Paulsen – Grade 10 Geometry

M TNTP

Culture of Learning

Are all students engaged in the work of the lesson from start to finish?

2. Minimally Effective	3. Developing	4. Proficient	5. Skillful
Some students complete instructional tasks, volunteer responses and/or ask appropriate questions.	Most students complete instructional tasks, volunteer responses and/or ask appropriate questions.	All or almost all students complete instructional tasks, volunteer responses and/or ask appropriate questions.	All descriptors for Level 4 are met, and at least one of the following types of evidence is demonstrated:
Some students follow behavioral expectations and/or directions	Most students follow behavioral expectations and/or directions	All or almost all students follow behavioral expectations and/or directions.	Students assume responsibility for routines and procedures and execute them in an orderly, efficient and self-directed manner, requiring no direction or narration from the teacher.
Students execute transitions, routines and procedures in an orderly and efficient manner only some of the time and/or require substantial direction from the teacher.	Students execute transitions, routines and procedures in an orderly and efficient manner most of the time, though they may require some direction from the teacher.	Students execute transitions, routines and procedures in an orderly and efficient manner with minimal direction or narration from the teacher.	Students demonstrate a sense of ownership of behavioral expectations by holding each other accountable for meeting them.
Students are idle while waiting for the teacher or left with nothing to do for one or two minutes at a time.	Students are idle for short periods of time (less than one minute at a time) while waiting for the teacher to provide directions, when finishing assigned work early, or during transitions.	Class has a quick pace and students are engaged in the work of the lesson from start to finish. Students who finish assigned work early engage in meaningful learning without interrupting other students' learning.	
	Some students complete instructional tasks, volunteer responses and/or ask appropriate questions. Some students follow behavioral expectations and/or directions Students execute transitions, routines and procedures in an orderly and efficient manner only some of the time and/or require substantial direction from the teacher. Students are idle while waiting for the teacher or left with nothing to do for one or two	Some students complete instructional tasks, volunteer responses and/or ask appropriate questions. Some students follow behavioral expectations and/or directions Students execute transitions, routines and procedures in an orderly and efficient manner only some of the time and/or require substantial direction from the teacher. Students are idle while waiting for the teacher or left with nothing to do for one or two minutes at a time. Most students complete instructional tasks, volunteer responses and/or ask appropriate questions. Most students follow behavioral expectations and/or directions Students execute transitions, routines and procedures in an orderly and efficient manner most of the time, though they may require some direction from the teacher. Students are idle for short periods of time (less than one minute at a time) while waiting for the teacher to provide directions, when finishing assigned work early, or during	Some students complete instructional tasks, volunteer responses and/or ask appropriate questions. Some students follow behavioral expectations and/or directions Students execute transitions, routines and procedures in an orderly and efficient manner only some of the time and/or require substantial direction from the teacher. Students are idle while waiting for the teacher or left with nothing to do for one or two minutes at a time. Most students complete instructional tasks, volunteer responses and/or ask appropriate questions. All or almost all students complete instructional tasks, volunteer responses and/or ask appropriate questions. All or almost all students follow behavioral expectations and/or directions. Students execute transitions, routines and procedures in an orderly and efficient manner most of the time, though they may require some direction from the teacher. Students are idle while waiting for the teacher or left with nothing to do for one or two minutes at a time. Students execute transitions, routines and procedures in an orderly and efficient manner most of the time, though they with minimal direction or narration from the teacher. Class has a quick pace and students are engaged in the work of the lesson from start to finish. Students who finish assigned work early, or during transitions.

Evidence Summary:

In Mr. Paulsen's 10th grade geometry class, nearly all students are engaged in the work of the lesson from start to finish. All students complete the instructional tasks of working collaboratively to discuss, solve, and analyze given problems at their tables. For example, when the camera pans the classroom, nearly every student is engaged in either discussion about the problem or in the work of solving the problem on their handout. Students are also observed asking the teacher and each other appropriate, content-based questions.



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- All students consistently follow behavioral expectations and directions. When a peer speaks in front of the class, all students are silent and actively
 listening as they present and defend their answers. After Mr. Paulsen asks for 100% participation, all students show their nonverbal agreement or
 disagreement with the student who presents their work at the board. Mr. Paulsen uses multiple strategies to bring the class back to the whole group and
 students participate in claps, stomps, snaps and chants to show their attention and engagement.
- Although transitions are generally efficient and orderly, the teacher provides heavy up front direction and additional narration as the class transitions into
 partner discussion or collaborative work. The teacher provides explicit directions and narration for every transition into and out of whole group forum and
 for behavioral expectations as peers defend their work in front of the class.
- The class has a quick pace and Mr. Paulsen provides explicit time constraints for each activity. Students are fully engaged in both full group forum and small group collaboration and consistently engaged in meaningful learning. If students finish early, they are directed to begin solving additional problems in their work packets.

Culture of Learning Rating

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Essential Content

Are all students working with content aligned to the appropriate standards for their subject and grade?

