



# Hattiesburg Public School District

## Grade 7 Mathematics Units

### 2015 – 2016



<b>Unit 5: Statistics</b>	<b>Time Frame:</b> March 21-April 8, 2016
<b>Content Standards</b>	<b>Standards for Mathematical Practice</b>
<b>Major Standards:</b>	<ol style="list-style-type: none"> <li>(1) Make sense of problems and persevere in solving them.</li> <li>(2) Reason abstractly and quantitatively.</li> <li>(3) Construct viable arguments and critique the reasoning of others.</li> <li>(4) Model with mathematics.</li> <li>(5) Use appropriate tools strategically.</li> <li>(6) Attend to precision.</li> <li>(7) Look for and make use of structure.</li> </ol>
<b>Supporting Standards</b>	
<p><b>7.SP.1</b> Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.</p> <p><b>7.SP.2</b> Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. <i>For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.</i></p>	
<b>Additional Standards</b>	
<p><b>7.SP.3</b> Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. <i>For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on</i></p>	



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either team; on a dot plot, the separation between the two distributions of heights is noticeable.

**7.SP.4** Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. *For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.*

**Pre-requisite Standards:**

- \*Be able to create a graph from given data.
- \*Be able to read and generate inferences based on data.
- \*Summarize numerical data sets in relation to their context.
- \*Understand the purpose of center and variability and that each can be summarized with a single number.
- \*Display numerical data in plots on a number line including dot plots, histograms, and box plots.

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5
<p><b>Lesson Topic:</b> Pre-Assessment</p> <p><b>Standard Ref:</b> 7.SP.1, 7.SP.2, 7.SP.3, 7.Sp.4</p> <p><b>Resource/Strategy:</b> engageNY/Module 5-C Mathshell.org</p>	<p><b>Lesson Topic:</b> Populations, Samples, and Generalizing from a Sample to a Population</p> <p><b>Standard Ref:</b> 7.SP.1, 7.SP.2</p> <p><b>Resource/Strategy:</b> engageNY/Module 5-C</p>	<p><b>Lesson Topic:</b> Selecting a Sample</p> <p><b>Standard Ref:</b> 7.SP.1, 7.SP.2</p> <p><b>Resource/Strategy:</b> engageNY/Module 5-C Mathshell.org Grade 7 CCSS PrBL Curriculum</p>	<p><b>Lesson Topic:</b> Random Sampling</p> <p><b>Standard Ref:</b> 7.SP.1, 7.SP.2</p> <p><b>Resource/Strategy:</b> engageNY/Module 5-C Mathshell.org Grade 7 CCSS PrBL Curriculum</p>	<p><b>Lesson Topic:</b> Methods for Selecting a Random Sample</p> <p><b>Standard Ref:</b> 7.SP.1, 7.SP.2</p> <p><b>Resource/Strategy:</b> engageNY/Module 5-C Mathshell.org</p>



