**California Alternate Assessment** 

California Assessment of Student Performance and Progress

# Science Administration Planning Guide

*This guide is intended for use by test site coordinators and test examiners to guide, plan, and schedule California Alternate Assessment (CAA) for Science testing between September 19, 2023, and the end of each school district’s 2023–‍24 instructional calendar.*

*This guide does not contain test content.*

**2023–24**

**High School, Form** **4** 

Table of Contents

[Introduction 1](#_Toc140154469)

[What is the California Alternate Assessment (CAA) for Science? 1](#_Toc140154470)

[Form Assignments 1](#_Toc140154471)

[Purpose and Use of This Administration Planning Guide 1](#_Toc140154472)

[Test Security 2](#_Toc140154473)

[Administering the 2023–24 CAA for Science 2](#_Toc140154474)

[Assessed Standards 3](#_Toc140154475)

[Life Sciences Connectors 5](#_Toc140154476)

[HS-LS1-6 5](#_Toc140154477)

[HS-LS2-4 6](#_Toc140154478)

[HS-LS3-2 6](#_Toc140154479)

[HS-LS4-6 7](#_Toc140154480)

[Physical Sciences Connectors 7](#_Toc140154481)

[HS-PS3-5 7](#_Toc140154482)

[HS-PS4-5 8](#_Toc140154483)

[Earth and Space Sciences Connectors 9](#_Toc140154484)

[HS-ESS2-3 9](#_Toc140154485)

[HS-ESS3-3 9](#_Toc140154486)

[Testing Planner for Form 4 10](#_Toc140154487)

List of Tables

[Table 1. HS-LS1-6, FKSA and EU 5](#_Toc138249358)

[Table 2. HS-LS2-4, FKSA and EU 6](#_Toc138249359)

[Table 3. HS-LS3-2, FKSA and EU 6](#_Toc138249360)

[Table 4. HS-LS4-6, FKSA and EU 7](#_Toc138249361)

[Table 5. HS-PS3-5, FKSA and EU 7](#_Toc138249362)

[Table 6. HS-PS4-5, FKSA and EU 8](#_Toc138249363)

[Table 7. HS-ESS2-3, FKSA and EU 9](#_Toc138249364)

[Table 8. HS-ESS3-3, FKSA and EU 10](#_Toc138249365)

[Table 9. 2023–24 CAA for Science Grade High School Testing Planner 11](#_Toc138249366)

## Introduction

### What is the California Alternate Assessment (CAA) for Science?

The CAA for Science is a computer-based California Assessment of Student Performance and Progress (CAASPP) assessment designed for students with the most significant cognitive disabilities and for whom an individualized education program (IEP) team has designated the use of an alternate assessment on statewide summative assessments.

The CAA for Science design philosophy supports the diverse needs of students by ensuring standardization while still allowing flexibility, enabling the greatest range of students to demonstrate their science content knowledge.

### Form Assignments

Administration Planning Guides and *Directions for Administration (DFAs)* are form-specific.

Each local educational agency (LEA) is assigned **one** of four forms for all CAA for Science administration materials. The exception is for the largest districts, which receive form assignments at the school level. All grade levels within an LEA will have the same form assignment. For example, if an LEA is assigned to Form 1, the LEA will use Form 1 of the Administration Planning Guides and *DFAs* for each grade level tested. Form assignments can be found on the [2023–24 CAA for Science Form Assignments](https://www.caaspp.org/administration/about/caa/caa-science-assignments.2023-24.html) web page.

### Purpose and Use of This Administration Planning Guide

This guide provides the following:

* Basic information about the CAA for Science administration and test security
* Information about factors to consider when deciding the best time to administer a CAA for Science embedded performance task (PT)
* The science content being assessed this year
* A blank testing planner to assist in determining when to administer each embedded PT

**Administration Planning Guides are not intended to guide instruction or to limit what science content is taught in the classroom.**

Administration Planning Guides are made available in advance to give teachers and test examiners as much time as possible to plan how best to integrate each of the four embedded PTs into the 2022–23 instructional calendar.

