

The Extent that High Expectations are Emphasized

Students were asked to report on activities related to high expectations. The following 10 indicators were examined to produce a composite index.

Students reported whether:

- Their teachers **often** knew their subject and made it interesting and useful.
- Their teachers **often** set high standards for them and were willing to help them meet them.
- Their teachers **often** clearly indicated the amount and quality of work that were necessary to earn a grade of A or B at the beginning of a project or unit.
- Their teachers **often** cared about them enough that they would not let them get by without doing the work.
- Most of their teachers **often** encouraged them to do well in school.
- Their courses **sometimes or often** were exciting and challenging.
- They **often** worked hard to meet high standards on assignments.
- They **somewhat or strongly agreed** that with hard work, they could understand the material being taught in their classes.
- They **somewhat or strongly agreed** that the grades they received were the result of the amount of effort they put forth in their classes.
- They usually spent **one or more hours** on homework each day.

- **21%** of the Missouri students at TCTW sites assessed in 2010 reported **nine to ten indicators** as applicable to their education experience are categorized as having an **Intensive Emphasis** on High Expectations;
- **48%** of the Missouri students at TCTW sites assessed in 2010 reported **five to eight indicators** as applicable to their education experience are categorized as having a **Moderate Emphasis** on High Expectations;
- **29%** of the Missouri students at TCTW sites assessed in 2010 reporting **zero to four indicators** as applicable to their education experience are categorized as having a **Low Emphasis** on High Expectations;
- **2%** of the Missouri students at TCTW sites assessed in 2010 failed to provide adequate information to be categorized for this index, and are listed as **incomplete**.

Emphasis on High Expectations	%	Reading Mean	Math Mean	Science Mean
High	21	259	256	261
Moderate	48	250	250	257
Low	29	238	239	245
Incomplete	2	n/a	n/a	n/a

Note 1: Each ten point deviation approximates a grade level separation.

Note 2: NAEP-referenced minimum scores for Basic are: Reading-250; Math-257; Science-258

The Extent of Emphasis on Literacy Across the Curriculum

Students were asked to report on activities related to literacy across the curriculum. The following 10 indicators were examined to produce a composite index.

Students reported whether:

- They **often** revised their essays or other written work several times to improve their quality.
 - They **sometimes or often** were asked to write in-depth explanations about a class project or activity.
 - They completed short writing assignments of one to three pages for which they received a grade in their English classes **at least monthly**.
 - They completed short writing assignments of one to three pages for which they received a grade in their science classes **at least monthly**.
 - They completed short writing assignments of one to three pages for which they received a grade in their social studies classes **at least monthly**.
 - They read an assigned book and demonstrated understanding of the significance of the main ideas **at least monthly**.
 - They analyzed works of literature in class **at least weekly**.
 - They discussed or debated topics with other students about what they read in English or language arts classes **at least monthly**.
 - They drafted, rewrote and edited writing assignments before being given a grade **at least monthly**.
 - They stood before the class and made an oral presentation on a project or assignment to meet specific quality requirements **at least once a semester**.
- **22%** of the Missouri students at TCTW sites assessed in 2010 reported **eight to ten indicators** as applicable to their education experience are categorized as having an **Intensive Emphasis** on Literacy Across the Curriculum;
 - **33%** of the Missouri students at TCTW sites assessed in 2010 reported **five to seven indicators** as applicable to their education experience are categorized as having a **Moderate Emphasis** on Literacy Across the Curriculum;
 - **42%** of the Missouri students at TCTW sites assessed in 2010 reporting **zero to four indicators** as applicable to their education experience are categorized as having a **Low Emphasis** on Literacy Across the Curriculum;
 - **2%** of the Missouri students at TCTW sites assessed in 2010 failed to provide adequate information to be categorized for this index, and are listed as **incomplete**.

Emphasis on Literacy Across the Curriculum	%	Reading Mean	Math Mean	Science Mean
High	22	261	259	266
Moderate	33	253	250	259
Low	42	238	240	243
Incomplete	2	n/a	n/a	n/a

Note 1: Each ten point deviation approximates a grade level separation.

