

New York State Student Learning Objective: Technology- Grade 6

All SLOs MUST include the following basic components:

Population	<p><i>These are the students assigned to the course section(s) in this SLO - all students who are assigned to the course section(s) must be included in the SLO. (Full class rosters of all students must be provided for all included course sections.)</i></p> <p>The population for this course consists of seven sections, totaling 174 students. This includes seven students with IEPs/504 plans and twelve students who are English Language Learners.</p> <p>Please see attached student roster for additional information.</p>
Learning Content	<p><i>What is being taught over the instructional period covered? Common Core/National/State standards? Will this goal apply to all standards applicable to a course or just to specific priority standards?</i></p> <p>The learning content for this course is based on the New York State Learning Standards for Math, Science, and Technology, as well as the District Educational Technology Curriculum. In particular, the learning content is aligned to the following standards and key concepts:</p> <p><u>Engineering Design</u>: Engineering design is an iterative process involving modeling and optimization used to develop technological solutions to problems within given constraints.</p> <p><u>Tools, Resources and Technological Processes</u>: Technological tools, materials, and other resources should be selected on the basis of safety, cost, availability, appropriateness, and environmental impact; technological processes change energy, information, and material resources into more useful forms.</p> <p><u>Computer Technology</u>: Computers, as tools for design, modeling, information processing, communication, and system control, have greatly increased human productivity and knowledge.</p> <p><u>Technology Systems</u>: Technological systems are designed to achieve specific results and produce outputs, such as products, structures, services, energy, or other systems.</p> <p><u>Management of Technology</u>: Project management is essential to ensuring that technological endeavors are profitable and that</p>

Comment [SED1]: Summarizing the demographics of a course provides additional context for the teacher and/or reviewer.

	<p>products and systems are of high quality and built safely, on schedule, and within budget</p> <p>Additionally, given our district's focus on advancing mathematical proficiency through varied content areas, this course will incorporate the New York State Common Core Learning Standards for Grade 6 Mathematics, with particular emphasis on the standards relating to Expressions and Equations and Geometry.</p> <p>Finally, the New York State P-12 Common Core Learning Standards for English Language Arts and Literacy for History, Science and Technical Subjects will be incorporated into daily instruction as appropriate.</p>
<p>Interval of Instructional Time</p>	<p><i>What is the instructional period covered (if not a year, rationale for semester/quarter/etc)?</i></p> <p>This course covers the entire 2013-2014 school year, and will meet on alternating school days, equating to a half-year course. Class sessions will be 40 minutes in length.</p>
<p>Evidence</p>	<p><i>What specific assessment(s) will be used to measure this goal? The assessment must align to the learning content of the course.</i></p> <p><u>Summative assessment:</u> The district-developed summative technology assessment will be administered in May 2014 and has been certified by district administrators for rigor and comparability across classrooms. Students' summative assessment will also include a performance measure based on the design of a series of objects using AutoCAD.</p> <p>During the summative assessment, accommodations will be provided for special population students, including the provision of translators and/or other assistive technology and personnel as required. In alignment with the vested interest rule, no teacher with an interest in the outcome of the summative assessment will be involved in the scoring process. All allowable scorers will be trained on the use of a 4-point rubric to assess the design of objects using AutoCAD.</p>
<p>Baseline</p>	<p><i>What is the starting level of students' knowledge of the learning content at the beginning of the instructional period?</i></p> <p>Baseline measures for this course will be students' prior academic performance on the New York State Grade 5 Mathematics assessment and the district-developed Grade 5 Science exam. Given the learning content for this course, which is heavily centered on the application of mathematical concepts and methods of scientific inquiry, these baseline measures will provide a useful picture of students' ability to achieve proficient levels of technological knowledge and skill.</p> <p>Students' performance on these baseline measures was as follows:</p>

- Comment [SED2]:** The inclusion of Common Core standards for mathematics and/or literacy in courses other than math or ELA reflects the collective responsibility of educators to instill students with core skills across subject areas. Understanding the applicability of mathematical skills in non-core subject areas can help students grasp and apply these skills in varied academic and real-world situations.
- Comment [SED3]:** Indicating the length of a course is important when the interval of instructional time is different than a full academic year. By indicating how often the course meets and the duration of a class period the teacher and/or reviewer gain additional insight into the context in which this SLO takes place. This level of detail can also help to inform the instructional plan of action associated with this SLO.
- Comment [SED4]:** The inclusion of performance measures can be a useful way to encourage students to think about the connections between learning content and real-world applications of skill.
- Comment [SED5]:** Describing the provision of testing accommodations and steps that will be taken to ensure the "vested interest rule" is followed allow the reviewer to be certain that the teacher is adhering to all relevant state and federal law as well as NYSED policy. [The Student Learning Objectives \(SLO\) Results Analysis webinar](#) will enable district leaders, principals and teachers to consider systems for scoring summative assessments used with SLOs.
- Comment [SED6]:** When utilizing a performance assessment it is imperative that clear scoring criteria and guides are provided to ensure accurate ratings by someone other than those with a vested interest in the outcome of the assessment.
- Comment [SED7]:** Multiple sources of baseline data provide a more robust picture of students' current academic ability, thus allowing for more precise targets to be set for end of course performance. For more information about the use of historical data to establish baselines please reference the [Student Learning Objectives 103 Webinar](#).
- Comment [SED8]:** A broad overview of student performance, in addition to individual student performance, allows the teacher and reviewer additional context from which to set rigorous and achievable targets for student performance.

