

Evaluation Tools

Drafting and Design Technology

Sample Performance Assessment Rubric

“A rubric is a printed set of guidelines that distinguishes performances or products of different quality. A rubric has descriptors that define what to look for at each level of performance. Rubrics also often have indicators providing specific examples or tell-tale signs of things to look for in work.”

The word rubric derives from the Latin word for red. Long ago, a rubric was a set of instructions for a law or liturgical services, typically written in red. Thus, a rubric instructs people on how to “lawfully” judge a performance.

Not only does a good rubric provide a consistent and reliable means for assessing performance, it also provides the student with a clear and written explanation of the instructor’s expectations of a performance.

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Sample Rubric

School

Teacher

CTE Program - Level III

Course Name

LEVELS OF PERFORMANCE

3	2	1	0	0
90% +	80% +	70% +	60% +	Less than 60%
Mastered	Exceeded	Attained	Approaching Attainment	Unattained
<p>Student presents a clear, specific understanding of the competency. All notes, assignments, test, work place records and labs required are completed on time, are extremely well organized and questions are answered accurately. High interest and excitement have lead the student to reach far beyond the requirements. Student has read related materials and has used many sources of information for reports and or experiments. The student has used his/her new knowledge when participating in all oral discussions, assignments and written work. Student makes connections between classroom and work place. The students' notes, tests, labs, workplace records, debates, CTSO participation, and assignments are of the highest level of achievement above 90%.</p>	<p>Student presents a clear, specific understanding of the competency. High interest and excitement leads the student to an investigation that reaches beyond requirements. All notes, assignments, tests, workplace records and labs required are completed on time, are very well organized and questions are answered accurately. The student has used more resources than required and demonstrates new knowledge both orally and in written work and uses this knowledge in his/her assignments and oral participation. New knowledge is evident when student shows connections between classroom and work place relationships. Student notes, tests, labs, work place records, CTSO participation, debates and assignments are clearly organized, carefully done, and often go beyond teacher expectations. All tests are beyond the standard level of achievement between 80% to 89%.</p>	<p>Student meets assignment expectations. The student demonstrates new knowledge learned in oral participation and or written tasks. The work is well organized and complete. The student understood the assignments. He/she used the resources required and organized information in all notes, assignments, tests, work place records, debates and labs. All notes, assignments and labs are complete, carefully done and the student meets just above the minimum requirements and expectations. All tests, work place records, CTSO participation, assignments and labs meet the standard level of achievement between 70% to 79%.</p>	<p>Student knowledge of the topic is understood, but at minimum level of competency. The assignments, notes and labs are occasionally incomplete and could be organized better. Some resources have been used, but it is not clear what the student understood. Some of the information included by the student was not important to the topic. Student does most of what is required, but nothing more. Some of the work may not be finished. Tasks are not carefully done and the information from the resources is not used. Tests, labs, notes, CTSO participation, and workbased learning results are at a level of achievement between 60% to 69%.</p>	<p>Student knowledge of the subject is not shown. Steps through the process were not followed. Notes, tests, assignments, workbased learning and labs lack neatness, organization, detail and evidence of new knowledge. Work does not meet requirements. Parts are missing. Participation is weak, or student is often not participating. Labs, tests, CTSO participation, and assignments are poorly done and fall well behind the standard level of achievement. Overall, the student has failed to grasp new concepts covered in the competency. The level of achievement is below 60%.</p>

Definition of Rubric:

"A rubric is a printed set of guidelines that distinguishes performances or products of different quality. A rubric has descriptors that define what to look for at each level of performance. Rubrics also often have indicators providing specific examples or tell-tale signs of things to look for in work."

The word rubric derives from the Latin word for red. Long ago, a rubric was the set of instructions for a law or liturgical service, typically written in red. Thus, a rubric instructs people on how to "lawfully" judge a performance. A good rubric allows valid and reliable--criterion-referenced--discrimination of performance.