Note 2: NAEP-referenced minimum scores for Basic are: Reading-250; Math-257; Science-258

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 - They completed short writing assignments of one to three pages for which they received a grade in their science classes **at least monthly**.
 - They completed short writing assignments of one to three pages for which they received a grade in their social studies classes **at least monthly**.
 - They read an assigned book and demonstrated understanding of the significance of the main ideas **at least monthly**.
 - They analyzed works of literature in class **at least weekly**.
 - They discussed or debated topics with other students about what they read in English or language arts classes **at least monthly**.
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 - **33%** of the Missouri students at TCTW sites assessed in 2010 reported **five to seven indicators** as applicable to their education experience are categorized as having a **Moderate Emphasis** on Literacy Across the Curriculum;
 - **42%** of the Missouri students at TCTW sites assessed in 2010 reporting **zero to four indicators** as applicable to their education experience are categorized as having a **Low Emphasis** on Literacy Across the Curriculum;
 - **2%** of the Missouri students at TCTW sites assessed in 2010 failed to provide adequate information to be categorized for this index, and are listed as **incomplete**.

Emphasis on Literacy Across the Curriculum	%	Reading Mean	Math Mean	Science Mean
High	22	261	259	266
Moderate	33	253	250	259
Low	42	238	240	243
Incomplete	2	n/a	n/a	n/a

Note 1: Each ten point deviation approximates a grade level separation.

Note 2: NAEP-referenced minimum scores for Basic are: Reading-250; Math-257; Science-258

The Extent of Emphasis on Numeracy Across the Curriculum

Students were asked to report on activities related to numeracy across the curriculum. The following eight indicators were examined to produce a composite index.

Students reported whether:

- They used math in classes other than mathematics **at least monthly**.
 - Their mathematics teachers **sometimes or often** showed how mathematics concepts are used to solve problems in real-life situations.
 - They **often** developed and analyzed tables, charts and graphs in their school work. They solved mathematics problems with more than one possible answer **at least monthly**.
 - They solved mathematics problems other than those found in the textbook **at least monthly**.
 - They were assigned word problems in mathematics **at least monthly**.
 - They used a graphing calculator to complete mathematics assignments **at least weekly**.
 - They worked in a group to brainstorm how to solve a mathematics problem **at least monthly**.
- **30%** of the Missouri students at TCTW sites assessed in 2010 reported **seven to eight indicators** as applicable to their education experience are categorized as having an **Intensive Emphasis** on Numeracy Across the Curriculum;
- **45%** of the Missouri students at TCTW sites assessed in 2010 reported **four to six indicators** as applicable to their education experience are categorized as having a **Moderate Emphasis** on Numeracy Across the Curriculum;
- **24%** of the Missouri students at TCTW sites assessed in 2010 reporting **zero to three indicators** as applicable to their education experience are categorized as having a **Low Emphasis** on Numeracy Across the Curriculum;
- **1%** of the Missouri students at TCTW sites assessed in 2010 failed to provide adequate information to be categorized for this index, and are listed as **incomplete**.

Emphasis on Numeracy Across the Curriculum	%	Reading Mean	Math Mean	Science Mean
High	30	261	260	261
Moderate	45	248	249	257
Low	24	232	230	238
Incomplete	1	n/a	n/a	n/a

Note 1: Each ten point deviation approximates a grade level separation.

Note 2: NAEP-referenced minimum scores for Basic are: Reading-250; Math-257; Science-258

The Extent of Emphasis on Integrating Academic Content And Skills into Career/Technical Classes

Students were asked to report on activities related to integrating academic content and skills into their career/technical courses. The following eight indicators were examined to produce a composite index. Results are reported for CT students only.

Students reported whether:

- They read and interpreted technical books and manuals to complete assignments in their career/technical classes **at least weekly**.
 - They read a career-related article and demonstrated understanding of the content in their career/technical classes **at least monthly**.
 - They used computer skills to complete an assignment or project in their career/technical classes **at least weekly**.
 - They used mathematics to complete challenging assignments in their career/technical classes **at least weekly**.
 - Their career/technical teachers **sometimes or often** stressed reading.
 - Their career/technical teachers **sometimes or often** stressed writing.
 - Their career/technical teachers **often** stressed mathematics.
 - Their career/technical teachers **often** stressed science.
- **31%** of the Missouri students at TCTW sites assessed in 2010 reported **six to eight indicators** as applicable to their education experience are categorized as having an **Intensive Emphasis** on integrating academic content and skills into CTE classes;
 - **43%** of the Missouri students at TCTW sites assessed in 2010 reported **three to five indicators** as applicable to their education experience are categorized as having a **Moderate Emphasis** on integrating academic content and skills into CTE classes;
 - **24%** of the Missouri students at TCTW sites assessed in 2010 reporting **zero to two indicators** as applicable to their education experience are categorized as having a **Low Emphasis** on integrating academic content and skills into CTE classes;
 - **2%** of the Missouri students at TCTW sites assessed in 2010 failed to provide adequate information to be categorized for this index, and are listed as **incomplete**.

