Updated Digital Resources Aligned to the New Framework

The digital resources have been updated to help you deliver instruction aligned to the new curriculum Framework.

The course dashboard aggregates a variety of resources essential to meeting the new standards including the updated Teacher Manual, updated Correlations, and a link directly to the new College Board Course and Exam Description. The test banks have also been revised to help you provide meaningful practice and assessment opportunities that ensure students are preparing for the Exam all year long.

The updated Teacher Manual includes section level correlations to the topics, pacing guides and innovative instructional strategies.

The updated program correlation highlights where and how the program aligns at a glance.

Link directly to the new course and exam description.

View the correlations by discrete chapter to help bring focus to chapter-level instruction.
CHAPTER 15  AIR, WEATHER, AND CLIMATE

Chapter Overview

The air flow patterns that circulate throughout Earth’s atmosphere are an integral component of weather and subsequently climate. This chapter describes these patterns. Focused on climate variability and human induced climate change, this chapter provides an essential background for the next few chapters.

Addressing the Updated Curriculum

Topics and Required Concepts

The topics covered in this chapter fall under Unit 4: Earth Systems and Resources and Unit 9: Global Change.

Unit 4: Earth Systems and Resources

• Students need to know the basic composition of the atmosphere. They should know the major atmospheric gases and abundances. Students should be familiar with the layers of the atmosphere, specifically the troposphere and the stratosphere, and that these layers are based on temperature gradient. (Topic 4.4 Earth’s Atmosphere).

• Students need to be able to explain which factors result in atmospheric circulation. Students must have a strong understanding that global wind patterns are the result of solar radiation arriving at the equator, resulting in density differences and the Coriolis effect. (Topic 4.5 Global Wind Patterns).

• Students must be able to explain how the sun’s energy affects the Earth’s surface and creates seasons. This will include being able to detail how solar radiation interacts with the shape of the Earth, its surface, and the movement of the Earth. (Topic 4.7 Solar Radiation and Earth’s Seasons).

• In addition to understanding seasons, students must be able to explain how Earth’s geography, such as mountains and ocean temperatures, affects weather and climate. Many students are unclear on the difference between weather and climate, so this may need to be addressed first. Additionally, students will be expected to know and explain what “rain shadows” are and how they function (Topic 4.8 Earth’s Geography and Climate).

• Students should understand the air/ocean interactions which produce El Niño and La Niña conditions, and be able to explain the worldwide environmental impacts of these weather phenomena. Students need to know not only what they are and where they occur, but their significance to weather-related events worldwide as well. (Topic 4.9 El Niño and La Niña).
Chapter level resources include an AP Chapter Overview, Pacing Guide, tips for Teaching the Chapter, AP Suggested Assignments, and Benchmarks that articulate the specific standards addressed within the chapter. Direct links to this section shows the standard number and the standard’s description.

The searchable Test Bank allows you to create assessments aligned to the updated framework by content standard, practice, or skill.

Click here to request access to the full digital course to review the updated resources, including the updated online Teacher Manual.