

## Precalculus Curriculum Bundle #8

Title	Suggested Dates
Vectors	February 1– February 19 (12 days)



Big Idea/Enduring Understanding	Guiding Questions
<ul style="list-style-type: none"> <li>• Vectors are used to model situations involving two or more quantities.</li> <li>• Vectors can be represented multiple ways.</li> </ul>	<ol style="list-style-type: none"> <li>1. How are vectors used to model situations and why would you choose to use them?</li> <li>2. How many different ways can you express a vector?</li> </ol>

The resources included here provide teaching examples and/or meaningful learning experiences to address the District Curriculum. In order to address the TEKS to the proper depth and complexity, teachers are encouraged to use resources to the degree that they are congruent with the TEKS and research-based best practices. Teaching using only the suggested resources does not guarantee student mastery of all standards. Teachers must use professional judgment to select among these and/or other resources to teach the District Curriculum.

Knowledge & Skills with Student Expectations	District Specificity/Examples	Suggested Resources (See note above)	
<b>PSAT online score report - one day has been planned in this bundle to go to computer lab to see report and SAT study plans with students in 10<sup>th</sup> and 11<sup>th</sup> grade only.</b>			
<p><b>P.3 The student uses functions and their properties, tools and technology to model and solve meaningful problems.</b></p> <p>P.3E solve problems from physical situations using trigonometry, including the use of Law of Sines, Law of Cosines, and area formulas and incorporate radian measure where needed.</p> <p><i>Note: As time permits revisit vectors in parametric form.</i></p>	<ul style="list-style-type: none"> <li>• Use problem situations involving right triangle trigonometry, the Pythagorean Theorem, as well as Law of Sines and Law of Cosines and trigonometry area formulas.</li> <li>• Know which formulas require radians as compared to degrees—such as length of an arc, apparent size, and area of sector.</li> </ul>	<p><b>PreCalculus with Limits</b> Houghton Mifflin Company / Larson – Hostetler</p> <p>Section 6.1 Law of Sines</p> <p>Section 6.2 Law of Cosines</p> <p>Section 6.3 Vectors in the Plane</p> <p>Section 6.3 Vectors and Dot Product</p>	
<p><b>P.6 The student uses vectors to model physical situations.</b></p> <p>P.6A use the concept of vectors to model situations defined by magnitude and direction.</p>	<ul style="list-style-type: none"> <li>• Recognize the connection between absolute value and magnitude.</li> </ul>	<p><b>PreCalculus with Limits</b> Houghton Mifflin Company / Larson – Hostetler</p> <p>Section 6.3 Vectors in the Plane</p> <p>Section 6.3 Vectors and Dot Product</p>	

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<p><b>P.6 The student uses vectors to model physical situations.</b></p> <p>P.6B analyze and solve vector problems generated by real-life situations.</p>	<ul style="list-style-type: none"><li>• Solve vector problems with a variety of techniques including, but not limited to Law of Cosines.</li></ul>	<p><b>PreCalculus with Limits</b> Houghton Mifflin Company / Larson – Hostetler</p> <p>Section 6.3 Vectors in the Plane</p> <p>Section 6.3 Vectors and Dot Product</p>	<p><b>Laying the Foundations Connecting PreCalculus to Advanced Placement Mathematics</b> Advanced Placement Strategies, Inc.</p> <p>Applications of Vectors pg. 324 – 326</p>
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