Emphasis on Integrating Academics into CTE	%	Reading Mean	Math Mean	Science Mean
High	31	254	255	258
Moderate	43	250	249	255
Low	24	238	236	245
Incomplete	2	n/a	n/a	n/a

Note 1: Each ten point deviation approximates a grade level separation.

Note 2: NAEP-referenced minimum scores for Basic are: Reading-250; Math-257; Science-258

The Extent of Emphasis on Quality Career/Technical Studies

Students were asked to report on activities related to quality career/technical studies. The following eight indicators were examined to produce a composite index. Results are reported for CT students only.

Students reported whether:

- They took a mathematics course during their senior year.
- They took a science course during their senior year.
- They were encouraged to take a combination of academic and career/technical courses.
- They completed a senior project that included researching a topic, creating a product or performing a service and presenting it to the class or others.
- They had challenging assignments in their career/technical classes **at least monthly**.
- They completed a project that first required some research and a written plan before completing the task in their career/technical classes **at least once a semester**.
- They used computer software or other technology related to their career/technical area to complete assignments **at least weekly**.
- They made journal or lab manual entries that recorded their class work in their career/technical classes **at least weekly**.

- **30%** of the Missouri students at TCTW sites assessed in 2010 reported **six to eight indicators** as applicable to their education experience are categorized as having an **Intensive Emphasis** on quality CTE classes;
- **39%** of the Missouri students at TCTW sites assessed in 2010 reported **four to five indicators** as applicable to their education experience are categorized as having a **Moderate Emphasis** on quality CTE classes;
- **28%** of the Missouri students at TCTW sites assessed in 2010 reporting **none to three indicators** as applicable to their education experience are categorized as having a **Low Emphasis** on quality CTE classes;
- **3%** of the Missouri students at TCTW sites assessed in 2010 failed to provide adequate information to be categorized for this index, and are listed as **incomplete**.

Emphasis on Quality Career/Technical Studies	%	Reading Mean	Math Mean	Science Mean
High	30	257	255	262
Moderate	39	246	249	251
Low	28	241	237	247
Incomplete	3	n/a	n/a	n/a

Note 1: Each ten point deviation approximates a grade level separation.

Note 2: NAEP-referenced minimum scores for Basic are: Reading-250; Math-257; Science-258

Technology Center Mission

Every technology center that has achieved and sustained meaningful increases in student performance has a significant number of teachers and leaders who agree that their mission is to prepare all students with the academic and technical knowledge and skills necessary to be successful in postsecondary studies and in their chosen career field. A center can reach consensus on such a mission when someone focuses the faculty and community on the mission, identifies the gap between where the center is and where it should be, and engages the faculty and community in looking at the actions and policies needed to close the gap.

Teachers at shared-time CTE centers in Missouri report:	Pct
Preparing all students with the academic and technical knowledge and skills needed to enter college and be successful without needing remedial courses is a very important goal.	59%
Helping all students master the academic content and skills needed to enter and advance in their chosen career field is a very important goal.	75%
Helping students acquire the technical knowledge and skills needed to get a good job is a very important goal.	87%
Preparing all students for the dual objective of employment and further study is a very important goal.	63%
Ensuring students earn a high school diploma is a very important goal.	70%
Preparing all students to pass an exam that will give them a credential that is valued by employers is a very important goal.	62%

Transitions from the Technology Center to College and Careers

Few teachers think more than 80 percent of their seniors have the skills to do well at a four-year or community college and not many more think more than 60 percent of seniors have the skills to do well. Many students leave technology centers only to discover that they cannot pass employer exams for good jobs or that they must take remedial courses in college. Technology centers must meet with employers and postsecondary instructors to understand what their graduates need to know and be able to do to be successful. They must make changes in the technology center and work with partnering high schools to ensure students are getting the knowledge and skills they need to be successful.