1. Ineffective	2. Minimally Effective	3. Developing	4. Proficient	5. Skillful
The lesson does not focus on content that advances students toward grade-level standards or expectations and/or IEP goals.	The lesson partially focuses on content that advances students toward grade-level standards or expectations and/or IEP goals.	The lesson focuses on content that advances students toward grade-level standards or expectations and/or IEP goals.	The lesson focuses on content that advances students toward grade- level standards or expectations and/or IEP goals.	All descriptors for Level 4 are met, and the following evidence is demonstrated:
Most of the activities students engage in are not aligned to the stated or implied learning goal(s) or to each other.	Only some activities students engage in are aligned to the stated or implied learning goal(s).	Most activities students engage in are aligned to the stated or implied learning goal(s) are well-sequenced and move students toward mastery of the grade-level standard(s) and/or IEP goal(s).	All activities students engage in are aligned to the stated or implied learning goal(s) and are well- sequenced and build on each other to move students toward mastery of the grade-level standard(s) and/or IEP goals.	Students make connections between what they are learning and other content across disciplines, their historical context (local, state, and national), and/or their current lives.
Instructional materials students use, such as texts, questions, problems, exercises and assessments, are not appropriately demanding for the grade/course and time in the school-year, based on guidance in the standards and/or students' IEP goals (ex. Lexile level and complexity of text).	Some instructional materials students use, such as texts, questions, problems, exercises and assessments, are not appropriately demanding for the grade/course and time in the school-year, based on guidance in the standards and/or students' IEP goals (ex. Lexile level and complexity of text).	Students execute transitions, routines and procedures in an orderly and efficient manner most of the time, though they may require some direction from the teacher.	All instructional materials students use, such as texts, questions, problems, exercises and assessments, are high-quality and appropriately demanding for the grade/course and time in the school-year, based on guidance in the standards and/or students' IEP goals (ex. Lexile level and complexity of text).	Students independently connect lesson content to real-world situations.

Evidence Summary:

- This 10th grade math lesson aligns to the following Common Core Geometry Standards:
 - o Prove geometric theorems
 - o CCSS.MATH.CONTENT.HSG.CO.C.9
 - o Prove theorems about lines and angles.
 - o CCSS.MATH.CONTENT.HSG.CO.C.10



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- o Prove theorems about triangles.
- The content of the lesson focuses on the above standards as students are asked to use and statement and reason t-charts to prove theorems about angles, lines, and triangles. The given content advances students towards mastery of the above Geometry standards.
- All activities students engage in are aligned to the learning goals, are well-sequenced and build on each other to move students toward mastery of the
 grade-level standards. Students work collaboratively to discuss, solve, and analyze theorems about lines, angles, and triangles. At the end of each
 collaborative discussion, the teacher pulls out key points and an individual student solves the problem on the board and asks the rest of the class to agree
 or disagree.
- Instructional materials include a document camera, teacher created notes, and a work packet with standards-based problems. Materials are grade-level appropriate, adequately demanding and rigorous, and serve to move student s towards mastery of the standards.

Essential Content Rating

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Academic Ownership

Are all students responsible for doing the thinking in this classroom?

1. Ineffective	2. Minimally Effective	3. Developing	4. Proficient	5. Skillful
Students complete very little of the cognitive work during the lesson, such as reading, writing, discussion, analysis, computation, or problem solving; the teacher completes all or almost all of the cognitive work.	Students complete some of the cognitive work during the lesson, such as reading, writing, discussion, analysis, computation, or problem solving, but the teacher or a very small number of students complete most of the cognitive work.	Most students complete an appropriately challenging amount of the cognitive work during the lesson, such as reading, writing, discussion, analysis, computation, or problem solving, given the focus of the lesson the teacher completes some of the cognitive work (i.e.: expands on student responses) that students could own.	All or almost all students complete an appropriately challenging amount of the cognitive work during the lesson, such as reading, writing, discussion, analysis, computation, or problem solving, given the focus of the lesson. The teacher rarely finishes any of the cognitive work that students could own.	All descriptors for Level 4 are met, and at least one of the following types of evidence is demonstrated:
Very few or no students provide meaningful oral or written evidence to support their thinking.	Some students provide meaningful oral or written evidence to support their thinking.	Most students provide meaningful oral or written evidence to support their thinking.	All or almost all students provide meaningful oral or written evidence to support their thinking.	Students synthesize diverse perspectives or points of view during the lesson.
Very few or no students are using knowledge and evidence to form, articulate, and defend their answers and opinions.	Some students are using knowledge and evidence to form, articulate, and defend their answers and opinions	Most students are using knowledge and evidence to form, articulate, and defend their answers and opinions.	All or almost all students are using knowledge and evidence to form, articulate, and defend their answers and opinions.	Students independently show enthusiasm and interest in taking on advanced or more challenging content.
Students respond negatively to their peers' thinking, ideas, or answers.	Students do not respond to their peers' thinking, ideas, or answers, or do not provide feedback.	Students respond to their peers' thinking, ideas or answers, and provide feedback to their classmates.	Students respond to and build on their peers' thinking, ideas or answers.	
No students or very few students try hard to complete challenging academic work or answer questions.	Some students try hard to complete challenging academic work and answer questions.	Most students try hard to complete academic work and answer questions, even if the work is challenging.	Students routinely provide constructive feedback to their classmates and respond productively when a peer answers a question incorrectly or when they do	



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not agree with the response.