The test examiner tutorial necessary to administer the 2023–24 CAA for Science will be available beginning in summer 2023. The CAA for Science embedded PTs will be available for administration beginning September 19, 2023.

### Test Security

This guide contains no test content and is not secure, but is intended for use only by CAASPP test site coordinators and test examiners for the purposes of planning and scheduling testing. Follow these guidelines to ensure the security of the CAA for Science embedded PTs:

**The downloadable *DFA* and the online embedded PTs, as referenced in this document, contain test content and must be kept secure at all times. *DFA*s should only be downloaded just prior to administering an embedded PT.**

* Access to *DFAs* in the Test Operations Management System is available only to the following user roles: test examiners, site coordinators, and local educational agency coordinators.
* *DFAs* will be available beginning September 19, 2023.
* Online content in the test delivery system, the downloadable *DFA*, and the orienting activities outlined in the *DFA* must be kept secure. *DFAs* that were printed for test examiners must be kept in a securely locked room or locked cabinet when not in use.
* After an embedded PT has been administered, its *DFA* must be immediately and securely destroyed.
* Any electronic files on the test examiner’s or test site coordinator’s device need to be securely deleted in such a way that the files do not remain in a temporary storage location such as the Windows Recycle Bin, where they can be undeleted.
* Once a test examiner begins an embedded PT with a student, it must be completed and submitted in the test delivery system within **45 calendar days** and before the end of the school’s instructional calendar or July 15, 2024, whichever comes first.

### Administering the 2023–24 CAA for Science

The [*Preparing for Administration (PFA)*](https://www.caaspp.org/rsc/pdfs/CAA.Science.Operational.PFA.2023-24.pdf) document is located on the CAASPP website and is available for the 2023–24 administration. This document should be used to prepare to administer the CAA for Science. The information contained in the *PFA* was previously found at the beginning of the *DFA*. There is one *PFA* used for all grade levels and forms. The *PFA* is a nonsecure document that is available for all LEAs in Moodle, and the CAASPP website where you can review or print if desired.

The 2023–24 CAA for Science is composed of four embedded PTs that are administered online to students.

* Each embedded PT is intended to be **administered shortly after the student has received related science instruction.**
* All four embedded PTs must be attempted by the student to complete the administration.
* The embedded PTs can be administered in any order between September 19, 2023, and the end of the instructional calendar or July 15, 2024, whichever comes first.

Each embedded PT assesses two Science Connectors from the same science domain with two corresponding sets of five test questions, each prefaced by an orienting activity. An orienting activity is a nonscorable activity that is designed to engage and familiarize a student with a science concept that the student was previously taught. In some cases, the test examiner completes hands-on exercises with the student during testing and may be required, beforehand, to prepare some commonly available materials found in the classroom or prepare graphics provided in the *DFA*. **There should not be a need to purchase materials just for testing.**

**The *DFA* will provide test examiners with guidelines on how to individualize the orienting activities and designated items. Please note that all items may be individualized based upon the student’s IEP.**

A blank testing planner is provided at the end of this document (refer to table 9) to aid in scheduling administration of each of the embedded PTs for your student(s) based on when the related content will be taught.

## Assessed Standards

The CAA for Science, which is based on the Science Connectors, measures knowledge, skills, and abilities that are appropriate for this student population. The Science Connectors are derived from the California Next Generation Science Standards Performance Expectations (PEs). They provide alternate standards and alternate science learning goals to guide science instruction and assessment for students with the most significant cognitive disabilities. The PEs that the assessed Science Connectors are derived from can be found in the [*CAA for Science Blueprint*](https://www.cde.ca.gov/ta/tg/ca/documents/caascienceblueprint.docx) web document.

These Science Connectors are further broken down into assessment targets made up of more discrete focal knowledge, skills, and abilities (FKSAs), which describe what students should know and be able to do in science; and, at the simplest level, the essential understandings (EUs), which are the basic concepts students should know and be able to do in science. This is presented as a continuum in figure 1.