Teachers at shared-time CTE centers in Missouri report:	Pct
They meet with employers and postsecondary faculty to discuss expectations, content knowledge and performance standards for students graduating from their center at least annually.	95%
They think 81 percent or more of current seniors have the skills to do well at a four-year or community college.	11%
They are comfortable recommending 81 percent or more of current seniors as highly competent to an employer in their area of specialization.	8%

High Quality CTE Instruction: Preparing Students for Further Learning and the Workplace

Characteristic	Description
Career-Focused	<ul style="list-style-type: none"> ❖ Preparation for further learning and the workplace—the mission of 21st century career/technical education ❖ Technical knowledge and skills within a career pathway ❖ Skills that apply to all workplaces, such as teamwork, problem solving, and critical thinking
Embedded with Academic Knowledge and Skills	<ul style="list-style-type: none"> ❖ High-level academic knowledge and skills to promote college- and career-readiness ❖ Challenging contextual mathematics, science, reading, and writing to promote application and transfer of knowledge from school to the real world
Intellectually Challenging	<ul style="list-style-type: none"> ❖ Intellectually challenging and relevant in- and out-of-school assignments ❖ Assignments and assessments that require planning, creating, synthesizing, analysis, problem solving, and decision-making
Engaging	<ul style="list-style-type: none"> ❖ Active involvement of students in all phases of learning, from planning and setting clear career and education goals to selecting learning strategies, reflecting on learning, and assessing progress ❖ Learning through teamwork, in laboratories, simulations, and in non-school environments
Project- and Problem-Based	<ul style="list-style-type: none"> ❖ Real workplace projects and problem-solving experiences to help students learn the knowledge and skills needed to enter and advance in the workplace ❖ The projects mean something to the students and have value beyond the classroom
Considerate of Learning Differences	<ul style="list-style-type: none"> ❖ Content, activities, and a classroom environment designed to accommodate different ways of learning and specific learning needs ❖ Teachers and students accepting and respecting one another’s similarities and differences
Within a Supportive Learning Environment	<ul style="list-style-type: none"> ❖ An environment that nurtures students’ unique talents, understands and respects the diversity of their experiences, considers their developmental needs, helps them draw meaning from their experiences, and promotes personal commitment to lifelong learning ❖ An ultimate goal that students will take responsibility to develop and monitor their own learning
Embedded with On-Going	<ul style="list-style-type: none"> ❖ Multiple opportunities for assessment to get feedback on progress

Assessment	<ul style="list-style-type: none">❖ Chances to correct and improve knowledge and skills❖ Opportunities to self-evaluate progress over time with portfolios❖ A final assessment that results in licensing, certification, or a public document to acknowledge employment and college readiness
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Project-Based Unit Planning Template

TITLE:

TEACHER:

COURSE:

DURATION:

Step 1: What will students do in this unit?

Step 2: What will students learn?

Technical Knowledge and Skills	Academic Knowledge and Skills	21 st Century Skills

Step 3: What scenario or problem will you use to engage students in this unit?

Step 4: How will you assess what students learn? (Check all that apply)

FORMATIVE		SUMMATIVE	
Preliminary Plans and Goals		Written Product	
Notes/Graphic Representations		Oral Presentation	
Rough Draft		Other Product or Performance	
Practice Presentation		Self-Evaluation or Reflection	
Checklists of Progress		Evaluation by Authentic Audience	
Journal/Learning Log		Test	
Quizzes		Other:	
Other:			

Step 5: What learning activities will you use to help the students achieve the knowledge and skills?

Week 1				
Monday	Tuesday	Wednesday	Thursday	Friday
Week 2				
Week 3				

Add weeks to this chart as needed.

Step 6: What materials and resources will be needed?

Step 7: What will you do to support students having difficulty, modify or accommodate students with special learning needs, and provide enrichment for advanced students?

Adapted from: Project Planning Form, Buck Institute for Education, 18 Commercial Boulevard,
Novato, CA 94949, www.bie.org.

