Collaborate with your cooperating teacher/mentor to design a unit of instruction that aligns to state content standards. Be sure to include technology integration and demonstrate how you will differentiate your lessons to meet the needs of individual students.

Note: You are expected to teach the unit by the end of Topic 8.

APA format is not required, but solid academic writing is expected.

This assignment uses a rubric. Review the rubric prior to beginning the assignment to become familiar with the expectations for successful completion.

You are required to submit this assignment to LopesWrite

Very well done and by far the most exciting math unit plan I have seen in a long time. Math doesn’t have to be boring, however, I know how much planning and time goes into making great instruction fun and exciting. With your many strategies your students will leave class making connections to real world applications. I made comments on your standards as I think we are looking in separate areas. I want to ensure you are focusing on aligning your standards, objectives, activities and assessments. I didn’t see any measurable objectives in week 3 or in this assignment. It’s important to have measurable objectives aligning Bloom’s verbs with the standard and post them every day for your students so they exactly what is expected.

Cindy

# STEP Standard 4 - Unit and Lesson Planning

*Note: When implementing the unit of study, you will be choosing one of these activities to video record, review, and reflect on your teaching later in the STEP process,*

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| --- | --- | --- | --- | --- | --- |
|  | **Day 1** | **Day 2** | **Day 3** | **Day 4** | **Day 5** |
| **Title of Lesson or Activity** | Probability | Probability | Probability | Probability | Probability |
| **Standards and Objectives**  What do students need to know and be able to do for each day of the unit? Where did you get your standards? I found the following:  8.11 The student will a) compare and contrast the probability of independent and dependent events; and b) determine probabilities for independent and dependent events.  [**Standards**](http://www.doe.virginia.gov/testing/sol/standards_docs/mathematics/2016/stds/stds-grade8.pdf)  From your standard you need to create measurable objectives. Without the measurement I can not determine the assessment nor can they be considered performance driven. | 8.11 The student will a) associate and differentiate the probability of independent and dependent events; and b) Decide probabilities for independent and dependent events.  You did not include the entire standard number.  a) Students will be able to state if there is an independent or dependent events when asked.  b) Students will be able to state the differences of independent or dependent events.  c) Students will be able to tell what the probability is for two independent events.  d) Students will be able to tell what the probability is for two dependent events.  Where are your objectives? | 8.11 The student will a) associate and differentiate the probability of independent and dependent events; and b) Decide probabilities for independent and dependent events. a) Students will be able to state if there is an independent or dependent events when asked.  b) Students will be able to state the differences of independent or dependent events.  c) Students will be able to tell what the probability is for two independent events.  d) Students will be able to tell what the probability is for two dependent events. | 8.11 The student will a) associate and differentiate the probability of independent and dependent events; and b) Decide probabilities for independent and dependent events. Students are able to state if the probability is independent or dependent. Students will be using probability for independent and dependent events. | 8.11 The student will a) associate and differentiate the probability of independent and dependent events; and b) Decide probabilities for independent and dependent events. Students are able to state if the probability is independent or dependent. Students will be using probability for independent and dependent events. | 8.11 The student will a) associate and differentiate the probability of independent and dependent events; and b) Decide probabilities for independent and dependent events. Students will be asked if the events are independent or dependent and can state with 8 out of 10 or 80% accuracy. Students will be able to solve dependent and independent probability problems with 8 out of 10 or 80% accuracy. |
| **Academic Language and Vocabulary**  What academic language will you emphasize and teach each day during this unit? This is a might be a helpful site to find math academic language. As vocabulary words are different than academic language. <https://scale.stanford.edu/teaching/pact/supporting-documents/single-subjects/academic-language> | Probability  Outcome  Sample space  Event  Simple  Compound  Independent event  Dependent event  Theoretical probability  Experimental probability | Probability  Outcome  Sample space  Event  Simple  Compound  Independent event  Dependent event  Theoretical probability  Experimental probability | Probability  Outcome  Sample space  Event  Simple  Compound  Independent event  Dependent event  Theoretical probability  Experimental probability | Probability  Outcome  Sample space  Event  Simple  Compound  Independent event  Dependent event  Theoretical probability  Experimental probability | Probability  Outcome  Sample space  Event  Simple  Compound  Independent event  Dependent event  Theoretical probability  Experimental probability |
| **Summary of Instruction and Activities for the Lesson**  How will the instruction and activities flow? Consider how the students will efficiently transition from one to the next. **Is your math minute warm up a review from the previous unit plan? I love the procedure and your inclusion of the pre-test. In addition, you have developed some great strategies.** | Students will start the day with their math minute warm up. From there, students will take their test on the prior unit of geometry. Once finished, students will complete a pre-assessment. | Students will start the day with their math minute warm up. From there, students will continue with notes on probability. Students will participate with the power point presentation on probability which ask them to roll a dice 50 times and record the results. The power point then adds in a dice to determine probability of both the penny and the dice. Students will fill in doodle notes after completion of the power point presentation. Students will be given task cards on simple or one event to complete individually or with pairs. If not completed, students will have to complete it for homework. | Students will start the day with their math minute warm up. From there, I will go over the homework to check for understanding. Students will then turn in the homework. Students will be given notes on how to identify and the differences between independent and dependent probability. Students will then be given a worksheet to complete in task on identifying simple, independent or dependent probability. | Students will start the day with their math minute warm up. From there, I will go over homework to check for understanding. Students will then complete a Kahoot checking for understanding of identifying independent and dependent probability. Students will complete the stations activity on their own or in pairs. The stations will ask them probability events that they must solve. Students will be given a homework sheet once complete to work on in class and finish at home if not completed. | Students will start the day with their math minute warm up. I will go over homework with students to ensure they understand and got the correct answers. Students will be given an activity using M&Ms to find independent and dependent probability with the M&Ms. Once completed, I will go over each answer and ensure they understood. Students will be given the study guide for probability to complete in class and over the weekend for a grade and for the quiz on Monday. |
