Project Coordinator and Evaluation Panel Guide

***Achieving Classroom Excellence Act* (ACE)**
End of Course Project
Geometry: Category B
Isn't It Amusing?

Project Overview

Design and conduct an investigation in order to determine and explain the relationship between a person's height and their arm span. This project will require collecting data from at least 10 people.

Role of the Project Coordinator

The Project Coordinator is an important part of the End of Course Project process. The Project Coordinator's role is to make sure the student understands the scope of the project, manage the paperwork, review a student's progress toward completion of the project at the indicated CHECK POINTS, and adjust the student's completion timeline if necessary.

This End of Course Project, Category B incorporates additional varied approaches for students to demonstrate mastery, including modifications and accommodations. To qualify for Category B End of Course Project, criteria must be identified in the student's Individualized Education Program (IEP) as approved by the State Board of Education. In the case of a student with an Individualized Education Program (IEP) or an or Language Instruction Education Plan (LIEP) for English Language Learners (ELL) (English II and English III only), the Project Coordinator should consult the student's records and resource personnel to ensure that all appropriate accommodations allowed on the Oklahoma Core Curriculum Tests (OCCT) are provided on the End of Course Project.

Once the student has completed the project, the Project Coordinator will prepare the paperwork necessary to submit the project to the Project Evaluation Panel. To the extent possible, it is recommended that the Project Coordinator serve only as a facilitator of the evaluation process rather than as an active participant of the Project Evaluation Panel.

Directions for the Project Coordinator

1. Read the Geometry: Isn't It Amusing? Student Guide.
2. With the student, determine a timeline for completing the project and enter target dates for completing each of the CHECK POINTS in the space provided.
3. Assist the student in determining an appropriate format to represent their work. Read the Representation of Work section for more information.
4. Check in with the student at the CHECK POINTS listed in the project to ensure that the student is making appropriate progress toward completion. Adjust the timeline if necessary.
5. Arrange a time for the student to complete the Student Learning Reflection as described in the project. This reflection must be completed in your presence or in the presence of another certified educator. This reflection will follow the same guidelines for Representation of Work as all other components of the project.
6. Submit the final project, including the Student Learning Reflection, to the Project Evaluation Panel for scoring. Attach the Project Submission Form.
7. After the Project Evaluation Panel has reviewed the project, ensure that the project and the panel's recommendation is forwarded to the District Superintendent.
8. Ensure that the District Superintendent submits the final project determination to the Oklahoma State Department of Education and communicates the final project determination to the student.

Representation of Work

Representation of work may come in a variety of forms, including multi-media presentations, constructed objects, artistic expression, written documents, and verbal expression. Creativity is encouraged!

All student work must be documented for scoring by the Project Evaluation Panel and kept on file for at least five years after completion. If a student completes any components of the project in a form other than written documents, these components may need to be documented through electronic files, video recordings, audio recordings, or other documentation method for accurate scoring and efficient storage. The Project Coordinator should assist the student with this documentation process.

Role of the Project Evaluation Panel

The Project Evaluation Panel is an important part of the End of Course Project process. The Project Evaluation Panel's role is to provide a recommendation to the District Superintendent regarding the overall performance of the student on the project. The Panel will make this recommendation without bias, adhering to the procedures and guidelines set by the Oklahoma State Board of Education, and using the scoring criteria and Performance Level Rubric included in this guide.

The Panel must consist of at least three certified educators. The Panel must include at least one teacher who is highly qualified in the content area of the project. To the extent possible, it is recommended that all panel members be highly qualified in the content area of the project. It is also recommended that the Panel include at least one educator who does not currently have the student in class and at least one administrator. Schools and districts are encouraged to work collaboratively with other schools and districts to develop Project Evaluation Panels that include qualified individuals who can provide a fair assessment of student mastery of content.