Rubric for Assessing Unit Plans

Criteria	1--Not Yet	2--Basic	3--Proficient	4--Advanced
Standards-Focus	<ul style="list-style-type: none"> ▪ Does not include a sufficient number of career/technical standards to be learned ▪ Identifies random and disconnected learning ▪ Does not include essential questions 	<ul style="list-style-type: none"> ▪ Identifies career/technical standards to be learned ▪ States appropriate standards but unmanageable number ▪ Identifies essential questions 	<ul style="list-style-type: none"> ▪ Clearly identifies career/technical and academic standards to be learned ▪ Targets manageable number of appropriate standards ▪ Includes significant content and 21st century skills ▪ Identifies a list of essential questions related to the standards 	<ul style="list-style-type: none"> ▪ Clearly identifies a comprehensive set of career/technical and academic standards to be learned that are related through a theme or unit scenario ▪ Targets manageable number of appropriate standards ▪ Identifies 21st century skills ▪ Outlines a list of essential questions that tie the standards together
Scenario or Problem	<ul style="list-style-type: none"> ▪ Does not include a scenario or problem ▪ Does not require a final performance or product ▪ Does not require the use of technology ▪ Does not require investigation 	<ul style="list-style-type: none"> ▪ Addresses a problem that is not placed in a career context ▪ Does not require a final performance or product ▪ No technology is required ▪ Requires students to conduct little or no investigation into the topic; steps may be specified for the students 	<ul style="list-style-type: none"> ▪ Includes a scenario ▪ Requires a final report, not necessarily of value outside the classroom ▪ Requires the use of technology ▪ Expects students to conduct investigations 	<ul style="list-style-type: none"> ▪ Addresses an authentic, work-related scenario ▪ Expects students to produce a final product or performance that has value outside the classroom ▪ Requires students to use technology ▪ Expects students to conduct extensive investigations
Instructional Activities	<ul style="list-style-type: none"> ▪ Unlikely to lead to mastery of the knowledge and skills ▪ Uses limited variety of instructional strategies ▪ Provides for minimal student-centered learning ▪ Only recall level tasks 	<ul style="list-style-type: none"> ▪ May lead to mastery of the knowledge and skills ▪ Uses some variety of instructional strategies ▪ Provides for some student-centered learning ▪ Mostly recall level tasks 	<ul style="list-style-type: none"> ▪ Will likely lead to mastery of the knowledge and skills ▪ Uses a variety of instructional strategies, some of which are challenging and hands-on ▪ Provides for some active student-centered learning ▪ Encourages some interactions with 	<ul style="list-style-type: none"> ▪ Will likely lead to in-depth mastery of the knowledge and skills ▪ Uses a variety of challenging, hands-on instructional strategies based on student needs ▪ Provides for active student-centered learning ▪ Encourages students to interact with other students, instructors, and community

Criteria	1--Not Yet	2--Basic	3--Proficient	4--Advanced
			other students and community members <ul style="list-style-type: none"> Requires no higher than analysis 	members <ul style="list-style-type: none"> Requires use of higher order thinking skills
Assessment	<ul style="list-style-type: none"> Measures some, but not all, of the knowledge and skills to be learned in the unit Includes summative assessment Assessment items or tasks are not intellectually demanding (require extended or strategic thinking) Does not include formative assessment Does not establish criteria for assessment Does not include performance assessments Includes assessments that are not relevant Does not include self-assessment 	<ul style="list-style-type: none"> Measures some, but not all, of the knowledge and skills to be learned in the unit Includes summative assessment with clearly defined criteria Few assessment items or tasks are intellectually demanding (require extended and strategic thinking) Includes some formative assessment that provide some feedback Includes some self-assessment 	<ul style="list-style-type: none"> Measures student progress on all the knowledge and skills to be learned in the unit Uses a variety of summative assessments with clearly defined criteria announced at the beginning of the unit Some assessment items or tasks are intellectually demanding (require extended and strategic thinking) Includes frequent feedback through a variety of formative assessments Engages students in peer and self assessment 	<ul style="list-style-type: none"> Measures student progress on all the knowledge and skills to be learned in the unit Uses a variety of summative assessments with clearly defined criteria announced at the beginning of the unit Assessment items or tasks are consistently intellectually demanding (require extended and strategic thinking) Includes ongoing feedback through a variety of formative assessments that support students in learning and doing quality work on the final assessment Engages students in peer and self-assessment and on-going reflection on learning Involves assessment by an authentic audience
Cohesiveness	<ul style="list-style-type: none"> Does not connect components Includes assessments that do not reflect instruction Connects few assessments to the learning focus 	<ul style="list-style-type: none"> Connects some components Has incidental matches between assessment and instruction Connects some assessments to the learning focus 	<ul style="list-style-type: none"> Connects most components Links instruction and assessment Connects all assessments to the learning focus 	<ul style="list-style-type: none"> Connects all components Unifies instruction and assessment Connects all assessments appropriately to the learning focus