All or almost all students consistently try hard to complete academic work and answer questions, even if the work is challenging.

Evidence Summary:

- Most students complete an appropriately challenging amount of cognitive work during the lesson. Students provide statements and reasons about angles, lines, and triangles using their knowledge of theorems and postulates. The teacher answers most student questions with, "ask your table partners," pushing the thinking back onto the students. In some cases he agrees with what students have written and pushes them by asking open ended questions. Most students participate in collaborative discussions about the problems but not all participate equitably. In one group of three students, for example, one student dominates the discussion as the remaining two students listen in. Only two students present their work for the class and defend their answers.
- Most students provide written evidence to support their thinking using the t-chart that requires them to list statements about the problem and reasons behind the statements. Some students use the angle/line/triangle given as evidence to support their statements and reasoning. Students are pushed to use notes from previous classes to defend their answers. For example, the teacher asks them to name the postulate that supports the congruence of two triangles and students refer back to their notes from previous lessons.
- Students provide some non-verbal feedback to their peers who defend their work in front of the class. Using non-verbal hand signals, students express their agreement or disagreement, but are not asked to justify their thinking. Students respond to each other's thinking as they collaboratively solve the problems at their tables.
- Almost all students try hard to complete the academic work, even when the work is challenging. The teacher notes the difficulty of the problem and highlights student efforts at naming the statements and reasoning.

Academic Ownership Rating

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Demonstration of Learning

Do all students demonstrate that they are learning?

1. Ineffective	2. Minimally Effective	3. Developing	4. Proficient	5. Skillful
Questions, tasks or assessments do not yield data that allow the teacher to assess students' progress toward learning goals.	Questions, tasks or assessments yield data that only partially allow the teacher to assess students' progress toward learning goals.	Questions, tasks or assessments yield data that allow the teacher to assess students' progress toward learning goals.	Questions, tasks or assessments yield data that allow the teacher to assess students' progress toward learning goals and help pinpoint where understanding breaks down.	All descriptors for Level 4 are met, and at least one of the following types of evidence is demonstrated:
Students have very few or no opportunities to express learning through academic writing and/or explanations using academic language.	Students have few opportunities to express learning through academic writing and/or explanations using academic language.	Students have some opportunities to express learning through academic writing and/or explanations using academic language.	Students have extensive opportunities to express learning through academic writing and/or explanations using academic language.	Students self-assess whether they have achieved the lesson objective and provide feedback to the teacher.
Very few or no students demonstrate how well they understand lesson content and their progress toward learning goals.	Some students demonstrate how well they understand lesson content and their progress toward learning goals through their work and/or responses.	Most students demonstrate how well they understand lesson content and their progress toward learning goals through their work and/or responses.	All students demonstrate how well they understand lesson content and their progress toward learning goals through their work and/or responses.	Students demonstrate that they make connections between what they are learning and how it advances their personal and professional goals.
Student responses, work and interactions demonstrate that most students are not on track to achieve stated or implied learning goals.	Student responses, work and interactions demonstrate that some students are on track to achieve stated or implied learning goals.	Student responses, work and interactions demonstrate that most students are on track to achieve stated or implied learning goals.	Student responses, work and interactions demonstrate that all or almost all students are on track to achieve stated or implied grade- level and/or IEP aligned learning goals.	Students monitor their own progress, identify their own errors and seek additional opportunities for practice.
Evidence Summary:				

- Questions and tasks given during this lesson yield data that allow Mr. Paulsen to assess students' progress toward learning goals and help pinpoint where understanding breaks down. Mr. Paulsen circulates throughout the class as students collaborate and asks questions based on the data he observes. He stops several times to highlight student progress and notes trending misconceptions.
- Student opportunities to express learning include during partner discussion, small group collaboration in solving the problems, and as two students present and defend their answers in front of the class. Students are required to use academic language to make statements about each problem and support each



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statement with reasoning based in mathematical rules and postulates.

- Most students demonstrate how well they understand the lesson content during discussion and in their written responses in the work packets. Some students seem to write what they hear from their peers rather than demonstrate their own understanding of the problem and its solution.
- Student responses, work, and interactions with peers and Mr. Paulsen indicate that most students are on track to achieve the goals of the class. Some students switch the reason and statement columns and a few students indicate that they still do not have a full understanding of the content as Mr. Paulsen asks for a fist-of-five prior to students completing the exit ticket.

Demonstration of Learning Rating

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Observation Notes: