

**Richmond Public Schools**  
**Department of Curriculum and Instruction**  
**Curriculum Pacing and Resource Guide – Unit Plan**



**Course Title/ Course #: Math Grade 7**

**Unit Title/ Marking Period # (MP): 2**

**Start day:**

**Meetings (Length of Unit): 10 days**

***Desired Results ~ What will students be learning?***

**Standards of Learning/ Standards**

**SOL 7.9**

The student will investigate and describe the difference between the experimental probability and theoretical probability of an event. The student will describe and represent arithmetic and geometric sequences using variable expressions.

**Essential Understandings/ Big Ideas**

What is the difference between the theoretical and experimental probability of an event?

**Theoretical probability of an event is the expected probability and can be found with a formula. The experimental probability of an event is determined by carrying out a simulation or an experiment. In experimental probability, as the number of trials increases, the experimental probability gets closer to the theoretical probability**

**Key Essential Skills and Knowledge**

- Determine the theoretical probability of an event.
- Determine the experimental probability of an event.
- Describe changes in the experimental probability as the number of trials increases.
- Investigate and describe the difference between the probability of an event found through experiment or simulation versus the theoretical probability of that same event.

<u>Vocabulary</u>	
<u>Academic Vocabulary</u>	<u>Content Vocabulary</u>
Probability Theoretical Probability Experimental Probability Percent Ratio Event Trials	Simplify Model Illustrate Identify Evaluate Stimulation
<b><i>Assessment Evidence ~ What is evidence of mastery? What did the students master &amp; what are they missing?</i></b>	
<b><u>Assessment/ Evidence</u></b>	
<b>Interactive Achievement 5 – 10 questions</b>	
<b>Gizmo Assessments</b>	
<b><i>Learning Plan ~ What are the strategies and activities you plan to use?</i></b>	
<b><u>Learning Experiences/ Best Practice</u></b>	
<b>Teacher Resources:</b> <ul style="list-style-type: none"> <li>• Use Frayer Model and/or Marzano for new vocabulary terms</li> <li>• Task Cards to review concepts when students are finished working on an activity</li> <li>• Use cards, dice, coins, cups, and spinners to stimulate real life probability events</li> </ul>	

**Interactive Manipulative(s):**

- [Interactive Manipulatives](#)
- [Adjustable Spinner](#)

**Interactive Student Video(s):**

- [Experimental Probability](#)

**Interactive Skill Practice:**

- [Experimental Probability](#)
- [Predicting Probability](#)
- [Spy Guy – Theoretical Probability](#)
- [Theoretical and Experimental, Compound Events](#)

**Technology Integrations**

**Technology:**

[Gizmo Lessons](#) -

Theoretical and Experimental Probability  
Probability Simulations

[BrainPop](#):

Basic Probability

**Resources**

**Text:**

**Virginia Math Connects, Course 2**, ©2012, Price, et al, McGraw-Hill School Education Group 1:

Probability, page(s) 429 – 433;

Experimental and Theoretical Probability, page(s) 458 - 463

**Virginia, SOL Coach, New Gold Edition, Mathematics, Grade 7,**

Probability, page(s) 140 – 146

Investigating Probability, page(s), 147 - 151

**Mulligan Math in Minutes**

SOL 7.9

**Interactive Reading and Note taking**

SOL 7.9

**Virginia Department of Education Lesson Plan(s):**

[What are the Chances?](#)

**Other Sites:**

**Lesson Plans and Activities:**

- [Boxing it Up](#)
- [A Week Probability](#)
- [Engage NY – Probabilities](#)
- [Probability](#)
- [Theoretical and Experimental Probability](#)
- [Theoretical and Experimental Probability](#)
- [Performance Task Assessment](#)
- [PBS – Simple Event Probability](#)

**Cross Curricular Connection**

Science – Punnett square with X, Y genes

**Materials**

**Manipulatives**

Spinners  
Counters  
Coins  
Spinners  
Dice

**Technology Resources**

LCD Projector  
Speakers  
Computer w/Internet Connection and SmartBoard  
Software  
SmartBoard  
Computer Cart

**Student Supplies**

Whiteboards/Markers  
Frayer Model/ Marzano  
Interactive Student Notes