Components of a Daily Lesson Plan

Component	Description	Checklist	Example (s)
Get Started 3-5 minutes	Focus the students as the class begins by providing a bell-ringer, “do now,” or problem of the day.	<input type="checkbox"/> Visible for students as they enter the room <input type="checkbox"/> Eliminates wasted time with clear directions <input type="checkbox"/> Includes accountability for finishing in the allotted time <input type="checkbox"/> Establishes expectations of behavior for getting started without teacher support <input type="checkbox"/> Supports the standards <input type="checkbox"/> Challenges students, but does not frustrate them <input type="checkbox"/> Sets the stage and establishes a mood for learning	Solve a practice problem Write in a learning journal by reflecting on what was learned in the previous lesson
Engage 3-5 minutes	Focus the student on the lesson topic	<input type="checkbox"/> Hooks students’ attention and interest <input type="checkbox"/> Sets the stage and establishes the purpose for learning <input type="checkbox"/> Connects to and supports the standards	Display an object/ picture/video clip related to the lesson Demonstrate an exciting result Model a lab Discuss memorable experiences Relate to the students’ lives
Discover/ Explain 15-20 minutes	Depending on the lesson approach, the students are learning information through exploration or through explanation	<input type="checkbox"/> Builds students’ knowledge by discovering information <input type="checkbox"/> Introduces and builds vocabulary <input type="checkbox"/> Supports and extends the standards <input type="checkbox"/> Includes a majority of higher-order questions AND/OR Delivers content through an interactive format <input type="checkbox"/> Helps students organize information <input type="checkbox"/> Includes frequent checks for understanding <input type="checkbox"/> Includes examples to model new content and skills	Manipulate materials Investigate information Read Build models Lecture with guided notes and questions Media presentations Interactive discussion Student presentations
Practice 15 minutes	Students practice what they have learned with teacher guidance, in small groups, and/or independently.	<input type="checkbox"/> Includes rigorous, hands-on practice <input type="checkbox"/> Allows teacher to monitor and support practice <input type="checkbox"/> Focuses practice on the skills to be learned OR Uses appropriate grouping for group practice OR Uses independent practice that helps students transfer knowledge and skills to new situations <input type="checkbox"/> Supports individual accountability <input type="checkbox"/> Includes practice spread out over time so that students maintain and deepen their knowledge and skills	Construct a product Create a performance Solve a problem Design a project Write a paper Create a brochure

Component	Description	Checklist	Example (s)
Check for Understanding 10-15 minutes or periodically throughout the lesson	Teachers monitor students' understanding to gauge their learning during the lesson.	<input type="checkbox"/> Uses the most appropriate formative assessment method <input type="checkbox"/> Uses a combination of written and oral questioning <input type="checkbox"/> Allows for timely feedback so that students improve their learning <input type="checkbox"/> Allows for or facilitates re-teaching	Open response Oral discussion Exit slip Journal entry Paper and pencil quiz Lab report Group report
Closing 6-10 minutes	In the last few minutes of class, complete the lesson and check for understanding, giving students a last chance to ask questions and reflect on their learning.	<input type="checkbox"/> Checks students' understanding of the content <input type="checkbox"/> Maintains on-task behavior until the end of class <input type="checkbox"/> Answers questions and clarifies instructions <input type="checkbox"/> Sets up next day's instruction <input type="checkbox"/> Explains the purpose and outcome for homework or practice <input type="checkbox"/> Provides a way for all students to participate and verbalize the day's learning	Exit slips One-minute paper Homework Journal sharing or discussion Review of major content points Answer questions
Support and Modifications Enrichment, Extensions and Re-teaching	Encourage in-depth understanding and mastery of content for all students, even if they have difficulty, special learning needs, or have already mastered the content	SUPPORT and MODIFICATIONS <input type="checkbox"/> Addresses identified skills for students who need extra help or extra time <input type="checkbox"/> Connects to and supports standards <input type="checkbox"/> Addresses weaknesses identified on pre- and daily assessments <input type="checkbox"/> Fits needs for multiple levels of extra help <input type="checkbox"/> Allows teacher to continue with other students if necessary <input type="checkbox"/> Fits fairly into grading system ENRICHMENT, EXTENSIONS, RE-TEACHING <input type="checkbox"/> Pushes students to go to proficient- and advanced-level mastery of the content <input type="checkbox"/> Encourages students to demonstrate higher levels of understanding <input type="checkbox"/> Allows the teacher to continue with other students if necessary <input type="checkbox"/> Provides different levels of activities based on modifications that are needed	Limit the quantity of the work Select alternate reading materials Use audio/video tapes to assist in reading Provide other formats for reading materials Allow more time Encourage peer assistance or tutoring

Source: Betty Harbin and Gene Bottoms. *Planning for Improved Student Achievement: Ten Steps for Planning and Writing Standards-Based Units*, Southern Regional Education Board, 2008.

Lesson Planning Template

Content Focus—What will students learn?		
Technical	Academic	21 st Century Skills
Lesson Outline—What learning activities will students do?		
Time	Sequence	Description of Learning Activity
	Get Started/Engage	
	Discover/Explain: Provide new information or demonstrate a skill	
	Practice: Provide opportunities to practice independently or in groups	
	Check for Understanding: Monitor what is being learned	
	Close: Summarize, check, and answer questions	

	Support, Modifications, and Extensions	
Materials and Resources—What do you need to assemble and prepare before the lesson?		
Reflection—Did the students learn the content outlined in the lesson focus? Why or why not?		

