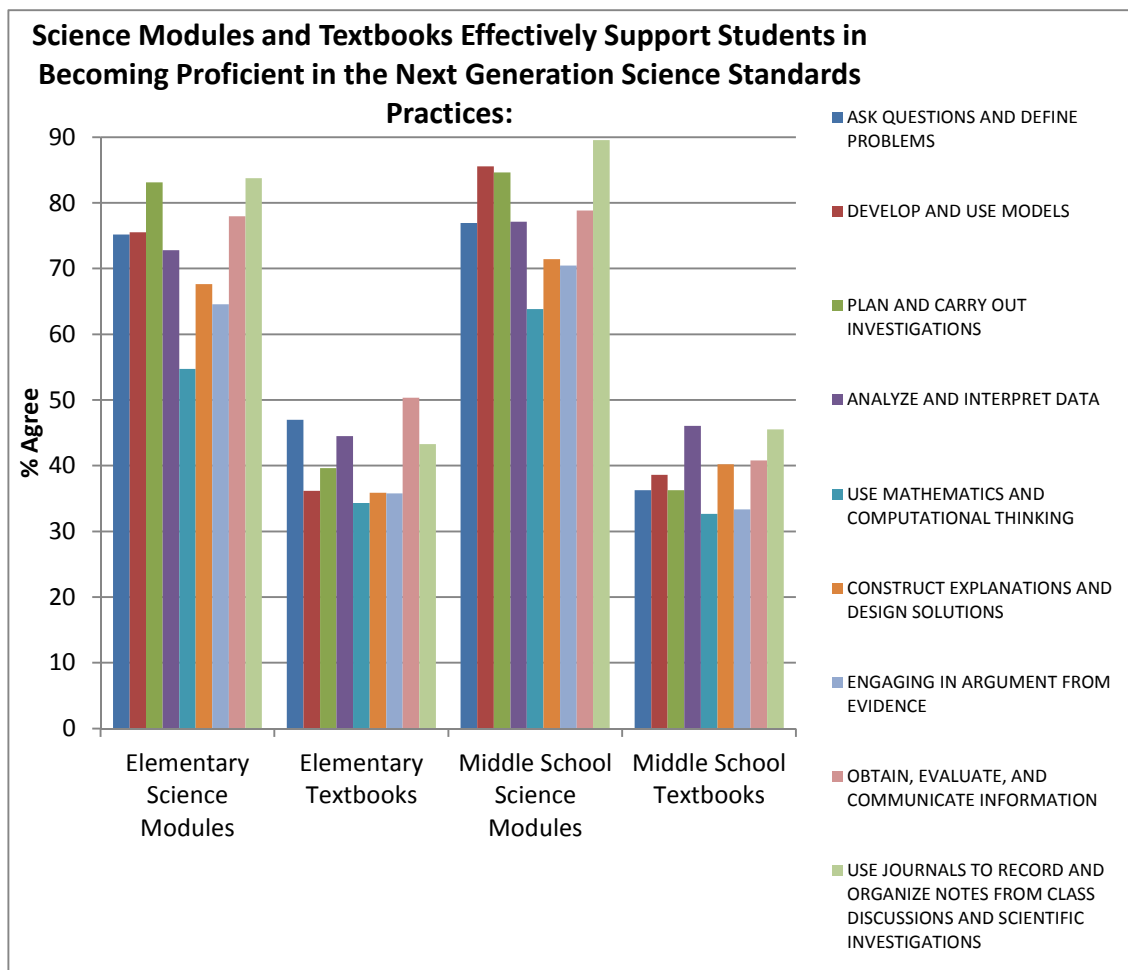


Figure 5. Teacher ratings of science modules and textbooks to effectively support students in becoming proficient in the Next Generation Science Standards practices.

The final section of the survey addressed NRC’s *Dimension 2: Crosscutting Concepts that Have Common Application Across Fields*. Crosscutting concepts include:

- Patterns
- Cause and effect: Mechanism and explanation
- Scale, proportion, and quantity
- Systems and system models
- Energy and matter: Flow, cycles, and conservation
- Structure and function
- Stability and change

Figure 6 shows that elementary and middle school teachers showed an overall higher rate of agreement for science modules than textbooks in supporting students becoming proficient with crosscutting concepts. In fact, none of the eight crosscutting concepts was rated higher for textbooks than science modules by elementary or middle school teachers.

