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| **LG #** | **A210** | **Standards:** | **S-CP.1.1, S-CP.1.2, S-CP.1.3, S-CP.1.4, S-CP.1.5, S-CP.2.6, S-CP.2.7** |
| **4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond instruction to the standard.****The student will be able to:*** Create a situation in which a two way table is an appropriate model.
* Design a game that is fair and a game that is unfair.

**No major errors or omissions regarding the score 4.0 content.** |
| **3.5** | In addition to 3.0, in-depth inferences and applications with partial success. |
| **3.0** | **Students will be able to understand independence and conditional probability and use the rules of probability to compute and interpret data in a probability model.****The student will be able to:*** Describe events as unions, intersections and complements of other events. (S-CP.1.1)
* Use that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities to determine if they are independent.

(S-CP.1.2)* Interpret independence of A and B as saying that the conditional probability of A given B is the same as the probability of A and the conditional probability of B given A is the same as the probability of B. (S-CP.1.3)
* Construct and interpret a Two-Way Frequency table of data when two categories are associated with each object being classified. (S-CP.1.4)
* Explain the concepts of conditional probability and independence in everyday language and everyday situations. (S-CP.1.5)
* Interpret the conditional probability of A given B as the fraction of B’s outcomes that also belong to A in terms of a model. (S-CP.2.6)
* Interpret the addition rule, P(A or B)=P(A)+P(B)-P(A and B) in terms of a model.

(S-CP.2.7)**No major errors or omissions regarding the score 3.0 content (simple or complex).** |
| **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of 3.0 content. |
| **2.0** | **The student recognizes and describes specific terminology such as:**

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| * Subset
 | * Intersection
 | * Two-Way Table
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| * Sample Space
 | * Complement
 | * Probability
 |
| * Event
 | * Venn Diagram
 | * Conditional Probability
 |
| * Union
* Inclusive
* Addition Rule
 | * Set Notation
* Mutually Exclusive
* Tree Diagram
 | * Independent
* Dependent
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**The student will be able to:*** Describe events as subsets of a sample space using characteristics of the outcomes. (S-CP.1.1)
* Understand that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities. (S-CP.1.2)
* Understand the conditional probability of A given B as P(A and B)/P(B). (S-CP.1.3)
* Use a two-way table to decide if events are independent and to approximate conditional probabilities. (S-CP.1.4)
* Recognize the concepts of conditional probability and independence in everyday language and situations. (S-CP.1.5)
* Find the conditional probability of A given B as the fraction of B’s outcomes that also belong to A. (S-CP.2.6)
* Apply the addition rule, P(A or B)=P(A)+P(B)-P(A and B). (S-CP.2.7)
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| **1.5** | Partial knowledge of the score 2.0 content, but major errors or omissions regarding score 3.0 content. |
| **1.0** | With partial understanding of some of the simpler details and processes and some of the more complex ideas and processes. |
| **0.5** | With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes. |
| **0.0** | Even with help, no understanding or skill is demonstrated |