Rubric for the Six A's

Category	Unsatisfactory	Basic	Exemplary
Authenticity	<ul style="list-style-type: none"> • The project has little or no connection with the outside world. • The problem or question has little or no meaning to the students. • There is no audience for the student work. 	<ul style="list-style-type: none"> • The project simulates “real world” activities. • The problem or question has meaning to the students. • There is an appropriate audience for the student work. 	<ul style="list-style-type: none"> • Adults in the “real world” are likely to tackle the problem or questions addressed by the project. • The problem or question has meaning to the students. • There is an external audience for the student work.
Academic Rigor	<ul style="list-style-type: none"> • The driving question is not based on standards. • The project demands little specific knowledge of central concepts. • Students can complete the project without learning new content. • Project does not include habits of mind in outcomes. 	<ul style="list-style-type: none"> • The driving question is based on standards. • The project demands specific knowledge of central concepts. • Students learn minimal content. • Project reinforces previously learned habits of mind. 	<ul style="list-style-type: none"> • There is a well-defined and clear driving question that is derived from specific national, state, district, or school content standards. • The project demands breadth and depth of specific knowledge of central concepts. • Students develop new habits of mind (e.g., questioning and posing problems; precision of language and thought; persistence).
Applied Learning	<ul style="list-style-type: none"> • Students do not apply new knowledge to a problem. • Students are not required to develop collaborative or teamwork skills. 	<ul style="list-style-type: none"> • Students apply new knowledge to a problem. • Students are required to work in teams. • Students use self-management skills to improve their performance. 	<ul style="list-style-type: none"> • Students apply new knowledge to a realistic and complex problem. • Students use multiple high-performance work organization skills (e.g., working in teams; using technology appropriately; communicating ideas, collecting organizing, and analyzing information).
Active Exploration	<ul style="list-style-type: none"> • No research is required. • Students gather information from textbooks or other 	<ul style="list-style-type: none"> • Students conduct their own research. • Students gather information from 	<ul style="list-style-type: none"> • Students do field-based activities (e.g., interviewing experts, surveying groups of people, exploring worksites).

	<p>secondary sources.</p> <ul style="list-style-type: none"> • Students use raw data provided by the teacher. 	<p>a limited number of primary sources.</p>	<ul style="list-style-type: none"> • Students gather information from a variety of primary sources and use a variety of methods (interviewing and observing, collecting data, model-building, using on-line services).
Adult Connections	<ul style="list-style-type: none"> • Students have no contacts with adults outside of school. 	<ul style="list-style-type: none"> • Students have limited contacts with adults outside of school (e.g., guest speakers). • The teacher uses role-playing or other staff members to simulate “expert” contact. 	<ul style="list-style-type: none"> • Students have multiple contacts with adults outside of school who have expertise and experience and who can ask questions, provide feedback, and offer advice. • Students have the opportunity to observe and work alongside adults in a worksite relevant to the project. • Adults outside of school provide students with a sense of the real-world standards for this type of work.
Assessment Practices	<ul style="list-style-type: none"> • Students are not provided with explanation of the assessment at early stages of the assignment. • The only product is a culminating exhibition or presentation. 	<ul style="list-style-type: none"> • Students are provided with a clear explanation of the assessment in the early stages of this assignment. • Students receive infrequent feedback on their works-in-progress from teachers, mentors, and peers. • The project includes multiple products. • The final product is a culminating exhibition or presentation that demonstrates their ability to apply the knowledge they have gained. 	<ul style="list-style-type: none"> • Students help in establishing assessment criteria. • Students use a variety of structured self-assessments (journals, peer conference, teacher or mentor conferences, rubrics). • Students receive frequent and timely feedback on their works-in-progress from teachers, mentors, and peers. • The final product is a culminating exhibition or presentation in front of an informed audience. • The project employs multiple products, and all products are aligned with outcomes.

Source: *Project Based Learning Handbook* (2nd ed.), Buck Institute for Education, 2003. www.bie.org.