Figure 1. CAA for Science Standards Continuum

Keep this structure in mind as you review the content being assessed this year. Test questions are written to assess the FKSAs and EUs. Each Science Connector has between one and six FKSAs and one EU. The EU will always be assessed, but not all of the FKSAs will be assessed in a single embedded PT; therefore, not all of the FKSAs are provided in this guide. Assessment of Science Connectors with more than one FKSA may occur over multiple years.

The following pages provide the Science Connectors and associated FKSAs and EUs being assessed this year, organized by science domain. The third column of each Connector table contains descriptions of ways in which a student may demonstrate mastery of the FKSA or EU to be assessed. These mastery statements describe specific actions the student will take, such as identifying, recognizing, or comparing information in the Science Connector being assessed, and are found in the column labeled “Students Will Be Able To….” These statements describe ***only those Science Connectors assessed this year*** and do **not** necessarily address all of the FKSAs associated with a particular Science Connector. A complete list of the Science Connectors, FKSAs, and EUs can be found in the [*California Next Generation Science Standards Core Content Connectors for Alternate Assessments*](https://www.cde.ca.gov/ta/tg/ca/documents/ngssaltconnectors.docx)web document.

### Life Sciences Connectors

#### HS-LS1-6

*Identify a model that demonstrates how organisms take in matter (allowing growth and maintenance) and rearrange the atoms to make new structures in chemical reactions.*

Table 1. HS-LS1-6, FKSA and EU

| **Connector Component** | **Definition** | **Students Will Be Able To…** |
| --- | --- | --- |
| FKSA | Identify a model which demonstrates how animals take in matter and rearrange molecules to grow.  Identify a model which demonstrates how plants take in matter and rearrange molecules to grow. | Recognize parts of the body used to process food.  Identify water, light, and air are needed for plants to grow.  Recognize that plants make their own food from other materials.  Identify examples of an animal growing due to the intake food.  Identify examples of a plant growing due to the intake of water, light, and air. |
| EU | Recognize that all organisms take in matter in order for growth to occur. | * Recognize that food is needed for animals to grow. |

#### HS-LS2-4

*Using a graphical representation, identify the changes in the amount of matter or energy as it travels through an energy pyramid or food web.*

Table 2. HS-LS2-4, FKSA and EU

| **Connector Component** | **Definition** | **Students Will Be Able To…** |
| --- | --- | --- |
| FKSA | * Ability to identify using a graphical representation the changes in the amount of matter as it travels through an energy pyramid or food web. * Ability to identify using a graphical representation the changes in the amount of energy as it travels through an energy pyramid or food web. | Recognize that energy or matter decreases when moving to higher levels in an energy pyramid or food web. |
| EU | Recognize that there are generally fewer organisms at higher levels of an energy pyramid or food web (e.g., a graphical representation) than at lower levels. | Recognize that there are fewer organisms at higher levels in an energy pyramid, food chain, or food web. |

#### HS-LS3-2

*Identify a model showing evidence that parents and offspring may have different traits.*

Table 3. HS-LS3-2, FKSA and EU

| **Connector Component** | **Definition** | **Students Will Be Able To…** |
| --- | --- | --- |
| FKSA | Identify examples of offspring who have different combinations of traits inherited from their parents. | * Identify offspring with combinations of traits different from those of their parents. |
| EU | Identify traits in offspring that are different from those of the parents. | * Identify offspring with traits different from those of their parents. |

#### HS-LS4-6

*Analyze data to determine a potential solution to mitigate adverse impacts of human activity on biodiversity.*

Table 4. HS-LS4-6, FKSA and EU

| **Connector Component** | **Definition** | **Students Will Be Able To…** |
| --- | --- | --- |
| FKSA | Ability to look at data and determine that there is a solution to mitigate adverse impacts of human activity on biodiversity. | Recognize examples in which a population of organisms is reduced as a result of human activity.  Identify data that support the claim that a human activity increased biodiversity. |
| EU | Recognize that human activities can affect biodiversity. | * Recognize examples of human activities that support an increase in biodiversity. |

### Physical Sciences Connectors

#### HS-PS3-5

*Identify a model (e.g., drawing, diagram) that shows the cause and effect relationships between forces produced by electric or magnetic fields.*

