

5E Lesson Plan Template

*All companion materials such as power points, handouts and video clips must be included with the submitted lesson plan.

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Title:	Constant of Proportionality
Grade level(s):	7th
Time Required:	one class period/ 50 minutes
Subject(s):	Math, science
Standards:	7.RP.2
Science and Engineering Practices, Cross-cutting Concepts and Standards for Mathematical Practice	
Objectives:	Students can explain what the points of a graph of a proportional relationship means in terms of a specific situation.
Materials List:	Markers, Calculators, Paper, Worksheets, Ozobots, Ruler Worksheets: Graphing stories Constant of proportionality worksheet
Safety Concerns:	None
Accommodations for Learners with Special Needs (ELL, Special Ed, 504, GT, etc.):	More time for calculations
References:	Maneuvering the Middle LLC organizer http://graphingstories.com/

ENGAGEMENT		Time: Minutes
What the Teacher Will Do	Probing/Eliciting Questions	Student Responses and Misconceptions
The teacher will give students graph to use with graphing stories and play the video that goes with the graph. Video	As you watch the video, see if you can graph the line of what you are seeing.	How to demonstrate a visual representation of a line
Evaluation/Decision Point Assessment	Assessment	Student Outcomes

EXPLORATION		Time: Minutes
What the Teacher Will Do Provide two scenarios of a proportional and nonproportional situation.	Probing/Eliciting Questions How can you identify proportional and nonproportional relationships?	Student Responses and Misconceptions Switching X and Y Coordinates Assuming everything is proportional.
Evaluation/Decision Point Assessment	Assessment	Student Outcomes
Identifying if a situation is proportional or nonproportional	Completion of table, graph, equation, and proportionality explanation.	Successful represent proportional and nonproportional relationships

EXPLANATION		Time: Minutes
What the Teacher Will Do	Probing/Eliciting	Student Responses and

	Questions	Misconceptions
The teacher will give students two pieces of white paper, a marker, a ruler, blank graph (first quadrant) and an ozobot and instruct them to create a visual representation of a scenario that they must create representing proportional and nonproportional situation.	How can we visually demonstrate if the two scenarios are proportional or nonproportional?	Intervals on X and Y coordinates
Evaluation/Decision Point Assessment	Assessment	Student Outcomes
Students can successfully construct a proportional and nonproportional representations	Two correctly completed Ozobot demonstration graphs	Two correctly completed Ozobot demonstration graphs

ELABORATION		Time: Minutes
What the Teacher Will Do	Probing/Eliciting Questions	Student Responses and Misconceptions
The teacher will give opportunity for students to correct their graph. Students must use a different color marker in making corrections.	How have you proven if this is proportional or nonproportional?	None
Evaluation/Decision Point Assessment	Assessment	Student Outcomes

EVALUATION		Time: Minutes
What the Teacher Will Do Students will have time to make corrections on their	Probing/Eliciting Questions Any questions the	Student Responses and Misconceptions Any misconceptions the

graphs	students have will be addressed	students have will be addressed