	<p><u>2013 New York State Grade 5 Mathematics Assessment</u></p> <ul style="list-style-type: none"> • 14 students scored a 4 • 96 students scored a 3 • 48 students scored a 2 • 16 students scored a 1 <p><u>2013 District-developed Grade 5 Science Exam</u></p> <ul style="list-style-type: none"> • 21 students scored 90% or better • 67 students scored between 80% and 89% • 55 students scored between 70% and 79% • 19 students scored between 65% and 69% • 12 students scored below 65%
<p>Target(s)</p>	<p><i>What is the expected outcome (target) of students' level of knowledge of the learning content at the end of the instructional period?</i></p> <p>Student targets will be measured by the district-developed summative assessment in May 2014 with targets set as follows:</p> <ul style="list-style-type: none"> • Students who scored at a level 4 on the New York State Grade 5 Mathematics assessment and/or a 90% or better on the district-developed grade 5 Science exam will be expected to score at least 90% • Students who scored at a level 3 on the New York State Grade 5 Mathematics assessment and/or a 75% or better on the district-developed grade 5 Science exam will be expected to score at least 80% • Students who scored at a level 2 on the New York State Grade 5 Mathematics assessment and/or a 65% or better on the district-developed grade 5 Science exam will be expected to score at least 75% • Students who scored at a level 1 on the New York State Grade 5 Mathematics assessment and/or less than 65% on the district-developed grade 5 Science exam will be expected to score at least 65% <p>These rigorous student achievement targets are aligned to the district's expectations and goals regarding performance in the fields of Math, Science, and Technology. In order to earn a HEDI rating of "Effective" or better, at least 80% of students must meet their individual achievement targets.</p>

Comment [SED9]: SLOs are meant to establish growth goals for all students, including those who have high levels of baseline performance. Setting minimum rigor expectations ensures elevated, yet attainable targets for students.

HEDI Scoring	<i>How will evaluators determine what range of student performance “meets” the goal (effective) versus “well-below” (ineffective), “below” (developing), and “well-above” (highly effective)?</i>																				
	HIGHLY EFFECTIVE			EFFECTIVE									DEVELOPING					INEFFECTIVE			
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
99-100	97-98	95-96	93-94	91-92	89-90	87-88	85-86	84	83	82	80-81	72-79	64-71	55-63	48-54	39-47	30-38	15-29	1-14	0	
Rationale	<i>Describe the reasoning behind the choices regarding learning content, evidence, and target and how they will be used together to prepare students for future growth and development in subsequent grades/courses, as well as college and career readiness.</i>																				
	<p>The baseline measures used for Grade 6 Technology are focused on the performance indicators and major understandings reflected in fifth grade science and math course work. Since students demonstrated a wide range of scores with the fifth grade content and skills, they will be provided with regularly differentiated instruction, embedded with elements of the Common Core for Math and Literacy as appropriate within the technology standards. This type of integration will help to ensure proficiency on the summative assessment in 2014. Progress towards meeting these goals will be monitored via regular course work and formative assessments. Regular feedback will be provided to students and instructors will use the analysis of student work to guide future instruction.</p>																				
	<p>The learning content chosen for this course is in alignment with both district goals and the needs of students as they progress toward high school in a world dominated by technology. Technological literacy, coupled with increased exposure to Common Core Literacy and Math content across various subject areas, will help prepare these students for course work in high school and beyond – particularly in the areas of math, science, and technology. The establishment of performance goals that are informed by students’ prior performance in math and science allows for tailored target-setting and provides opportunities for differentiated instruction over the course of the year.</p> <p>The overarching goal for this Student Learning Objective is to ensure that students are prepared to understand the impacts of technology and to use it wisely and effectively, to meet both personal and academic goals. As part of the digital generation, good digital citizenship, the ability to use common tools and exposure to different areas of technology is highly desirable for all students and lends itself to a higher degree of college and career readiness.</p>																				

Comment [SED10]: A clear explanation as to how progress will be monitored and instruction continuously adjusted to meet student needs helps SLOs become instructional tools that can help ensure students meet building and/or district academic goals.

Comment [SED11]: A thoughtful level of detail around decisions regarding learning content, evidence, targets, baseline and HEDI criteria gives the reviewer a complete perspective on how the various elements of an SLO relate to one another and foster student learning that is aligned to appropriate standards and school- or district-level goals.