Table 5. HS-PS3-5, FKSA and EU

| **Connector Component** | **Definition** | **Students Will Be Able To…** |
| --- | --- | --- |
| FKSA | * Identify a model (e.g., drawing, diagram) that shows the cause and effect relationships between forces produced by electric fields. * Identify a model (e.g., drawing, diagram) that shows the cause and effect relationships between forces produced by magnetic fields. | * Recognize that opposite electrical charges attract. * Recognize that similar electrical charges repel. * Identify an effect produced by an electrical field. * Identify an effect produced by a magnetic field. * Recognize why an object will be attracted or repelled. |
| EU | * Identify electric and magnetic forces that attract or repulse. | * Recognize that opposite magnetic poles attract. * Recognize that similar magnetic poles repel. |

#### HS-PS4-5

*Describe how a device operates using the principles of wave behavior by identifying steps in a model that show how a device uses waves to transmit and capture information and transmit energy.*

Table 6. HS-PS4-5, FKSA and EU

| **Connector Component** | **Definition** | **Students Will Be Able To…** |
| --- | --- | --- |
| FKSA | Ability to describe how a device operates using the principles of wave behavior by identifying steps in a model that show how a system uses waves to transmit and receive information. | * Identify steps in models in which devices use waves to transmit or capture information. * Recognize that light, sound, and energy are transmitted in waves. |
| EU | Identify common devices that use light or sound waves to transmit information. | * Identify devices which use light or sound waves to transmit information. |

### Earth and Space Sciences Connectors

#### HS-ESS2-3

*Use a model of Earth to identify the motion of the mantle and its plates occurs primarily through thermal convection, which is primarily driven by radioactive decay within Earth’s interior.*

Table 7. HS-ESS2-3, FKSA and EU

| **Connector Component** | **Definition** | **Students Will Be Able To…** |
| --- | --- | --- |
| FKSA | Ability to use a model to identify that the motions of the mantle and its plates occur primarily through thermal convection.  Ability to identify Earth’s core as the primary source of the heat that drives mantle convection by using a model. | * Identify thermal convection as the cause of the movement of tectonic plates. * Recognize Earth’s core is the primary source of heat that drives mantle convection. |
| EU | Use a model of Earth to identify the inner core, the outer core, the mantle, and the crust. | * Identify the inner core of Earth. * Identify the outer core of Earth. * Identify the mantle of Earth. * Identify the crust of Earth. |

#### HS-ESS3-3

*Compare models to determine the effects of a conservation strategy to manage natural resources and to sustain human society and plant and animal life.*

Table 8. HS-ESS3-3, FKSA and EU

| **Connector Component** | **Definition** | **Students Will Be Able To…** |
| --- | --- | --- |
| FKSA | Ability to identify effects of a conservation strategy to manage natural resources and to sustain human society and plant and animal life. | * Recognize the effects of conservation strategies. * Identify appropriate conservation strategies for environmental challenges. |
| EU | Identify human activities that result in positive or negative impacts on land, ocean, atmosphere, or biosphere resources. | * Identify positive environmental impacts due to human activities. * Identify negative environmental impacts due to human activities. |

## Testing Planner for Form 4

Use the planner in table 9 to aid in scheduling testing for your student(s) based on when the related content will be taught.

Test Examiner:

School:

Grade:

Table 9. 2023–24 CAA for Science Grade High School Testing Planner

| **Associated Science Connectors** | **Date(s) Related Instructional Content Will Be Taught** | **Scheduled Testing Date(s)** |
| --- | --- | --- |
| Life Sciences A:  HS-LS2-2  HS-LS4-6 | Add date(s) here: | Add date(s) here: |
| Life Sciences B:  HS-LS1-6  HS-LS3-2 | Add date(s) here: | Add date(s) here: |
| Physical Sciences:  HS-PS3-5  HS-PS4-5 | Add date(s) here: | Add date(s) here: |
| Earth and Space Sciences:  HS-ESS2-3  HS-ESS3-3 | Add date(s) here: | Add date(s) here: |