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Grade 7 CCSS PrBL Curriculum Map <a href="https://docs.google.com/document/d/1KYgt2q5x2clpDTwtJwpDeAoZw_M_00R9Au5bkKXHsE/edit">https://docs.google.com/document/d/1KYgt2q5x2clpDTwtJwpDeAoZw_M_00R9Au5bkKXHsE/edit</a>	<a href="http://Mathshell.org">Mathshell.org</a> Grade 7 CCSS PrBL Curriculum Map <a href="https://docs.google.com/document/d/1KYgt2q5x2clpDTwtJwpDeAoZw_M_00R9Au5bkKXHsE/edit">https://docs.google.com/document/d/1KYgt2q5x2clpDTwtJwpDeAoZw_M_00R9Au5bkKXHsE/edit</a>	Map <a href="https://docs.google.com/document/d/1KYgt2q5x2clpDTwtJwpDeAoZw_M_00R9Au5bkKXHsE/edit">https://docs.google.com/document/d/1KYgt2q5x2clpDTwtJwpDeAoZw_M_00R9Au5bkKXHsE/edit</a>	Map <a href="https://docs.google.com/document/d/1KYgt2q5x2clpDTwtJwpDeAoZw_M_00R9Au5bkKXHsE/edit">https://docs.google.com/document/d/1KYgt2q5x2clpDTwtJwpDeAoZw_M_00R9Au5bkKXHsE/edit</a>	Grade 7 CCSS PrBL Curriculum Map <a href="https://docs.google.com/document/d/1KYgt2q5x2clpDTwtJwpDeAoZw_M_00R9Au5bkKXHsE/edit">https://docs.google.com/document/d/1KYgt2q5x2clpDTwtJwpDeAoZw_M_00R9Au5bkKXHsE/edit</a>
<b>Lesson 6</b>	<b>Lesson 7</b>	<b>Lesson 8</b>	<b>Lesson 9</b>	<b>FAL</b>
<b>Lesson Topic:</b> Sampling Variability <b>Standard Ref:</b> 7.SP.1, 7.SP.2 <b>Resource/Strategy:</b> <a href="http://engageNY/Module 5-C">engageNY/Module 5-C</a> <a href="http://Mathshell.org">Mathshell.org</a> Grade 7 CCSS PrBL Curriculum Map <a href="https://docs.google.com/document/d/1KYgt2q5x2clpDTwtJwpDeAoZw_M_00R9Au5bkKXHsE/edit">https://docs.google.com/document/d/1KYgt2q5x2clpDTwtJwpDeAoZw_M_00R9Au5bkKXHsE/edit</a>	<b>Lesson Topic:</b> Sampling Variability and the Effect of Sample Size <b>Standard Ref:</b> 7.SP.1, 7.SP.2 <b>Resource/Strategy:</b> <a href="http://engageNY/Module 5-C">engageNY/Module 5-C</a> <a href="http://Mathshell.org">Mathshell.org</a> Grade 7 CCSS PrBL Curriculum Map <a href="https://docs.google.com/document/d/1KYgt2q5x2clpDTwtJwpDeAoZw_M_00R9Au5bkKXHsE/edit">https://docs.google.com/document/d/1KYgt2q5x2clpDTwtJwpDeAoZw_M_00R9Au5bkKXHsE/edit</a>	<b>Lesson Topic:</b> Understanding Variability When Estimating a Population Proportion <b>Standard Ref:</b> 7.SP.1, 7.SP.2 <b>Resource/Strategy:</b> <a href="http://engageNY/Module 5-C">engageNY/Module 5-C</a> <a href="http://Mathshell.org">Mathshell.org</a> Grade 7 CCSS PrBL Curriculum Map <a href="https://docs.google.com/document/d/1KYgt2q5x2clpDTwtJwpDeAoZw_M_00R9Au5bkKXHsE/edit">https://docs.google.com/document/d/1KYgt2q5x2clpDTwtJwpDeAoZw_M_00R9Au5bkKXHsE/edit</a>	<b>Lesson Topic:</b> Estimating a Population Proportion <b>Standard Ref:</b> 7.SP.1, 7.SP.2 <b>Resource/Strategy:</b> <a href="http://engageNY/Module 5-C">engageNY/Module 5-C</a> <a href="http://Mathshell.org">Mathshell.org</a> Grade 7 CCSS PrBL Curriculum Map <a href="https://docs.google.com/document/d/1KYgt2q5x2clpDTwtJwpDeAoZw_M_00R9Au5bkKXHsE/edit">https://docs.google.com/document/d/1KYgt2q5x2clpDTwtJwpDeAoZw_M_00R9Au5bkKXHsE/edit</a>	<b>Lesson Topic:</b> <a href="#">Sampling and Estimating: Counting Trees</a> <b>Standard Ref:</b> 7.SP.1, 7.SP.2, 7.SP.3, 7.SP.4 <b>Resource/Strategy:</b> <a href="http://Mathshell.org">Mathshell.org</a>
<b>Lesson 10</b>	<b>Lesson 11</b>			
<b>Lesson Topic:</b> Why worry about	<b>Lesson Topic:</b> Use Sample Data to			



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<p>Sampling Variability? Standard Ref Resource/Strategy <b>Standard Ref:</b> 7.SP.3, 7.SP.4 <b>Resource/Strategy:</b> engageNY/Module 5-D Mathshell.org Grade 7 CCSS PrBL Curriculum Map <a href="https://docs.google.com/document/d/1KYgtd2q5x2clpDTwtJwpDeAoZw_M_00R9Au5bkKXHsE/edit">https://docs.google.com/document/d/1KYgtd2q5x2clpDTwtJwpDeAoZw_M_00R9Au5bkKXHsE/edit</a></p>	<p>Compare the Means of Two or More Populations <b>Standard Ref:</b> 7.SP.3, 7.SP.4 <b>Resource/Strategy:</b> engageNY/Module 5-D Mathshell.org Grade 7 CCSS PrBL Curriculum Map <a href="https://docs.google.com/document/d/1KYgtd2q5x2clpDTwtJwpDeAoZw_M_00R9Au5bkKXHsE/edit">https://docs.google.com/document/d/1KYgtd2q5x2clpDTwtJwpDeAoZw_M_00R9Au5bkKXHsE/edit</a></p>			
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