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The Five Learning & Employability Profile Traits

1. Commitment to Quality - *Gives best effort, evaluates work, and completes work to quality standards.*

Minimal/0-11	Initial/12-13	Progress/14-15	Proficient/16-17	Exemplary/18-20
Minimal effort. Attempt to evaluate work and utilize feedback is not evident. Does not regularly complete work.	Rarely gives best effort. Rarely evaluates work and utilizes feedback. Completes work inconsistently.	Inconsistently gives best effort. Sometimes evaluates work and utilizes feedback. Completes work; does not consistently meet quality standards.	Usually gives best effort. Usually evaluates work and utilizes feedback. Completes work; usually meets quality standards.	Consistently gives best effort. Constantly evaluates work and fully utilizes feedback to improve product quality. Consistently completes work according to the highest quality standards.

2. Work Habits - *Displays initiative, flexibility, and time management.*

Minimal/0-11	Initial/12-13	Progress/14-15	Proficient/16-17	Exemplary/18-20
Reluctant to begin tasks. Poor use of time. Rarely adjusts well to new situations.	Reluctant to begin tasks without significant teacher intervention. Needs frequent reminders to use available time. Has difficulty adjusting to new situations.	Inconsistently begins and completes tasks. Needs occasional prompting. Sometimes uses time effectively. Adjusts to new situations in an inconsistent manner.	Usually begins and remains on task without prompting until the work is completed. Generally uses time effectively. Usually adjusts well to new situations.	Consistently begins and remains on task until the work is completed. Maximizes time available. Consistently responds to changing situations in a successful manner.

3. Communication - *Reads with comprehension, writes with skill, and communicates effectively and responsibly in a variety of ways and settings.*

Minimal/0-11	Initial/12-13	Progress/14-15	Proficient/16-17	Exemplary/18-20
Understands and interprets information incorrectly. Presents information in a vague and unorganized manner. Refuses to access or use appropriate resources.	Seldom understands and interprets information accurately. Presents information in an unorganized manner. Accesses minimal resources.	Inconsistently receives, understands and interprets information accurately. Demonstrates a limited ability to present information in an organized manner. Inconsistently accesses appropriate resources.	Usually, receives, understands, and interprets information accurately. Presents information in a clear and organized manner using appropriate methods and resources.	Consistently receives, understands, and interprets information accurately. Consistently presents information in a clear, organized and engaging manner using a variety of methods and resources.

4. Interpersonal Effectiveness - *Works effectively with others and contributes productively as a member of a work team.*

Minimal/0-11	Initial/12-13	Progress/14-15	Proficient/16-17	Exemplary/18-20
Uncooperative and disrespectful in working with others. Disruptive to group efforts.	Demonstrates inappropriate group behaviors. Improvement needed in treating others with respect. Rarely contributes to group efforts.	Utilizes a limited number of positive group behaviors. Generally respectful of others. Contributes to group efforts in an inconsistent manner.	Consistently works well with others and is respectful. Contributes significantly to group efforts.	Consistently works well with others and is respectful. Contributes significantly to group efforts. Facilitates positive groups dynamics and respectful environment. Demonstrates leadership that plays a significant role in the success of group efforts.