Formative and Summative Assessment Tools

SUMMATIVE		
Tool	What It Measures	Notes on Use
Paper-and-pencil test, with items such as <ul style="list-style-type: none"> ❖ Multiple choice ❖ Open-response 	Knowledge and <i>understanding</i> of technical skills, academic skills, and 21 st century skills	<ul style="list-style-type: none"> ❖ In short form, such as a quiz, can also be used as a formative assessment ❖ Depending on the design of the items, involves critical thinking
Performance—can be assigned as a part of a project and focused around a real-world problem or scenario, such as <ul style="list-style-type: none"> ❖ Oral presentation ❖ Interview ❖ Performance of task or skill 	The application of knowledge and skills—technical, academic, and 21 st century	<ul style="list-style-type: none"> ❖ Use a rubric to assess quality ❖ Practice of the performance, such as an oral presentation can be used as a formative assessment
Product—can be assigned as a part of a project and focused around a real-world problem or scenario, such as <ul style="list-style-type: none"> ❖ Real-world product ❖ Paper ❖ Brochure 	The application of knowledge and skills—technical, academic, and 21 st century	<ul style="list-style-type: none"> ❖ Use a rubric to assess quality ❖ A draft or partially completed version of the product can be used as a formative assessment
FORMATIVE		
Tool	What It Measures	Notes on Use
Journals or learning logs <ul style="list-style-type: none"> ❖ Progress journals ❖ Log of what is being learned ❖ Research log 	Self-assessment of progress and what is being learned	<ul style="list-style-type: none"> ❖ Use a journal to review where students are in completing work ❖ Design prompts for learning logs for guided reflection
Written plans such as goals, timelines, checklists	Goal setting, time management, personal accountability	Use with projects when students have to manage time and resources
Checklists or observation of performance or work completed	Progress in learning knowledge and skills or in completing work	Use in the lab to record progress Use periodically throughout a large project to let students know where they are
Homework	Knowledge and skills	Use as practice of applying knowledge and skills or as preparation for class or reinforcement of content
Classroom questions and other checks for understanding such as Exit Slips, Hand Signs, One-Minute Papers describing what was learned and what questions still remain	Understanding of what was taught or of directions to be followed	Use for quick feedback on whether students need further instruction

Peer review and feedback	Knowledge and skills	Provide guidelines for giving feedback and time to integrate the feedback into the work before the final performance or completion of the product
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Classroom Management: Beliefs for Building a Respectful Classroom Culture

Three Important Messages

- ✚ “What we are doing here is important.” (School and the work that goes on in classrooms are essential to students now and in their future.)
- ✚ “You can do it.” (All students have the intellectual ability to do rigorous work and meet high standards.)
- ✚ “I won’t give up on you—even if you give up on yourself.” (It is our job as teachers and as a school to make sure that students reach proficiency.)

Ability-Based Beliefs and Practices	Effort-Based Beliefs and Practices
<p>Students of high ability receive the highest marks and are selected to take the most challenging courses. Students perceived with less ability are put in classes with lower expectations. Any academic deficiencies students have are attributed to low ability.</p> <p>Since time is the constant in learning, students that fail to finish assignments, score well on tests, or learn key concepts by the “due dates” receive failing marks with no second chances.</p> <p>Extra help opportunities are entirely the responsibility of the student. If they take advantage of them, that’s good; but no structure exists to ensure that students who need extra help get it.</p> <p>Students have the responsibility to motivate themselves to learn. If they do not believe they can do well in school, they probably won’t.</p> <p>Feedback to students is limited, often occurring only in the form of a numerical or letter grade.</p>	<p>Effort makes a difference. Academic ability can be grown. It is not how smart the child is, but how hard he or she works that determines success. All students are held to high expectations and offered opportunities to take challenging courses.</p> <p>Students learn at different rates and may not reach proficiency at the same time. A mistake is not an inability to perform, but a learning opportunity. For that reason, students may re-do work and retake tests.</p> <p>Effort-based teachers are not necessarily unrealistic about their students’ capabilities, but they are unwilling to give up on them. Students are provided with extra help—during school, in the summer, and before- and after-school.</p> <p>Students can be motivated to come to the belief that their effort is worthwhile, even if they do not believe it at the time they enter school.</p> <p>Students are provided with extensive and specific feedback through the learning process to make corrections in their understanding and continue to learn.</p>

<p>Teachers assume that students should have these skills by the time they get to high school</p>	<p>Teachers explicitly teach students how to exert effective efforts in learning—study skills, time management, problem solving, and note-taking.</p>
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Reference: “Masters of Motivation” by Jonathon Saphier. Chapter 5 in *On Common Ground: The Power of Professional Learning Communities*, Edited by Richard DuFour, Robert Eaker, and Rebecca DuFour.