

# Unit 11 Limits

Content Area: **Math**  
Course(s): **Accelerated PreCalculus, CP PreCalculus**  
Time Period: **Marking Period 4**  
Length: **4**  
Status: **Published**

## Unit Overview

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In this unit, students will use the concepts of limits and continuity to understand the behavior of functions.

## Enduring Understandings

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- Students will study two fundamental problems from calculus – finding tangent lines and the area of a region. Students will understand limits of functions.

## Essential Questions

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What is calculus?

How do you find and interpret the limit of a function for a certain value of  $x$ ?

How do you evaluate limits that cannot be solved through use of direct substitution?

How do you find the slope of a graph at any single point?

How do you find the limits of functions at infinity and the limits of sequences?

How do you approximate and find exact areas of plane regions defined by functions?

## Instructional Strategies & Learning Activities

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- Provide access to online book

- Provide access to book pages and problems through Canvas
- Provide access to review keys
- Provide access to webassign as learning and reviewing tool
- Specific problems will be pulled out to provide opportunities to extend their knowledge.
- Work on problem solving in a group setting

### **Formative Assessments**

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- Daily homework checks
- Quiz
- Chapter Test
- Exit Tickets
- Warm-ups

### **Summative Assessment**

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- Unit Test
- Unit Project

### **Benchmark Assessments**

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- Midterm/Final Exam

### **Alternate Assessments**

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- Modified homework
- Modified quizzes
- Modified tests
- Modified projects

### **Closure**

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- Low-Stakes Quizzes - Give a short quiz using technologies like Kahoot or a Google form.
- Have students write down three quiz questions (to ask at the beginning of the next class).
- Have students dramatize a real-life application of a skill.
- Ask a question. Give students ten seconds to confer with peers before you call on a random student to answer. Repeat.
- Have kids orally describe a concept, procedure, or skill in terms so simple that a child in first grade would get it.
- Direct kids to raise their hands if they can answer your questions. Classmates agree (thumbs up) or disagree (thumbs down) with the response.
- Have kids create a cheat sheet of information that would be useful for a quiz on the day's topic.
- Kids write notes to peers describing what they learned from them during class discussions.
- Have students fill out a checklist with the objectives for the day.
- Have students complete an exit ticket without putting their name on it. Hand back exit tickets the next day in class and have students correct as a warm up.
- Ask students to write what they learned, and any lingering questions on an "exit ticket". Before they leave class, have them put their exit tickets in a folder or bin labeled either "Got It," "More Practice, Please," or "I Need Some Help!"
- After writing down the learning outcome, ask students to take a card, circle one of the following options, and return the card to you before they leave: "Stop (I'm totally confused. Go (I'm ready to move on.)" or "Proceed with caution (I could use some clarification on . . .)"