5. Attendance and Punctuality - *Contributes to the learning environment in a consistent and responsible manner.*

Minimal/0-11	Initial/12-13	Progress/14-15	Proficient/16-17	Exemplary/18-20
Uncooperative and disrespectful in working with others. Disruptive to group efforts.	Demonstrates inappropriate group behaviors. Improvement needed in treating others with respect. Rarely contributes to group efforts.	Utilizes a limited number of positive group behaviors. Generally respectful of others. Contributes to group efforts in an inconsistent manner.	Consistently works well with others and is respectful. Contributes significantly to group efforts.	Consistently works well with others and is respectful. Contributes significantly to group efforts. Facilitates positive groups dynamics and respectful environment. Demonstrates leadership that plays a significant role in the success of group efforts.
Excessive absences make it difficult to contribute in class and are a serious obstacle to successful classroom performance. Student refuses to accept responsibility of making-up missed work.	Absences limit opportunities to contribute in class and consistently impact classroom performance. Student makes-up missed work only after frequent reminders.	Absences impact opportunity to contribute in class and noticeably impact classroom performance. Student needs occasional reminders before missed work is made up.	Absences rarely impact opportunity to contribute in class and rarely affect overall classroom performance. Student is usually responsible in seeking out and making-up missed work.	Absences do not limit opportunity to contribute in class and do not affect classroom performance. Student is consistently responsible in seeking out and making-up missed work.
PUNCTUALITY - (3+ Tardies per Quarter) Pattern of tardiness indicates lack of self-discipline related to punctuality.		PUNCTUALITY - (2 Tardies per Quarter) Instances of tardiness indicate punctuality may become a concern.		PUNCTUALITY - (0-1 Tardies per Quarter) Exemplary self-discipline related to punctuality.

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Technology Education: Career Report Rubric

Student Name _____

CATEGORY	4	3	2	1
Quality of Information	Information gathered provides answers to the main questions along with several supporting details and/or examples for each.	Information gathered provides answers to main questions along with 1-2 supporting details and/or examples.	Information gathered provides answers to main questions, but no details and/or examples are given.	Information gathered has little or nothing to do with the questions posed.
Amount of Information	All topics are addressed, and all questions answered, with at least 3 sentences about each.	All topics are addressed and most questions answered, with at least 3 sentences about each.	All topics are addressed, and most questions answered with 1-2 sentences about each.	All topics not addressed OR most questions answered with words or phrases instead of sentences.
Organization	Information is very well organized with headings that relate clearly to the material.	Information is organized with headings, but some material under the headings may be out of place.	Information is generally organized, but no headings are used.	There appears to be little organization of the material.
Mechanics	No grammatical, spelling or punctuation errors.	Almost no grammatical, spelling or punctuation errors.	A few grammatical spelling, or punctuation errors.	Many grammatical, spelling, or punctuation errors.
Sources	Sources for information and graphics are documented in the designated format.	Most sources for information and graphics are documented in the designated format.	Sources for information and graphics are documented, but most are not in the correct format.	Some sources for information and graphics are not documented.

Source for lesson and rubric: http://www.geocities.com/tech_ed_2000/units/wadd/career.htm

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PROBLEM-SOLVING TASK HOLISTIC 5-POINT SCORING SCALE

This scale evaluates the process employed in response to a problem solving task. It takes into consideration the level of student knowledge and understanding with respect to the given problem solving task; the selection and implementation of appropriate procedures and/or strategies; and the accuracy of the solution obtained.

4 - Response is characterized by all of the following:

- The student selects and implements relevant concepts and procedures/strategies needed to solve this problem.
- The student considers all constraints of the problem situation.
- The solution and all relevant work is correct; or, there is a mistake due to some minor computational or copying error.

3 - Response is characterized by one of the following:

The student selects appropriate procedures/strategies to solve this problem; however, the response/solution is not entirely correct because **one** of the following is apparent:

- There is evidence the student has **a** misconception or has failed to consider **a** relevant concept needed to solve the problem correctly
- The student fails to consider **a** constraint of the problem situation.
- The student has considered **an** irrelevant variable or failed to consider a relevant variable.

The response/solution is generally correct; however, from the information provided it is not completely clear how the student arrived at this solution.

2 - Response is characterized by one of the following:

The student selects appropriate procedures/strategies to solve this problem; however, the response/solution is not correct because **one or more** of the following are:

- There is evidence that the student has **several** misconceptions or has failed to consider **several** relevant concepts needed to solve the problem correctly.
- The student fails to consider **several** constraints of the problem situation.
- The student has also considered **several** irrelevant variables or failed to consider **several** relevant variables.
- The student did not carry the procedures/strategies far enough to reach a solution. The response/solution is generally correct; however, there is no information showing how the student arrived at this response/solution.

