# Pre-AP Algebra 2 Instructional Planning Guide

This planning guide is designed to help you create a roadmap of the key instructional activities and assessments you will use to design   
your course in alignment with the Pre-AP course framework and instructional principles. Please view this document as a template you   
can adapt and refine as you implement the Pre-AP model lessons and assessments in concert with your own resources. You are encouraged   
to customize it by incorporating your own resources that further support student learning based on your individual students’ needs,   
and your school, district, and state requirements.

**Using and Customizing the Instructional Planning Guide:**

* This template is organized by the four core units of the Pre-AP course. You can customize the *Date(s)* column with single dates,   
  date ranges, weeks, or other time measurements that make sense for your setting.
* Some useful planning documents include your Pre-AP teacher resources and standards crosswalk (where available).   
  Detailed planning information is captured in the course map and unit overviews found in your teacher resources.
* This template has room to include the Pre-AP performance tasks and learning checkpoints, as well as any   
  Pre-AP model lessons and additional materials you plan to use.
* Consider using this tool to plan collaboratively with your peers.
* When planning additional lessons, consider how they support the Pre-AP course framework, areas of focus, and shared principles.   
  These three elements represent the key ingredients of aligning to Pre-AP.
* Take time to capture your reflections as you move through the course.

## Unit 1: Modeling with Functions

| **Planned Date(s)** | **Actual Date(s)** | **Key Concepts** | **Materials/Resources/Tasks**  *Pre-AP Model Lessons, Additional Lessons, Textbooks,  Performance Tasks, Assessments* | **Learning Objectives** | **State Standards** | **Reflections on  Areas of Focus & Shared Principles** |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | 1.1: Choosing Appropriate Function Models |  |  |  |  |
|  |  | 1.1 | **Learning Checkpoint 1**  *This learning checkpoint can assess any of the learning objectives from its associated key concepts.* |  |  |  |
|  |  | 1.2: Rate of Change |  |  |  |  |
|  |  | 1.2 | **Performance Task**  Counting Customers in the Grocery Store  *This performance task assesses learning objectives addressed in the unit.* |  |  |  |
|  |  | 1.3: Piecewise-Defined Models |  |  |  |  |
|  |  | 1.2 and 1.3 | **Learning Checkpoint 2**  *This learning checkpoint can assess any of the learning objectives from its associated key concepts.* |  |  |  |

[add or remove rows as needed]

### Reflections

What went well in this unit?

When were students most engaged during this unit?

How have students grown? What opportunities for growth stand out at this time?

What needs modification or differentiation next time?

## Unit 2: The Algebra of Functions

| **Planned Date(s)** | **Actual Date(s)** | **Key Concepts** | **Materials/Resources/Tasks**  *Pre-AP Model Lessons, Additional Lessons, Labs, Textbooks,  Performance Tasks, Assessments* | **Learning Objectives** | **State Standards** | **Reflections on  Areas of Focus & Shared Principles** |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | 2.1: Composing Functions |  |  |  |  |
|  |  | 2.2: Transforming Functions |  |  |  |  |
|  |  | 2.1 and 2.2 | **Learning Checkpoint 1**  *This learning checkpoint can assess any of the learning objectives from its associated Key Concepts.* |  |  |  |
|  |  | 2.3: Inverting Functions |  |  |  |  |
|  |  | 2.3 | **Learning Checkpoint 2**  *This learning checkpoint can assess any of the learning objectives from its associated Key Concepts.* |  |  |  |
|  |  | 2.1 and 2.3 | **Performance Task**  Composite Functions and Inverse Functions  *This performance task assesses learning objectives addressed in the unit.* |  |  |  |

[add or remove rows as needed]

### Reflections

What went well in this unit?

When were students most engaged during this unit?

How have students grown? What opportunities for growth stand out at this time?

What needs modification or differentiation next time?