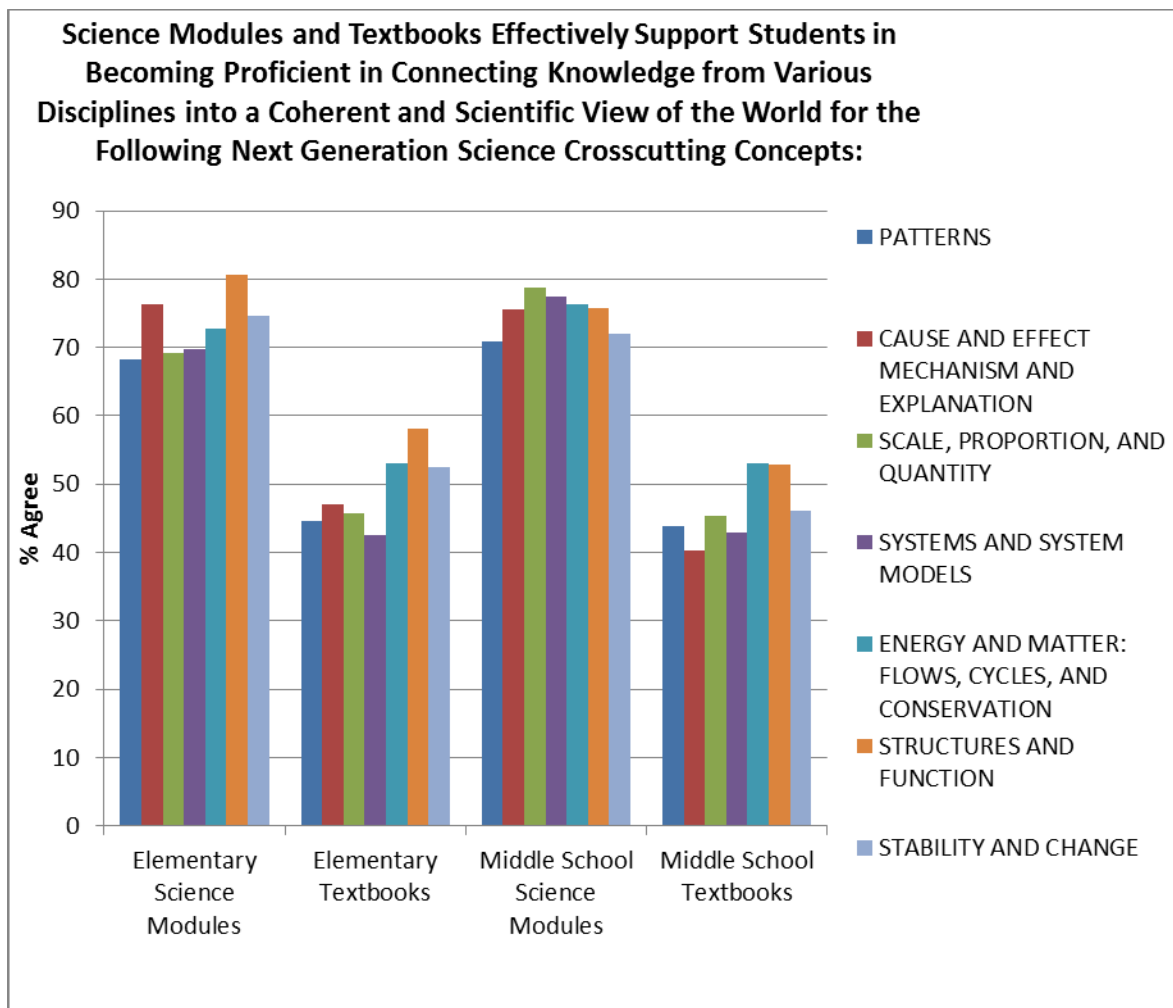


Figure 6. Teacher ratings of science modules and textbooks to effectively support students in becoming proficient in Next Generation Science crosscutting concepts.

Science Module Cost

Determining the actual cost of providing science modules to district elementary and middle school students is challenging. For example, the science resource teacher is currently in her second year of managing the warehouse science module operations and has instituted a very detailed inventory system that should support future cost savings. However, there is not yet enough “trend” data under her management to forecast the long-term cost savings. Module supplies had been stockpiled in the past, resulting in a surplus of many of the materials currently needed to refurbish modules. This surplus will allow for budgetary reductions but only for the short-term. Costs for science modules are shown in Table 2. General Fund budget info was provided by John Collopy (email communication: October 24th, 2012), and the teacher staffing *estimates* were provided by Lee Ann Nickerson and Michelle Tedford (email communication: October 23, 2012). For comparison’s sake, the estimated K-8 cost per student for science modules is \$14.81 while science textbooks at a cost of \$70.00 (conservative estimate) each would have an initial cost of \$3,082,800 and a K-8 cost per student (based on a six-year adoption cycle) of \$11.66 *plus* costs for laboratory materials.

Table 2. BUDGETED JCPS SCIENCE MODULE COSTS (2012-2013)

• Science Kit K-12 Refurbishment:	\$500,000
○ K-8 Science Kit Refurbishment	\$449,000
○ 9-12 Critters	\$51,000
• Resource Teacher Salary and Fringes:	\$74, 254
• Warehouse Workers (FTE 2) and Fringes:	\$129,327
TOTAL K-8 BUDGET:	\$652,581
TOTAL ESTIMATED K-8 COST PER STUDENT*	\$14.81

*High school refurbishment costs not included in K-8 cost per student estimate. Based on estimate of 1835 elementary and middle school science teachers and 24 students per classroom (44,064 students). Cost per student = Total Budget/44,064.

The data in Table 3 represent *cost estimate projections* based on information provided by Michele Tedford (email, November 9, 2012). The data are provided to support future conversations between the JCPS science specialist (Lee Ann Nickerson), Michele Tedford, John Freeman (Grants and Awards), and John Collopy (Finance), and other stakeholders. These

Table 3. ESTIMATED JCPS SCIENCE MODULE BUDGETARY NEEDS (2013-2014)

Remaining FY 13 Materials Budget (Nov 2012)	\$488,637.97
Estimated FY 13 Remaining Costs Based on EOY 2012 Spending on Refurbishing	\$346,009.50
FY2013 MATERIALS BUDGET SURPLUS:	\$142,628.47
FY2014 MATERIALS COSTS:	\$356,009.50
Critters (for FY2015)*	\$184,009.50
Refurbishment	\$172,000
FY2014 PERSONNEL COSTS:**	\$209,689
Resource Teacher and Fringes	\$76,482
Warehouse Workers (2) and Fringes	\$133,207
FY 2013 ENDING BALANCE:	\$142,628.47
FY 2014 COSTS:	\$565,698.50
DIFFERENCE:	-\$423,070.03
FY2014 SAVINGS:***	\$280,510.97

*Critters are purchased one year in advance. **Calculated assuming 3% increase for salaries/fringes. ***Based on FY2013 budget of \$703,581.

conversations should guide final budgetary decisions with the data provided in this report used as a starting point. It does appear that the 2014 science module budget can be adjusted as a **short-term** approach to district cost savings. More detailed recommendations appear in the following section of this report.