Directions for the Project Evaluation Panel

1. Read the Geometry Isn't it Amusing? Student Guide.
2. Become familiar with the Algebra I Performance Level Rubric (Appendix C).
3. Follow all directions and scoring criteria included in this guide.
4. Submit a recommendation to the District Superintendent on the overall performance of the student on the project. Use the Review Panel Recommendations Form.

General Scoring Criteria

This project will be evaluated on the student's demonstration of mastery of the state academic content standards. A final recommendation of the student's performance level will be made to the District Superintendent based on the Geometry Performance Level Rubric (Appendix C).

Scoring Considerations

- Representation of work may come in a variety of forms, including multi-media presentations, constructed objects, artistic expression, written documents, and verbal expression. Creativity is encouraged! Work that is not submitted in written form should be documented or recorded and provided to the Panel for accurate scoring.
- Due to the nature of this in-depth, sequential project, it is very possible that a student will make computational errors and/or display misconceptions of content in early steps that will impact the student's work in subsequent steps. In order to keep from penalizing a student multiple times throughout the 8 steps of the project, it is important for the student's errors to be taken into consideration throughout the scoring process.
- Use of technology for project completion is acceptable. At any point that a student uses technology to assist in calculations or product creation, the student must be able to explain the inputs and justify the outputs as required by the 8 steps listed below.

Scoring Directions

1. Score each step of the student project using the Scoring Criteria provided in the Project Scoring Rubric (Appendix A).
2. Transfer assigned points for each step to the Scoring Table (Appendix B).
    - On Step 3, 7 separate scores will be listed in the column for Standard 2 and the column for Standard 3.
    - On Steps 3, 5, 6, 7, 8, 9, 11 & 14 the same score will be listed in more than one column.
3. Total the points for each column on the Scoring Table (Appendix B).
4. Use the Scoring Table Guide (Appendix B) to determine how to rate the student's project on each row of the Algebra I Performance Level Rubric (Appendix C).
5. Total the points earned on the Algebra I Performance Level Rubric.
    - An overall score of 7 or more on the Algebra I Performance Level Rubric is required for the student to score Limited Knowledge on the Algebra I End of Course Project.
    - An overall score of 13 or more on the Algebra I Performance Level Rubric is required for the student to score Proficient on an Algebra I End of Course Project.
    - An overall score of 19 or more on the Algebra I Performance Level Rubric is required for the student to score Advanced on an Algebra I End of Course Project.
    - A student may not score Proficient or Advanced on an Algebra I End of Course Project if the student scored a 1 on any row of the Algebra I Performance Level Rubric.
6. Based on the information in #5, make a recommendation to the District Superintendent for the Performance Level score of the student on the Algebra I End of Course Project.

Isn't It Amusing? Project Scoring Rubric

PROJECT STEP	STANDARD COMPONENT	SCORING CRITERIA
1. Determine if you will use the metric system or the standard system of measurement. Defend your selection.	Process Standards	0 – No justification or inappropriate reason. 1 – Gave a valid reason to support his/her choice.
2. At its widest points, the amusement park (not including the parking lot) measures 0.25 miles (400 meters) across and 0.4 miles (650 meters) long. Determine the general shape of your fictional amusement park. Determine the scale that would be most appropriate for you to use when drawing a schematic or building a model of your amusement park. Justify your conclusions.	Process Standards	0 – No scale or explanation given. 1 – Determined a shape and an appropriate scale, but little or no explanation provided. 2 – Determined a shape and an appropriate scale with a mathematical explanation provided.
3. Using your scale from Step 2, develop a schematic or construct a model of a fictional amusement park. The park must meet the following requirements: □ It must have a children's playground area. □ It must have a 70' (21 m) free-fall tower ride. □ It must have a ticket booth with at least four walls, each 4' wide. □ It must have a restaurant. □ It must have a restroom facility. □ It must have a garden. □ It will have a parking lot, but the specifications for the parking lot will not be determined until later.	Process Standards	0 – Schematic or model is not reasonable for an amusement park. 1 – Schematic or model is reasonable for an amusement park but only includes the minimum requirements. 3 – Schematic or model is reasonable for an amusement park and demonstrates that the student has great creativity or detail in the representation.
	Standard 2 Standard 4	0 – Measurements (lengths and angles) in schematic or model are not accurate based on scale and all other information provided. 1 – Measurements (lengths and angles) in schematic or model are mostly accurate based on scale and all other information provided. 2 – Measurements (lengths and angles) in schematic or model are all accurate based on scale and all other information provided.