| **Differentiation**  What are the adaptations or modifications to the instruction/activities as determined by the student factors or individual learning needs? Including Kahoot is a great idea. I especially like that you are thinking of all students for your differentiation not just IEP type of students. | Students can use calculators and formula sheets for the geometry test. | The power point presentation has a lot of graphics and uses a kid which the class assigned as the student who looked most like the kid on the presentation. This allowed the students to make connections. Real life examples were given to ensure the students understood the lesson. The simple event task cards assigned to the students will be used as a formative assessment. I will work with students in small group who need assistance on homework. I will also walk around the class as students complete the task cards answering questions and assisting students. | When giving students the notes on independent and dependent probability, students will be walked through their differences, making notes of them. Students will then watch me complete a problem on both dependent and independent probability. I will guide them through it step by step. Students will then be asked to complete the examples on the back of the notes, one at a time, which I will walk them through the examples after they complete it. I will ask if a student would like to come up to the Smart Board to attempt to work through a few examples on the homework worksheet. I will work with students in small group who need assistance on the homework. | The Kahoot will just ask students to identify if the probability is independent or dependent, not working out the problem. When going over homework, I will ask if students would like to come to the Smart Board to work out problems on it as they and I walk students through the problems. When completing the stations, I will group students who are weak with students who have a strong understanding of probability. I will work in a small group with students who need assistance with the homework. | Students will be called up to the Smart Board to go over the homework. I will walk students through any problems they got stuck on. Students will be given M&Ms to use to solve and manipulate the probability problems on the activity sheet. I will work with small group of students who need extra assistance. I will also work in small group with students who need assistance on probability study guide. |
| **Required Materials, Handouts, Text, Slides, and Technology** In case you have a substitute or look a this unit plan a year from now it is best to include URLs and worksheets in your lesson plans. | Math Minute  Calculators  Chromebook for test  White Boards if needed  Note worksheet  Journal | Math Minute  Calculators  Chromebooks for task cards  White boards and notes for Power Point presentation  Penny  Dice  Doodle notes  Task cards  Chromebooks for task cards on Google classroom  Journal | Math Minute  Calculators  Notes  Journals  Worksheet  White boards | Math Minute  Chromebooks  Stations set up  Clipboards  Worksheet for students to put answers in  Homework | Math Minute  M&Ms  M&M worksheet  Sheet for students to write the answers in is on the back of the stations sheet  Study Guide |
| **Instructional and Engagement Strategies**  What strategies are you going to use with your students to keep them engaged throughout the unit of study? What is brain storming? You will have to share your in-text citation on a reference page. I kept my sources as I may need them in the future. | Since this day is a test day and the pre-assessment, I will review with students prior to the geometry test. I will use “Thumbs Up/Thumbs Down - agreement, disagreement, or for voting purposes” (Konen, 2017, chapter 2). | This lesson will be an introduction to probability. I will use real life examples such as the penny and the dice during the presentation. This will allow students to link information. “Notetaking - students write down notes in some manner” (Konen, 2017, chapter 2). Students will use white boards to check for learning (Konen, 2017). | Students will be guided through the difference between independent and dependent probability. Students will use white boards to check for learning (Konen, 2017). | Since I will be using a Kahoot Quiz, this is one instructional and engagement strategies that I will use during today’s lesson. “Kahoot Quiz - used to quiz students or used as a poll for all to view classroom results; can be used in game format” (Konen, 2017, chapter 2). | Students will work in pairs to complete the M&M practice (Konen, 2017). Guided practice for the study guide will assist students with understanding. I will allow students Brain Storming to assist them with instructional and engagement strategies (Konen, 2017). |
| **Formative Assessments**  How are you going to measurethe learning of your students throughout the lesson? | The homework given to students will be used as a formative assessment for introduction to probability. The pre-assessment will be used as a formative assessment. | Formative assessments used will be the penny and penny and dice used during the power point presentation. Asking students questions about the lesson. Also the homework assigned will be used as a formative assessment. | The homework from the day prior will be used as a formative assessment. The examples used on the notes will be used as a formative assessments. Any questions asked by students will allow me to adjust the lesson and give me data for a formative assessment. | The Kahoot used will allow me to see which students understand independent and dependent. The stations used will allow me to see which students are understanding probability. The homework prior will be collected and used as a formative assessment. | The homework from the night prior will be collected and used as a formative assessment. Completing the M&M activity will allow me to adjust teaching and used as a formative assessment. The study guide will guide me as a formative assessment ensuring I go over any final weaknesses prior to the quiz on Monday. |
| **Summative, Post- Assessment**  What post-assessment will measure the learning progress? Note: This can be thesame as the pre-assessment or a modified version of it. | The pre-assessment will be used as well as a quiz on Monday over probability will be used as a summative assessment. | | | | |
| **Reference:** | Konen, J. (2017). 6 Questions to Tackle When Engaging Students in Learning. Retrieved from <https://www.teacher.org/daily/engaging-students-learning/> | | | | |