## Unit 3: Function Families

| **Planned Date(s)** | **Actual Date(s)** | **Key Concepts** | **Materials/Resources/Tasks**  *Pre-AP Model Lessons, Additional Lessons, Labs, Textbooks,  Performance Tasks, Assessments* | **Learning Objectives** | **State Standards** | **Reflections on  Areas of Focus & Shared Principles** |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | 3.1: Exponential and Logarithmic Functions |  |  |  |  |
|  |  | 3.1 | **Learning Checkpoint 1**  *This learning checkpoint can assess any of the learning objectives from its associated key concepts.* |  |  |  |
|  |  | 3.2: Polynomial and Rational Functions |  |  |  |  |
|  |  | 3.2 | **Performance Task**  Predicting the Number of Sections of a Circle  *This performance task assesses learning objectives addressed in the unit.* |  |  |  |
|  |  | 3.3: Square Root and Cube Root Functions |  |  |  |  |
|  |  | 3.2 and 3.3 | **Learning Checkpoint 2**  *This learning checkpoint can assess any of the learning objectives from its associated key concepts.* |  |  |  |

[add or remove rows as needed]

### Reflections

What went well in this unit?

When were students most engaged during this unit?

How have students grown? What opportunities for growth stand out at this time?

What needs modification or differentiation next time?

## Unit 4T: Trigonometric Functions

| **Planned Date(s)** | **Actual Date(s)** | **Key Concepts** | **Materials/Resources/Tasks**  *Pre-AP Model Lessons, Additional Lessons, Labs, Textbooks,  Performance Tasks, Assessments* | **Learning Objectives** | **State Standards** | **Reflections on  Areas of Focus & Shared Principles** |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | 4T.1: Radian Measure and Sinusoidal Functions |  |  |  |  |
|  |  | 4T.1 | **Performance Task**  Modeling Hours of Sunlight with a Trigonometric Function  *This performance task assesses learning objectives addressed in the unit.* |  |  |  |
|  |  | 4T.1 | **Learning Checkpoint 1**  *This learning checkpoint can assess any of the learning objectives from its associated key concepts.* |  |  |  |
|  |  | 4T.2: The Tangent Function and Other Trigonometric Functions |  |  |  |  |
|  |  | 4T.3: Inverting Trigonometric Functions |  |  |  |  |
|  |  | 4T.2 and 4T.3 | **Learning Checkpoint 2**  *This learning checkpoint can assess any of the learning objectives from its associated key concepts.* |  |  |  |

[add or remove rows as needed]

### Reflections

What went well in this unit?

When were students most engaged during this unit?

How have students grown? What opportunities for growth stand out at this time?

What needs modification or differentiation next time?

## Unit 4M: Matrices and Their Applications

| **Planned Date(s)** | **Actual Date(s)** | **Key Concepts** | **Materials/Resources/Tasks**  *Pre-AP Model Lessons, Additional Lessons, Labs, Textbooks,  Performance Tasks, Assessments* | **Learning Objectives** | **State Standards** | **Reflections on  Areas of Focus & Shared Principles** |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | 4M.1: Geometric Transformations |  |  |  |  |
|  |  | 4M.1 | **Learning Checkpoint 1**  *This learning checkpoint can assess any of the learning objectives from its associated key concepts.* |  |  |  |
|  |  | 4M.2: Solving Systems of Equations with Matrices |  |  |  |  |
|  |  | 4M.3: Applications of Matrix Multiplication |  |  |  |  |
|  |  | 4M.2 and 4M.3 | **Learning Checkpoint 2**  *This learning checkpoint can assess any of the learning objectives from its associated key concepts.* |  |  |  |
|  |  | 4M.3 | **Performance Task**  Migrating Populations  *This performance task assesses learning objectives addressed in the unit.* |  |  |  |

[add or remove rows as needed]

### Reflections

What went well in this unit?

When were students most engaged during this unit?

How have students grown? What opportunities for growth stand out at this time?

What needs modification or differentiation next time?