CONCLUSIONS AND RECOMMENDATIONS

Kentucky is expected to be one of the first states to adopt the NGSS which will be rolled out this spring for the 2013-2014 school year. The new standards for science heavily emphasize deeper understanding of content as well as development of inquiry-based practices. The accountability standards will infuse science practice with content knowledge. The JCPS science specialist, Lee Ann Nickerson, serves on the KY NGSS Review Committee and has been involved in providing feedback to the NGSS writers. That experience has led Ms. Nickerson (personal communication: November 14, 2012) to understand that the new standards will require an emphasis on inquiry-based science which modules, as opposed to textbooks alone, clearly support. The next textbook adoption for science 2014-2015 year but KDE has is off cycle for textbook adoption for other content areas so both the timeline and funding for science textbook adoption are uncertain. Based on the timeline for the roll-out of the new standards alone, it would seem logical to retain the science modules for elementary and middle schools for FYs 2014 and 2015. Retention of the modules would allow district personnel to better determine the future costs of providing modules to JCPS students (i.e., measure benefits of cost-saving measures already in place), and deliver needed professional development and support to teachers. Related, a crucial way of determining teacher needs is to monitor instructional practices. Walk-thru data on science module implementation has not been collected in a systematic fashion for at least six years. Observations of classrooms, even if conducted as a random sampling, should be conducted as soon as possible. Textbook developers will need additional time to align their materials with the new standards. Textbooks adopted before the new standards are official are most certainly going to fall short of any company's promises of alignment.

Science modules minimize preparation time for elementary teachers which allows for more time for preparation in other content areas and analysis of student work. They also provide extensive teacher content knowledge to support effective questioning. Science modules support students performing inquiry-based learning without traditional science laboratories. Additionally, warehouse operations for science modules prevent schools from refurbishing kits; and avoid space limitations often found at schools. The problem is that there is only limited evidence of a positive impact on state assessment scores for science – 5-year trend data for elementary schools show little gain while the trend data for middle schools show gains similar to the state. The latest assessment scores do show a slight improvement in science scores while the state showed a slight decline. NAEP science data provide a different perspective on student assessment outcomes, JCPS 4th and 8th grade students outperformed most large urban districts that participated in NAEP.

The vast majority of both elementary and middle school teachers said they either use the science modules almost exclusively or exclusively in their instruction; thus, there does appear to be strong internal support from teachers for the modules. JCPS teachers overwhelmingly rated the science modules higher than they rated textbooks in providing/supporting effective instruction. This held true for 100% of the survey items even when asked about some of the less familiar NRC content such as engineering.

The overall recommendation of this evaluation is to retain science modules for FYs 2014 and 2015 under the following conditions:

- Reduce the FY2014 budget to reflect estimated costs. Use the additional year to track actual funding requirements closely and base FY2015 budget on those findings.
- Consider appropriating some of the money from the budget reductions or seek external funding to support teacher professional development on the new standards and alignment/implementation of science modules. A KY MSP grant is being pursued which will provide some funding for vertical professional learning communities to begin the process of aligning science modules to the NGSS. Regardless of the outcome of the grant proposal, there will be an immediate need for professional development on the new standards once they are released.
- Provide support to science teachers in the classroom that is equitable to the other content areas. The new accountability system weights achievement in science the same as reading, math, and social studies. The 2014 KPREP will assess science practices, not just content knowledge.
- Ensure that science is taught and supported in all grades, not just the accountability grades (i.e., 4th, 7th, and 11th) and that the science modules at the elementary and middle school levels are delivered with a high rate of fidelity. To accomplish this, district support to monitor level of science module implementation should be provided.
- Review KPREP performance of the 2014 assessment in science and factor outcomes into decision to retain or abandon use of science modules for FY2016. This timeline assumes that 2014 assessment data will not be available in time to put an alternative to the science modules in place until FY 2016.

Appendix A - Elementary School Science

2a. Physical Science - If this is not taught at your grade level, select "N/A" - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	373	69.3	79.4	79.4
	Disagree	36	6.7	7.7	87.0
	Neutral	61	11.3	13.0	100.0
	Total	470	87.4	100.0	
Missing		22	4.1		
	N/A	46	8.6		
	Total	68	12.6		
Total		538	100.0		

2b. Physical Science - If this is not taught at your grade level, select "N/A" - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	188	34.9	58.4	58.4
	Disagree	56	10.4	17.4	75.8
	Neutral	78	14.5	24.2	100.0
	Total	322	59.9	100.0	
Missing		54	10.0		
	N/A	162	30.1		
	Total	216	40.1		
Total		538	100.0		

3a. Life Science- If this is not taught at your grade level, select "N/A" - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	407	75.7	80.3	80.3
	Disagree	49	9.1	9.7	89.9
	Neutral	51	9.5	10.1	100.0
	Total	507	94.2	100.0	
Missing		22	4.1		
	N/A	9	1.7		
	Total	31	5.8		
Total		538	100.0		

3b Life Science- If this is not taught at your grade level, select "N/A" - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	216	40.1	61.9	61.9
	Disagree	62	11.5	17.8	79.7
	Neutral	71	13.2	20.3	100.0
	Total	349	64.9	100.0	
Missing		60	11.2		
	N/A	129	24.0		
	Total	189	35.1		
Total		538	100.0		

4a. Earth and Space Science - If this is not taught at your grade level, select "N/A" - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	300	55.8	74.1	74.1
	Disagree	43	8.0	10.6	84.7
	Neutral	62	11.5	15.3	100.0
	Total	405	75.3	100.0	
Missing		23	4.3		
	N/A	110	20.4		
Total		133	24.7		
Total		538	100.0		

4b. Earth and Space Science - If this is not taught at your grade level, select "N/A" - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	167	31.0	58.8	58.8
	Disagree	50	9.3	17.6	76.4
	Neutral	67	12.5	23.6	100.0
	Total	284	52.8	100.0	
Missing		57	10.6		
	N/A	197	36.6		
Total		254	47.2		
Total		538	100.0		

5a. Engineering, Technology, and Applications of Science - If this is not taught at your grade level, select "N/A" - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	74	13.8	65.5	65.5
	Disagree	16	3.0	14.2	79.6
	Neutral	23	4.3	20.4	100.0
	Total	113	21.0	100.0	
Missing		28	5.2		
	N/A	397	73.8		
Total		425	79.0		
Total		538	100.0		