1 - Response is characterized by the following:

An incomplete and/or incorrect response/solution is provided **evidencing an attempt** to solve the problem. In addition, one or more of the following are apparent:

- The student did consider a constraint or variable of the problem situation.
- The student understands some concepts relevant to the problem task.
- The student selected a totally inappropriate procedure/strategy.

0 - Response is characterized by the following:

- It is blank.
- The student response only repeats information in the problem task.
- An incorrect solution/response is given and no other information is shown.
- The solution/response and supportive information is totally irrelevant to the problem task.

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Simple Rubric for Use of Measuring Tools

Name: _____ Date: _____

The student:	Acceptable	Unacceptable
Measured to specified dimensions		
Used proper type of marking technique		
Used measuring tools safely		
Demonstrated proper use of foot rule		
Demonstrated proper use of folding rule		
Demonstrated proper use of retractable steel tape		
Demonstrated proper use of architect's scale		

Source: <http://voc.ed.psu.edu/projects/Institute/2002/SampleUnits/ManufUnits/BasicMeasurementdoc.pdf>

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Problem-Solving Task

This scale evaluates the process employed in response to a problem-solving task. It takes into consideration the level of student knowledge and understanding with respect to the given problem solving task; the selection and implementation of appropriate procedures and/or strategies; and the accuracy of the solution obtained.

4 Response is characterized by all of the following:

- The student selects and implements relevant concepts and procedures/strategies needed to solve this problem.
- The student considers all constraints of the problem situation.
- The solution and all relevant work is correct; or, there is a mistake due to some minor computational or copying error.

3 Response is characterized by one of the following:

The student selects appropriate procedures/strategies to solve this problem; however, the response/solution is not entirely correct because one of the following is apparent:

- There is evidence the student has a misconception or has failed to consider a relevant concept needed to solve the problem correctly.
- The student fails to consider a constraint of the problem situation.
- The student has considered an irrelevant variable or failed to consider a relevant variable.

The response/solution is generally correct; however, from the information provided it is not completely clear how the student arrived at this solution.

2 Response is characterized by one of the following:

The student selects appropriate procedures/strategies to solve this problem; however, the response/solution is not correct because one or more of the following are:

- There is evidence that the student has several misconceptions or has failed to consider several relevant concepts needed to solve the problem correctly.
- The student fails to consider several constraints of the problem situation.
- The student has also considered several irrelevant variables or failed to consider several relevant variables.
- The student did not carry the procedures/strategies far enough to reach a solution.

The response/solution is generally correct; however, there is no information showing how the student arrived at this response/solution.

1 Response is characterized by the following:

An incomplete and/or incorrect response/solution is provided evidencing an attempt to solve the problem. In addition, one or more of the following are apparent:

- The student did consider a constraint or variable of the problem situation.
- The student understands some concepts relevant to the problem task.
- The student selected a totally inappropriate procedure/strategy.

0 Response is characterized by the following:

- It is blank.
- The student response only repeats information in the problem task.

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STUDENT RESEARCH MODULE

QUESTIONING

- 4 The question is clear, well-focused and requires high level thinking skills in order to research.
- 3 The question is clear and well focused. The question requires moderately high level thinking skills.
- 2 The question is incomplete and unclear. The teacher needed to help form a question.
- 1 Was unable to come up with a research question.

PLANNING

- 4 Made really good use of time. Was able to remain focused on the tasks and make changes when needed. Was able to develop a clear method to organize the information. Was able to make revisions in the plan when needed.
- 3 Was able to work within the time frame the teacher gave . Was able to develop a system to organize information. Was able to make revisions with help from the teacher.
- 2 Needed teacher help to list and organize what was needed to do. There are some steps missing in the planning. Made revisions with teacher help.
- 1 Was unable to come up with an organized plan and work within the time limits.

