

**Lesson Plan/Facilitator Guide**

<p><b>Lesson Plan:</b> Finding position of particles</p> <p><b>Program Title:</b> AP Calculus AB</p> <p><b>Objective Time:</b> 59 minutes</p>		
Time	Media/Activities	Content
		<p><b>Prior to the lesson:</b></p> <p>- Post Handouts and video links to class website as resources for students to access at a later.</p>
5 min.	Learning Objective; LCD Projector; Documentary camera	<p><b>Introduction:</b></p> <ol style="list-style-type: none"> <li>Gain student attention by talking about the AP Exam. <ul style="list-style-type: none"> <li>Exam date and time</li> <li>Number of questions (multiple choice &amp; free response) and time.</li> <li>Goal &amp; purpose of earning a score of 3 or higher</li> <li>Purpose of the lesson: Review &amp; prep for the exam</li> </ul> </li> <li>State the learning objective for the lesson. <ul style="list-style-type: none"> <li>Given the velocity (in a table, graph, or equation) of a particle in rectilinear motion over an interval of time, students will be able to write and evaluate an expression involving definite integral to calculator the position of a particle at a given time, with 75% accuracy on the end of the lesson's assessment.</li> </ul> </li> </ol>
4 min.  8 min.	Video; Laptop; LCD Projector,  Handout/practice problems; LCD projector, Documentary	<p><b>Body/Content:</b></p> <ol style="list-style-type: none"> <li>Stimulate recall of prior knowledge by having students watch the video: Position of a Particle. <ul style="list-style-type: none"> <li>Project video for all students to watch.</li> </ul> </li> <li>Present the packet/handout of past review free response questions.</li> <li>Provide learning guidance by modeling how to apply the concept to free response questions. <ul style="list-style-type: none"> <li>Question 1a and 2.</li> </ul> </li> </ol>

Appendix B: Lesson Plan/Facilitator Guide

5 min.	camera	6. Students work on practice problem 3a. <ul style="list-style-type: none"> <li>○ Individually first for about 2 minutes &amp; then collaborate with a partner for 3 more minutes.</li> </ul>
20 min.		7. Rally Coach (Question 3b,4a,b, 5, 6). Each student will receive feedback from their peers & when instructor displays solution/scoring guide (upon completion of each question). <ul style="list-style-type: none"> <li>○ Question 3b: Partner A solves/answers, Partner B is the coach.</li> <li>○ Question 4a: Partner A is the coach, Partner B solves/answers.</li> <li>○ Question 5: Partner A solves/answers, Partner B is the coach.</li> <li>○ Question 6: Partner A is the coach, Partner B solves/answers.</li> </ul>
2 min.		8. Have students verbally summarize to their partner how to find position of a particle/object.
15 min.	End of lesson assessment	9. End of lesson assessment
		<b>Supply/Material List:</b> Handout Handout with Solutions (Scoring Guide) TI-89 Titanium Graphing Calculator LCD Projector Laptop ELMO/Documentary Camera End of Lesson Assessment End of Lesson Assessment with Solutions