5b. Engineering, Technology, and Applications of Science - If this is not taught at your grade level, select "N/A" - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	47	8.7	46.1	46.1
	Disagree	23	4.3	22.5	68.6
	Neutral	32	5.9	31.4	100.0
	Total	102	19.0	100.0	
Missing		60	11.2		
	N/A	376	69.9		
Total		436	81.0		
Total		538	100.0		

**6a. Create Learning Environments Where Students are Active Participants
(Individually and in Groups) in Questioning, Hands-on Experiences, Discussing,
Reasoning, and Analyzing Scientific Problems - SCIENCE MODULES^a**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	461	85.7	89.0	89.0
	Disagree	21	3.9	4.1	93.1
	Neutral	36	6.7	6.9	100.0
	Total	518	96.3	100.0	
Missing		20	3.7		
Total		538	100.0		

**6b. Create Learning Environments Where Students are Active Participants
(Individually and in Groups) in Questioning, Hands-on Experiences, Discussing,
Reasoning, and Analyzing Scientific Problems - TEXTBOOKS^a**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	182	33.8	39.9	39.9
	Disagree	118	21.9	25.9	65.8
	Neutral	156	29.0	34.2	100.0
	Total	456	84.8	100.0	
Missing		82	15.2		
Total		538	100.0		

**7a. Uncover Students' Prior Knowledge of Concepts and Address any
Misconceptions - SCIENCE MODULES^a**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	383	71.2	73.8	73.8
	Disagree	47	8.7	9.1	82.9
	Neutral	89	16.5	17.1	100.0
	Total	519	96.5	100.0	
Missing		19	3.5		
Total		538	100.0		

**7b. Uncover Students' Prior Knowledge of Concepts and Address any
Misconceptions - TEXTBOOKS^a**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	219	40.7	47.6	47.6
	Disagree	84	15.6	18.3	65.9
	Neutral	157	29.2	34.1	100.0
	Total	460	85.5	100.0	
Missing		78	14.5		
Total		538	100.0		

**8a. Orchestrate Effective Classroom Discussions, Questioning, and Learning
Tasks that Promote Higher-Order Thinking - SCIENCE MODULES^a**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	420	78.1	81.2	81.2
	Disagree	31	5.8	6.0	87.2
	Neutral	66	12.3	12.8	100.0
	Total	517	96.1	100.0	
Missing		21	3.9		
Total		538	100.0		

**8b. Orchestrate Effective Classroom Discussions, Questioning, and Learning
Tasks that Promote Higher-Order Thinking - TEXTBOOKS^a**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	217	40.3	48.0	48.0
	Disagree	74	13.8	16.4	64.4
	Neutral	161	29.9	35.6	100.0
	Total	452	84.0	100.0	
Missing		86	16.0		
Total		538	100.0		

**9a. Integrate KCAS for English Language Arts & Literacy in Science into
Classroom Instruction - SCIENCE MODULES^a**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	321	59.7	61.8	61.8
	Disagree	78	14.5	15.0	76.9
	Neutral	120	22.3	23.1	100.0
	Total	519	96.5	100.0	
Missing		19	3.5		
Total		538	100.0		

**9b. Integrate KCAS for English Language Arts & Literacy in Science into
Classroom Instruction - TEXTBOOKS^a**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	248	46.1	54.6	54.6
	Disagree	64	11.9	14.1	68.7
	Neutral	142	26.4	31.3	100.0
	Total	454	84.4	100.0	
Missing		84	15.6		
Total		538	100.0		

10a. Ask Questions and Define Problems - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	385	71.6	75.2	75.2
	Disagree	46	8.6	9.0	84.2
	Neutral	81	15.1	15.8	100.0
	Total	512	95.2	100.0	
Missing		26	4.8		
Total		538	100.0		

10b. Ask Questions and Define Problems - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	212	39.4	47.0	47.0
	Disagree	77	14.3	17.1	64.1
	Neutral	162	30.1	35.9	100.0
	Total	451	83.8	100.0	
Missing		87	16.2		
Total		538	100.0		

11a. Develop and Use Models - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	386	71.7	75.5	75.5
	Disagree	42	7.8	8.2	83.8
	Neutral	83	15.4	16.2	100.0
	Total	511	95.0	100.0	
Missing		27	5.0		
Total		538	100.0		

11b. Develop and Use Models - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	162	30.1	36.2	36.2
	Disagree	103	19.1	23.0	59.2
	Neutral	183	34.0	40.8	100.0
	Total	448	83.3	100.0	
Missing		90	16.7		
Total		538	100.0		

12a. Plan and Carry Out Investigations - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	424	78.8	83.1	83.1
	Disagree	28	5.2	5.5	88.6
	Neutral	58	10.8	11.4	100.0
	Total	510	94.8	100.0	
Missing		28	5.2		
Total		538	100.0		

12b. Plan and Carry Out Investigations - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	178	33.1	39.6	39.6
	Disagree	101	18.8	22.5	62.1
	Neutral	170	31.6	37.9	100.0
	Total	449	83.5	100.0	
Missing		89	16.5		
Total		538	100.0		

13a. Analyze and Interpret Data - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	372	69.1	72.8	72.8
	Disagree	41	7.6	8.0	80.8
	Neutral	98	18.2	19.2	100.0
	Total	511	95.0	100.0	
Missing		27	5.0		
Total		538	100.0		

13b. Analyze and Interpret Data - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	199	37.0	44.5	44.5
	Disagree	87	16.2	19.5	64.0
	Neutral	161	29.9	36.0	100.0
	Total	447	83.1	100.0	
Missing		91	16.9		
Total		538	100.0		

14a. Use Mathematics and Computational Thinking - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	278	51.7	54.7	54.7
	Disagree	91	16.9	17.9	72.6
	Neutral	139	25.8	27.4	100.0
	Total	508	94.4	100.0	
Missing		30	5.6		
Total		538	100.0		

14b. Use Mathematics and Computational Thinking - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	154	28.6	34.3	34.3
	Disagree	98	18.2	21.8	56.1
	Neutral	197	36.6	43.9	100.0
	Total	449	83.5	100.0	
Missing		89	16.5		
Total		538	100.0		