4. Describe the tools and processes you used to ensure that the measurements in your schematic or model are accurate and reasonable.	Standard 2	0 – Tools were inappropriate or no explanation provided of tools and/or processes. 1 – Explanation provides evidence that the student can select and use mathematical tools correctly.
5. Use geometric properties to prove that your two parallel components (such as a floor and a ceiling of your ticket booth) are actually parallel.	Standard 1 Standard 2 Standard 3	0 – Did not provide a proof or justification that the surfaces are or are not parallel. 1 – Provides an informal justification that the surfaces are or are not parallel. 2– Provides a formal proof that the surfaces are or are not parallel.
6. The parking lot must be built according to civil requirements. These requirements state that amusement parks must have one parking space for every 350 square feet of recreational area. Determine how many parking spaces will be needed.	Process Standards Standard 2	0 – Did not determine an accurate number of spaces based on area of amusement park created in Step 3. 1 – Accurately determined the number of spaces based on area of amusement park created in Step 3.
7. Some of the parking spaces within your parking lot will need to be handicapped accessible. a. Use the table below to determine how many of your parking spaces need to be reserved for accessible parking spaces. b. Using a regular sized parking space, a handicap accessible parking space, and a driving lane from a real parking lot as guides, determine the total area of your fictional parking lot. Explain	Process Standards	0 – Did not do any unnecessary critical thinking, problem solving, and mathematical reasoning. 2 – Demonstrated critical thinking, problem solving, and mathematical reasoning skills above those required to answer the questions.
	Standard 1 Standard 2	0 – Did not accurately determine the total area of the parking lot. 1 – Accurately determined the total area of the parking lot, but did not explain. 1 – Did not accurately determine the total area of the parking lot, but provided a logical explanation of how to calculate the total area. 2 – Accurately determined the total area of the parking lot and provided a valid explanation.

8. You are standing 15 feet (4.5 meters) from the free-fall tower ride when you notice your best friend is at the very top of the ride. On a coordinate grid, diagram the angle of eyesight from you to your friend. Label the key coordinates in your diagram.	Standard 4 Standard 5	0 – Did not create an accurate diagram on a coordinate grid. 1 – Created an accurate diagram on a coordinate grid.
9. Calculate the distance from you to your friend. Explain your calculation.	Standard 3 Standard 5	0 – Did not calculate the distance accurately. 1– Calculated the distance accurately. 1 – Calculated the distance accurately and provided an appropriate explanation.
10. Use trigonometric ratios to determine the angle of eyesight from you to your friend.	Standard 3	0 – Did not calculate the angle correctly or did not provide evidence of using trigonometric ratios. 1– Calculated the angle correctly using trigonometric ratios.
11. Determine the new coordinates for your favorite ride. Explain why you chose the new location for that ride and any other considerations that had to be made for the relocation.	Standard 1 Standard 2 Standard 5	0 – Did not accurately identify new Coordinates. 1 – Accurately identified new coordinates but did not provide an explanation (or explanation is not mathematically appropriate) for the ride's new location. 2– Accurately identified new coordinates and provided a mathematically appropriate explanation.
12. Identify the type of transformation that could be used on the vertices of your ride to move it from its original location to its new location.	Standard 5	0 – Did not identify the Transformation. 1 – Accurately identified the transformation.

