Mini-Map for M.EE.HS.S.IC.1-2

Subject: Mathematics
Statistics and Probability—Making Inferences and Justifying Conclusions (S.IC)
Grade: 11

Learning Outcome

DLM Essential Element	Grade-Level Standard
M.EE.HS.S.IC.1-2 Determine the likelihood of an event occurring when the outcomes are equally likely to occur.	**M.S.IC.1** Understand statistics as a process for making inferences about population parameters based on a random sample from that population. **M.S.IC.2** Decide if a specified model is consistent with results from a given data-generating process (e.g., using simulation). For example, a model says a spinning coin falls heads up with probability 0.5. Would a result of 5 tails in a row cause you to question the model?

Linkage Level Descriptions

Initial Precursor	Distal Precursor	Proximal Precursor	Target	Successor
Compare the attributes of two objects to identify common characteristics. Create a pair by joining two separate objects.	Recognize outcomes of an event that are either possible or impossible (e.g., shown a picture of a girl standing in the rain with no umbrella, the student identifies possible outcomes such as wet hair or wet clothes).	Recognize an event's sample space by identifying all the possible outcomes of an event (e.g., identify all possible outcomes of rolling a six-sided number cube as numbers 1-6).	Determine the probability of simple events where all outcomes are equally likely (e.g., the theoretical probability of getting a 4 when rolling a six-sided number cube is 1/6).	Determine the theoretical probability of a simple event where some outcomes are more likely than others (e.g., drawing a green marble out of a bag where there are 2 blue marbles, 7 green marbles, and 3 red marbles is 7/12).

Initial Precursor and Distal Precursor Linkage Level Relationships to the Target

How is the Initial Precursor related to the Target?

In order to determine the likelihood of an event, students begin by learning about attributes, numbers, and measurement. Educators draw student attention to new objects or stimuli, label and describe them (e.g., “this is a circle; it won't have any sides”, “compare sets of objects, counting them and comparing them using the words same, different, more, less”, “use direct comparison to compare objects”) and students observe, feel, or otherwise interact with the objects.

How is the Distal Precursor related to the Target?

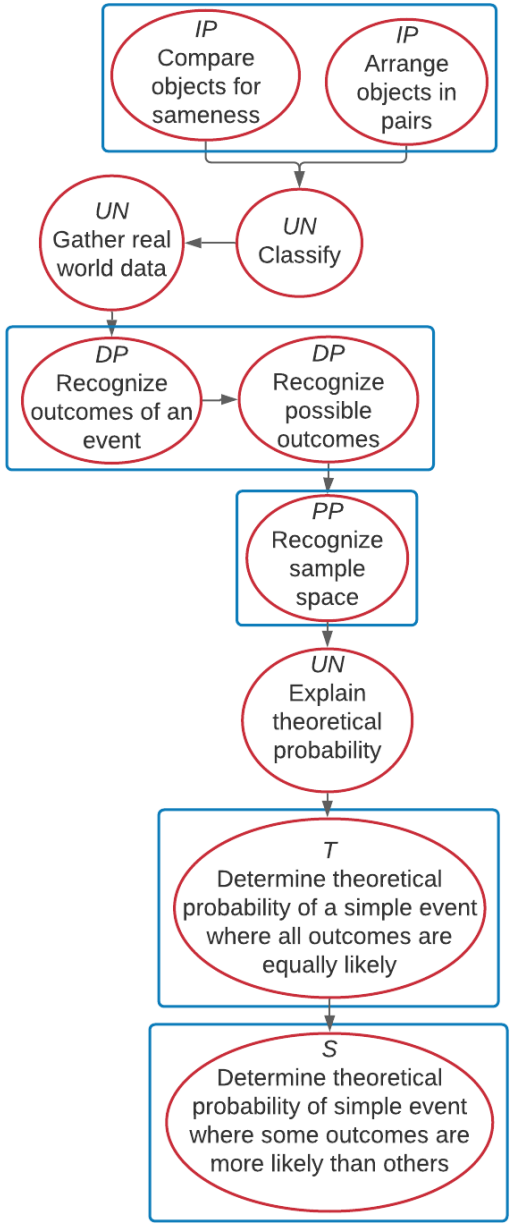
Proportional understanding is key when working toward describing events as independent or dependent. Educators provide many opportunities for students to classify (i.e., group) items based on their size (e.g., compare two or more items and determine which is larger or smaller), amount (e.g., numbers larger or smaller than a given number), and distance between numbers (e.g., skip counting by 2, 5, or 10). Educators should also take care to use words like “will”, “won't”, “might”, “likely”, and “unlikely” when talking about events (e.g., “The traffic lights will change from red to green. The traffic lights won’t change from red to blue.”, “A ball is likely to bounce when it is dropped.”, “It is unlikely I will travel to the moon.”). While students do not need to say these words, they do need to learn the meanings.

Instructional Resources

Released Testlets
See the Guide to Practice Activities and Released Testlets.
Using Untested (UN) Nodes
See the document Using Mini-Maps to Plan Instruction.

[Link to Text-Only Map]

M.EE.HS.S.IC.1-2 Determine the likelihood of an event occurring when the outcomes are equally likely to occur.



Map Key	
IP	Initial Precursor
DP	Distal Precursor
PP	Proximal Precursor
T	Target
S	Successor
UN	Untested

Boxes indicate tested nodes