15a. Construct Explanations and Design Solutions - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	345	64.1	67.6	67.6
	Disagree	51	9.5	10.0	77.6
	Neutral	114	21.2	22.4	100.0
	Total	510	94.8	100.0	
Missing		28	5.2		
Total		538	100.0		

15b. Construct Explanations and Design Solutions - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	161	29.9	35.9	35.9
	Disagree	99	18.4	22.0	57.9
	Neutral	189	35.1	42.1	100.0
	Total	449	83.5	100.0	
Missing		89	16.5		
Total		538	100.0		

16a. Engaging in Argument from Evidence - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	330	61.3	64.6	64.6
	Disagree	58	10.8	11.4	75.9
	Neutral	123	22.9	24.1	100.0
	Total	511	95.0	100.0	
Missing		27	5.0		
Total		538	100.0		

16b. Engaging in Argument from Evidence - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	160	29.7	35.8	35.8
	Disagree	96	17.8	21.5	57.3
	Neutral	191	35.5	42.7	100.0
	Total	447	83.1	100.0	
Missing		91	16.9		
Total		538	100.0		

17a. Obtain, Evaluate, and Communicate Information - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	396	73.6	78.0	78.0
	Disagree	31	5.8	6.1	84.1
	Neutral	81	15.1	15.9	100.0
	Total	508	94.4	100.0	
Missing		30	5.6		
Total		538	100.0		

17b. Obtain, Evaluate, and Communicate Information - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	225	41.8	50.3	50.3
	Disagree	76	14.1	17.0	67.3
	Neutral	146	27.1	32.7	100.0
	Total	447	83.1	100.0	
Missing		91	16.9		
Total		538	100.0		

18a. Use Journals to Record and Organize Notes from Class Discussions and Scientific Investigations - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	428	79.6	83.8	83.8
	Disagree	27	5.0	5.3	89.0
	Neutral	56	10.4	11.0	100.0
	Total	511	95.0	100.0	
Missing		27	5.0		
Total		538	100.0		

18b. Use Journals to Record and Organize Notes from Class Discussions and Scientific Investigations - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	194	36.1	43.3	43.3
	Disagree	95	17.7	21.2	64.5
	Neutral	159	29.6	35.5	100.0
	Total	448	83.3	100.0	
Missing		90	16.7		
Total		538	100.0		

19a. Patterns - If this is not taught at your grade level, select "N/A" - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	176	32.7	68.2	68.2
	Disagree	26	4.8	10.1	78.3
	Neutral	56	10.4	21.7	100.0
	Total	258	48.0	100.0	
Missing		32	5.9		
	N/A	248	46.1		
	Total	280	52.0		
Total		538	100.0		

19b. Patterns - If this is not taught at your grade level, select "N/A" - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	99	18.4	44.6	44.6
	Disagree	41	7.6	18.5	63.1
	Neutral	82	15.2	36.9	100.0
	Total	222	41.3	100.0	
Missing		71	13.2		
	N/A	245	45.5		
	Total	316	58.7		
Total		538	100.0		

20a. Cause and Effect: Mechanism and Explanation - If this is not taught at your grade level, select "N/A" - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	194	36.1	76.4	76.4
	Disagree	14	2.6	5.5	81.9
	Neutral	46	8.6	18.1	100.0
	Total	254	47.2	100.0	
Missing		34	6.3		
	N/A	250	46.5		
	Total	284	52.8		
Total		538	100.0		

20b. Cause and Effect: Mechanism and Explanation - If this is not taught at your grade level, select "N/A" - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	101	18.8	47.0	47.0
	Disagree	35	6.5	16.3	63.3
	Neutral	79	14.7	36.7	100.0
	Total	215	40.0	100.0	
Missing		71	13.2		
	N/A	252	46.8		
	Total	323	60.0		
Total		538	100.0		

21a. Scale, Proportion, and Quantity - If this is not taught at your grade level, select "N/A" - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	117	21.7	69.2	69.2
	Disagree	17	3.2	10.1	79.3
	Neutral	35	6.5	20.7	100.0
	Total	169	31.4	100.0	
Missing		33	6.1		
	N/A	336	62.5		
	Total	369	68.6		
Total		538	100.0		

21b. Scale, Proportion, and Quantity - If this is not taught at your grade level, select "N/A" - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	65	12.1	45.8	45.8
	Disagree	26	4.8	18.3	64.1
	Neutral	51	9.5	35.9	100.0
	Total	142	26.4	100.0	
Missing		80	14.9		
	N/A	316	58.7		
	Total	396	73.6		
Total		538	100.0		

22a. Systems and System Models - If this is not taught at your grade level, select "N/A" - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	134	24.9	69.8	69.8
	Disagree	15	2.8	7.8	77.6
	Neutral	43	8.0	22.4	100.0
	Total	192	35.7	100.0	
Missing		32	5.9		
	N/A	314	58.4		
	Total	346	64.3		
Total		538	100.0		

22b. Systems and System Models - If this is not taught at your grade level, select "N/A" - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	66	12.3	42.6	42.6
	Disagree	23	4.3	14.8	57.4
	Neutral	66	12.3	42.6	100.0
	Total	155	28.8	100.0	
Missing		74	13.8		
	N/A	309	57.4		
	Total	383	71.2		
Total		538	100.0		

23a. Energy and Matter: Flows, Cycles, and Conservation - If this is not taught at your grade level, select "N/A" - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	176	32.7	72.7	72.7
	Disagree	18	3.3	7.4	80.2
	Neutral	48	8.9	19.8	100.0
	Total	242	45.0	100.0	
Missing		31	5.8		
	N/A	265	49.3		
	Total	296	55.0		
Total		538	100.0		

23b. Energy and Matter: Flows, Cycles, and Conservation - If this is not taught at your grade level, select "N/A" - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	105	19.5	53.0	53.0
	Disagree	29	5.4	14.6	67.7
	Neutral	64	11.9	32.3	100.0
	Total	198	36.8	100.0	
Missing		76	14.1		
	N/A	264	49.1		
	Total	340	63.2		
Total		538	100.0		