13. One of your managers said, "If people are eating snow cones, then it is hot." Evaluate whether this statement is sometimes true, always true, or never true. Then list and identify the converse, inverse, and contrapositive of this statement.	Standard 1	0 – Does not list and identify the conditional statements. 1 – Correctly evaluates the truth of the given statement. 2– Correctly evaluates the truth of the given statement and lists the conditional statements. 3– Correctly evaluates the truth of the given statement and lists and identifies the conditional statements.
14. Explain how this project has contributed to your learning and ability to apply Algebra I skills to the real world.	Process Standard	0 – No explanation or inappropriate explanation. 1- Explanation provided.

APPENDIX B

Tall & Wide Scoring Table

Project Step	Process Standards	Standard 1	Standard 2	Standard 3	Standard 4	Standard 5
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
Total						

Tall & Wide Scoring Table Guide

	Column Totals from Scoring Table	Performance Level Rubric Correlation
Process Standards	0-2	1
	3-5	2
	6-8	3
	9-10	4
Standard 1	0-1	1
	2-4	2
	5-7	3
	8-9	4
Standard 2	0-2	1
	3-5	2
	6-8	3
	9-10	4
Standard 3	0-1	1
	2	2
	3-4	3

	5	4
Standard 4	0	1
	1	2
	2	3
	3	4
Standard 5	0-1	1
	2-3	2
	4-5	3
	6	4

APPENDIX C

ACE End of Course Projects
Performance Level Rubric

Algebra I

	1	2	3	4
Process Standards: Problem Solving, Communication, Reasoning, Connections, and Representation	Student demonstrates little to no mastery of the process standards.	Student demonstrates partial mastery of the process standards.	Student demonstrates mastery of the process standards including such skills as use mathematics to solve problems encountered in daily life; and use a variety of mathematical representations to model real world situations.	Student demonstrates a superior and in-depth mastery of the process standards.
Standard 1: Number Sense and Algebraic Operations - The student will use expressions and equations to model number relationships.	Student demonstrates little to no mastery of the standard.	Student demonstrates partial mastery of the standard.	Student demonstrates mastery of the standard including such skills as translate word phrases and sentences into expressions and equations; use formulas and mathematics concepts to solve multi-step problems; and simplify and factory polynomials.	Student demonstrates a superior and in-depth mastery of the standard.
Standard 2: Relations and Functions - The student will use relations and functions to model number relationships.	Student demonstrates little to no mastery of the standard.	Student demonstrates partial mastery of the standard.	Student demonstrates mastery of the standard including such skills as calculate slope; use and interpret slope and intercepts; distinguish between parallel, perpendicular, horizontal, or vertical lines; develop the equation of a line and graph linear relationships; and match simple equations or inequalities to a graph, table, or situation.	Student demonstrates a superior and in-depth mastery of the standard.

APPENDIX C

	1	2	3	4
Standard 3: Data Analysis, Probability and Statistics - The student will use data analysis, probability and statistics to formulate and justify predictions from a set of data.	Student demonstrates little to no mastery of the standard.	Student demonstrates partial mastery of the standard.	Student demonstrates mastery of the standard including such skills as make valid predictions and/or arguments based on collected data; and use a line-of-best-fit model to represent collected data.	Student demonstrates a superior and in-depth mastery of the standard.
Student Learning Reflection	Student demonstrates less than a Limited Knowledge level of understanding how this project has contributed to the student's learning and real world application of Algebra I skills.	Student demonstrates a partial understanding how this project has contributed to the student's learning and real world application of Algebra I skills.	Student demonstrates understanding of how this project has contributed to the student's learning and real world application of Algebra I skills.	Student demonstrates superior understanding of how this project has contributed to the student's learning and real world application of Algebra I skills, including past and future benefits of this experience on the student's life.

Proficient
To score Proficient, a student must have a total of at least 13 points on the Algebra I Performance Level Rubric, with no component scoring a 1.

Advanced
To score Advanced, a student must have a total of at least 19 points on the Algebra I Performance Level Rubric, with no component scoring a 1.