GATHERING

- 4 Used a variety of resources and carefully selected only the information that answered the question. Was able to continually revise the search based on information found.
- 3 Used many resources to find information that answered the question. Tried revising the search, but had some problems doing so.
- 2 Used 1 or more sources. Original question or focus guided the search, although should have made revisions. Made errors in selection of references
- 1 Lost focus during the gathering process and therefore the information was not accurate and complete.

SORTING

- 4 Thoroughly selected and organized information that answered the question in a organized way. Selected information that was appropriate.
- 3 Sorted information and organized information that answered the question without too many errors.
- 2 Tried to organize the information found, but made some mistakes. Wasn't able to completely stay focused on information that would answer the question.
- 1 Was unable to sort and organize the information found to answer the question.

SYNTHESIZING

- 4 Used the information found in a meaningful way to create an original product that clearly answers the question with accuracy, detail and understanding.
- 3 The product answers the question in a way that reflects learning using some detail and accuracy.
- 2 The product is not complete and only answers part of the question.
- 1 The product is incomplete and contains missing details and it isn't completely accurate.

TOTAL POINTS:

Student's Name:

Teacher:

http://www.bcps.org/offices/lis/models/tips/rubrics_sec/teach_rubric.html

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STUDENTS USING TECHNOLOGY

Key Questions	Below Standard	Standard	Above Standard
Does the student demonstrate an ability to operate technology appropriate to his or her academic level?	<ul style="list-style-type: none"> • Does basic operations with help • Unable to troubleshoot 	<ul style="list-style-type: none"> • Performs routine tasks independently with a minimum of assistance • Can troubleshoot common operational difficulties 	<ul style="list-style-type: none"> • Performs complex tasks independently • Can troubleshoot some advanced operational difficulties
Does the student use technology tools safely, responsibly, and ethically?	<ul style="list-style-type: none"> • Seldom works cooperatively and collaboratively with technology • Demonstrates little or no evidence of ethical use of technology • Demonstrates little or no evidence or concern for personal or physical safety 	<ul style="list-style-type: none"> • Usually works cooperatively and collaboratively with technology • Demonstrates ethical use of technology • Uses technology with appropriate concern for personal and physical safety 	<ul style="list-style-type: none"> • Takes a leadership role in collaborative work with technology • Models a high level of respect for personal and physical safety • Models technology with appropriate concern for personal and physical safety
Does the student use technology as a problem-solving and decision-making tool?	<ul style="list-style-type: none"> • Demonstrates little or no evidence of formulating problems or choosing appropriate strategies for using technology • Uses few or inefficient technology resources to gather information • Seldom evaluates accuracy, relevance, appropriateness, comprehensiveness and bias of electronic information sources 	<ul style="list-style-type: none"> • Formulates problems and chooses appropriate strategy with some guidance using technology • Uses a variety of technology resources to gather information • Usually evaluates accuracy, relevance, appropriateness, comprehensiveness and bias of electronic information sources 	<ul style="list-style-type: none"> • Formulates problems and chooses appropriate strategy using technology • Consistently uses the most appropriate technology resources to gather information • Almost always researches and evaluates the accuracy, relevance, appropriateness, comprehensiveness and bias of electronic information sources
Does the student use technology to produce school assignments and projects?	<ul style="list-style-type: none"> • Needs much assistance to produce a product using technology • Tends to use a minimum of resources repeatedly • Communicates and/or illustrates ideas with difficulty using technology 	<ul style="list-style-type: none"> • Uses technology to design, develop, publish and present a product with a minimum of assistance • Routinely uses a variety of resources • Communicates and/or illustrates ideas with technology 	<ul style="list-style-type: none"> • Designs and develops advanced products with little or no assistance • Consistently seeks new resources to support work projects • Fluently communicates and/or illustrates ideas with technology

Source: <http://jls.palo-alto.ca.us/eslr/eslrTechnology.pdf>