24a. Structure and Function - If this is not taught at your grade level, select "N/A" - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	255	47.4	80.7	80.7
	Disagree	19	3.5	6.0	86.7
	Neutral	42	7.8	13.3	100.0
	Total	316	58.7	100.0	
Missing		35	6.5		
	N/A	187	34.8		
	Total	222	41.3		
Total		538	100.0		

24b. Structure and Function - If this is not taught at your grade level, select "N/A" - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	154	28.6	58.1	58.1
	Disagree	30	5.6	11.3	69.4
	Neutral	81	15.1	30.6	100.0
	Total	265	49.3	100.0	
Missing		72	13.4		
	N/A	201	37.4		
	Total	273	50.7		
Total		538	100.0		

25a. Stability and Change - If this is not taught at your grade level, select "N/A" - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	174	32.3	74.7	74.7
	Disagree	16	3.0	6.9	81.5
	Neutral	43	8.0	18.5	100.0
	Total	233	43.3	100.0	
Missing		34	6.3		
	N/A	271	50.4		
	Total	305	56.7		
Total		538	100.0		

25b. Stability and Change - If this is not taught at your grade level, select "N/A" - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	104	19.3	52.5	52.5
	Disagree	27	5.0	13.6	66.2
	Neutral	67	12.5	33.8	100.0
	Total	198	36.8	100.0	
Missing		73	13.6		
	N/A	267	49.6		
	Total	340	63.2		
Total		538	100.0		

Middle School Data

1. Please Indicate Your Overall Level of Science Module Implementation: ^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I Never Use the Science Modules in My Instruction	2	1.9	1.9	1.9
	I Use the Science Modules Almost Exclusively in My Instruction	78	72.2	72.9	74.8
	I use the Science Modules Exclusively in My Instruction	14	13.0	13.1	87.9
	I Use the Science Modules Occasionally to Supplement Our Textbook	13	12.0	12.1	100.0
	Total	107	99.1	100.0	
Missing		1	.9		
Total		108	100.0		

2a. Physical Science - If this is not taught at your grade level, select "N/A" - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	62	57.4	75.6	75.6
	Disagree	12	11.1	14.6	90.2
	Neutral	8	7.4	9.8	100.0
	Total	82	75.9	100.0	
Missing		1	.9		
	N/A	25	23.1		
	Total	26	24.1		
Total		108	100.0		

2b. Physical Science - If this is not taught at your grade level, select "N/A" - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	38	35.2	48.7	48.7
	Disagree	26	24.1	33.3	82.1
	Neutral	14	13.0	17.9	100.0
	Total	78	72.2	100.0	
Missing		3	2.8		
	N/A	27	25.0		
	Total	30	27.8		
Total		108	100.0		

3a. Life Science- If this is not taught at your grade level, select "N/A" - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	61	56.5	78.2	78.2
	Disagree	8	7.4	10.3	88.5
	Neutral	9	8.3	11.5	100.0
	Total	78	72.2	100.0	
Missing		1	.9		
	N/A	29	26.9		
	Total	30	27.8		
Total		108	100.0		

3b Life Science- If this is not taught at your grade level, select "N/A" - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	36	33.3	49.3	49.3
	Disagree	24	22.2	32.9	82.2
	Neutral	13	12.0	17.8	100.0
	Total	73	67.6	100.0	
Missing		5	4.6		
	N/A	30	27.8		
	Total	35	32.4		
Total		108	100.0		

4a. Earth and Space Science - If this is not taught at your grade level, select "N/A" - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	51	47.2	72.9	72.9
	Disagree	12	11.1	17.1	90.0
	Neutral	7	6.5	10.0	100.0
	Total	70	64.8	100.0	
Missing		1	.9		
	N/A	37	34.3		
	Total	38	35.2		
Total		108	100.0		

4b. Earth and Space Science - If this is not taught at your grade level, select "N/A" - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	31	28.7	47.7	47.7
	Disagree	20	18.5	30.8	78.5
	Neutral	14	13.0	21.5	100.0
	Total	65	60.2	100.0	
Missing		3	2.8		
	N/A	40	37.0		
	Total	43	39.8		
Total		108	100.0		

5a. Engineering, Technology, and Applications of Science - If this is not taught at your grade level, select "N/A" - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	19	17.6	57.6	57.6
	Disagree	8	7.4	24.2	81.8
	Neutral	6	5.6	18.2	100.0
	Total	33	30.6	100.0	
Missing		1	.9		
	N/A	74	68.5		
Total		75	69.4		
Total		108	100.0		

5b. Engineering, Technology, and Applications of Science - If this is not taught at your grade level, select "N/A" - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	9	8.3	30.0	30.0
	Disagree	11	10.2	36.7	66.7
	Neutral	10	9.3	33.3	100.0
	Total	30	27.8	100.0	
Missing		5	4.6		
	N/A	73	67.6		
Total		78	72.2		
Total		108	100.0		

6a. Create Learning Environments Where Students are Active Participants (Individually and in Groups) in Questioning, Hands-on Experiences, Discussing, Reasoning, and Analyzing Scientific Problems - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	93	86.1	87.7	87.7
	Disagree	5	4.6	4.7	92.5
	Neutral	8	7.4	7.5	100.0
	Total	106	98.1	100.0	
Missing		2	1.9		
Total		108	100.0		

6b. Create Learning Environments Where Students are Active Participants (Individually and in Groups) in Questioning, Hands-on Experiences, Discussing, Reasoning, and Analyzing Scientific Problems - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	41	38.0	39.8	39.8
	Disagree	34	31.5	33.0	72.8
	Neutral	28	25.9	27.2	100.0
	Total	103	95.4	100.0	
Missing		5	4.6		
Total		108	100.0		

7a. Uncover Students' Prior Knowledge of Concepts and Address any Misconceptions - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	81	75.0	76.4	76.4
	Disagree	13	12.0	12.3	88.7
	Neutral	12	11.1	11.3	100.0
	Total	106	98.1	100.0	
Missing		2	1.9		
Total		108	100.0		

7b. Uncover Students' Prior Knowledge of Concepts and Address any Misconceptions - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	40	37.0	38.8	38.8
	Disagree	35	32.4	34.0	72.8
	Neutral	28	25.9	27.2	100.0
	Total	103	95.4	100.0	
Missing		5	4.6		
Total		108	100.0		

8a. Orchestrate Effective Classroom Discussions, Questioning, and Learning Tasks that Promote Higher-Order Thinking - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	84	77.8	80.0	80.0
	Disagree	6	5.6	5.7	85.7
	Neutral	15	13.9	14.3	100.0
	Total	105	97.2	100.0	
Missing		3	2.8		
Total		108	100.0		

8b. Orchestrate Effective Classroom Discussions, Questioning, and Learning Tasks that Promote Higher-Order Thinking - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	44	40.7	43.1	43.1
	Disagree	28	25.9	27.5	70.6
	Neutral	30	27.8	29.4	100.0
	Total	102	94.4	100.0	
Missing		6	5.6		
Total		108	100.0		

9a. Integrate KCAS for English Language Arts & Literacy in Science into Classroom Instruction - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	61	56.5	58.1	58.1
	Disagree	22	20.4	21.0	79.0
	Neutral	22	20.4	21.0	100.0
	Total	105	97.2	100.0	
Missing		3	2.8		
Total		108	100.0		

9b. Integrate KCAS for English Language Arts & Literacy in Science into Classroom Instruction - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	44	40.7	42.7	42.7
	Disagree	23	21.3	22.3	65.0
	Neutral	36	33.3	35.0	100.0
	Total	103	95.4	100.0	
Missing		5	4.6		
Total		108	100.0		

10a. Ask Questions and Define Problems - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	80	74.1	76.9	76.9
	Disagree	11	10.2	10.6	87.5
	Neutral	13	12.0	12.5	100.0
	Total	104	96.3	100.0	
Missing		4	3.7		
Total		108	100.0		

10b. Ask Questions and Define Problems - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	37	34.3	36.3	36.3
	Disagree	31	28.7	30.4	66.7
	Neutral	34	31.5	33.3	100.0
	Total	102	94.4	100.0	
Missing		6	5.6		
Total		108	100.0		

11a. Develop and Use Models - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	89	82.4	85.6	85.6
	Disagree	8	7.4	7.7	93.3
	Neutral	7	6.5	6.7	100.0
	Total	104	96.3	100.0	
Missing		4	3.7		
Total		108	100.0		

11b. Develop and Use Models - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	39	36.1	38.6	38.6
	Disagree	29	26.9	28.7	67.3
	Neutral	33	30.6	32.7	100.0
	Total	101	93.5	100.0	
Missing		7	6.5		
Total		108	100.0		

12a. Plan and Carry Out Investigations - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	88	81.5	84.6	84.6
	Disagree	8	7.4	7.7	92.3
	Neutral	8	7.4	7.7	100.0
	Total	104	96.3	100.0	
Missing		4	3.7		
Total		108	100.0		

12b. Plan and Carry Out Investigations - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	37	34.3	36.3	36.3
	Disagree	36	33.3	35.3	71.6
	Neutral	29	26.9	28.4	100.0
	Total	102	94.4	100.0	
Missing		6	5.6		
Total		108	100.0		

13a. Analyze and Interpret Data - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	81	75.0	77.1	77.1
	Disagree	7	6.5	6.7	83.8
	Neutral	17	15.7	16.2	100.0
	Total	105	97.2	100.0	
Missing		3	2.8		
Total		108	100.0		

13b. Analyze and Interpret Data - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	47	43.5	46.1	46.1
	Disagree	31	28.7	30.4	76.5
	Neutral	24	22.2	23.5	100.0
	Total	102	94.4	100.0	
Missing		6	5.6		
Total		108	100.0		

14a. Use Mathematics and Computational Thinking - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	67	62.0	63.8	63.8
	Disagree	17	15.7	16.2	80.0
	Neutral	21	19.4	20.0	100.0
	Total	105	97.2	100.0	
Missing		3	2.8		
Total		108	100.0		

14b. Use Mathematics and Computational Thinking - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	33	30.6	32.7	32.7
	Disagree	30	27.8	29.7	62.4
	Neutral	38	35.2	37.6	100.0
	Total	101	93.5	100.0	
Missing		7	6.5		
Total		108	100.0		

15a. Construct Explanations and Design Solutions - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	75	69.4	71.4	71.4
	Disagree	12	11.1	11.4	82.9
	Neutral	18	16.7	17.1	100.0
	Total	105	97.2	100.0	
Missing		3	2.8		
Total		108	100.0		

15b. Construct Explanations and Design Solutions - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	41	38.0	40.2	40.2
	Disagree	34	31.5	33.3	73.5
	Neutral	27	25.0	26.5	100.0
	Total	102	94.4	100.0	
Missing		6	5.6		
Total		108	100.0		

16a. Engaging in Argument from Evidence - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	74	68.5	70.5	70.5
	Disagree	16	14.8	15.2	85.7
	Neutral	15	13.9	14.3	100.0
	Total	105	97.2	100.0	
Missing		3	2.8		
Total		108	100.0		

16b. Engaging in Argument from Evidence - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	34	31.5	33.3	33.3
	Disagree	36	33.3	35.3	68.6
	Neutral	32	29.6	31.4	100.0
	Total	102	94.4	100.0	
Missing		6	5.6		
Total		108	100.0		

17a. Obtain, Evaluate, and Communicate Information - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	82	75.9	78.8	78.8
	Disagree	13	12.0	12.5	91.3
	Neutral	9	8.3	8.7	100.0
	Total	104	96.3	100.0	
Missing		4	3.7		
Total		108	100.0		

17b. Obtain, Evaluate, and Communicate Information - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	40	37.0	40.8	40.8
	Disagree	29	26.9	29.6	70.4
	Neutral	29	26.9	29.6	100.0
	Total	98	90.7	100.0	
Missing		10	9.3		
Total		108	100.0		

18a. Use Journals to Record and Organize Notes from Class Discussions and Scientific Investigations - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	94	87.0	89.5	89.5
	Disagree	3	2.8	2.9	92.4
	Neutral	8	7.4	7.6	100.0
	Total	105	97.2	100.0	
Missing		3	2.8		
Total		108	100.0		

18b. Use Journals to Record and Organize Notes from Class Discussions and Scientific Investigations - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	46	42.6	45.5	45.5
	Disagree	24	22.2	23.8	69.3
	Neutral	31	28.7	30.7	100.0
	Total	101	93.5	100.0	
Missing		7	6.5		
Total		108	100.0		

19a. Patterns - If this is not taught at your grade level, select "N/A" - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	56	51.9	70.9	70.9
	Disagree	11	10.2	13.9	84.8
	Neutral	12	11.1	15.2	100.0
	Total	79	73.1	100.0	
Missing		4	3.7		
	N/A	25	23.1		
	Total	29	26.9		
Total		108	100.0		

19b. Patterns - If this is not taught at your grade level, select "N/A" - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	32	29.6	43.8	43.8
	Disagree	15	13.9	20.5	64.4
	Neutral	26	24.1	35.6	100.0
	Total	73	67.6	100.0	
Missing		7	6.5		
	N/A	28	25.9		
	Total	35	32.4		
Total		108	100.0		

20a. Cause and Effect: Mechanism and Explanation - If this is not taught at your grade level, select "N/A" - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	65	60.2	75.6	75.6
	Disagree	5	4.6	5.8	81.4
	Neutral	16	14.8	18.6	100.0
	Total	86	79.6	100.0	
Missing		4	3.7		
	N/A	18	16.7		
	Total	22	20.4		
Total		108	100.0		

20b. Cause and Effect: Mechanism and Explanation - If this is not taught at your grade level, select "N/A" - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	33	30.6	40.2	40.2
	Disagree	21	19.4	25.6	65.9
	Neutral	28	25.9	34.1	100.0
	Total	82	75.9	100.0	
Missing		8	7.4		
	N/A	18	16.7		
	Total	26	24.1		
Total		108	100.0		

21a. Scale, Proportion, and Quantity - If this is not taught at your grade level, select "N/A" - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	52	48.1	78.8	78.8
	Disagree	5	4.6	7.6	86.4
	Neutral	9	8.3	13.6	100.0
	Total	66	61.1	100.0	
Missing		5	4.6		
	N/A	37	34.3		
	Total	42	38.9		
Total		108	100.0		

21b. Scale, Proportion, and Quantity - If this is not taught at your grade level, select "N/A" - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	29	26.9	45.3	45.3
	Disagree	13	12.0	20.3	65.6
	Neutral	22	20.4	34.4	100.0
	Total	64	59.3	100.0	
Missing		8	7.4		
	N/A	36	33.3		
	Total	44	40.7		
Total		108	100.0		

22a. Systems and System Models - If this is not taught at your grade level, select "N/A" - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	62	57.4	77.5	77.5
	Disagree	5	4.6	6.3	83.8
	Neutral	13	12.0	16.3	100.0
	Total	80	74.1	100.0	
Missing		4	3.7		
	N/A	24	22.2		
	Total	28	25.9		
Total		108	100.0		

22b. Systems and System Models - If this is not taught at your grade level, select "N/A" - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	33	30.6	42.9	42.9
	Disagree	17	15.7	22.1	64.9
	Neutral	27	25.0	35.1	100.0
	Total	77	71.3	100.0	
Missing		7	6.5		
	N/A	24	22.2		
	Total	31	28.7		
Total		108	100.0		

23a. Energy and Matter: Flows, Cycles, and Conservation - If this is not taught at your grade level, select "N/A" - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	68	63.0	76.4	76.4
	Disagree	9	8.3	10.1	86.5
	Neutral	12	11.1	13.5	100.0
	Total	89	82.4	100.0	
Missing		4	3.7		
	N/A	15	13.9		
	Total	19	17.6		
Total		108	100.0		

23b. Energy and Matter: Flows, Cycles, and Conservation - If this is not taught at your grade level, select "N/A" - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	44	40.7	53.0	53.0
	Disagree	16	14.8	19.3	72.3
	Neutral	23	21.3	27.7	100.0
	Total	83	76.9	100.0	
Missing		8	7.4		
	N/A	17	15.7		
	Total	25	23.1		
Total		108	100.0		

24a. Structure and Function - If this is not taught at your grade level, select "N/A" - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	56	51.9	75.7	75.7
	Disagree	8	7.4	10.8	86.5
	Neutral	10	9.3	13.5	100.0
	Total	74	68.5	100.0	
Missing		5	4.6		
	N/A	29	26.9		
	Total	34	31.5		
Total		108	100.0		

24b. Structure and Function - If this is not taught at your grade level, select "N/A" - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	38	35.2	52.8	52.8
	Disagree	16	14.8	22.2	75.0
	Neutral	18	16.7	25.0	100.0
	Total	72	66.7	100.0	
Missing		7	6.5		
	N/A	29	26.9		
	Total	36	33.3		
Total		108	100.0		

25a. Stability and Change - If this is not taught at your grade level, select "N/A" - SCIENCE MODULES^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	59	54.6	72.0	72.0
	Disagree	10	9.3	12.2	84.1
	Neutral	13	12.0	15.9	100.0
	Total	82	75.9	100.0	
Missing		4	3.7		
	N/A	22	20.4		
	Total	26	24.1		
Total		108	100.0		

25b. Stability and Change - If this is not taught at your grade level, select "N/A" - TEXTBOOKS^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	36	33.3	46.2	46.2
	Disagree	16	14.8	20.5	66.7
	Neutral	26	24.1	33.3	100.0
	Total	78	72.2	100.0	
Missing		8	7.4		
	N/A	22	20.4		
	Total	30	27.8		
Total		108	100.0		