

and other content standards and as the principle standards during Designated ELD, see Chapter 2.

Snapshot 4.3 Designated ELD Connected to Science in Grade Two

In science, Mr. Chen is teaching his students about interdependent relationships in ecosystems. The class has planted different kinds of plants in the school garden and are now determining which kinds of insects are beneficial or detrimental to the plants and why, including the role of pollinating insects. The children engage in collaborative discussions about the informational texts they read on the topic, the multimedia they view, and what they observe in the garden and record in their science journals.

During designated ELD, Mr. Chen works with his EL students at the Bridging level of English language proficiency. He facilitates a discussion about the language used in the science informational texts the class is reading and the language needed to engage in science tasks, such as observing insects in the garden and then discussing the observations or recording them in writing. This language includes domain-specific vocabulary (e.g., *beneficial insects, pollinators, pests*), general academic vocabulary (e.g., *devour, gather*), and adverbials, such as prepositional phrases (e.g. *with its proboscis, underneath the leaf, on the stem*). He highlights some of the language patterns in the informational texts students are reading (e.g., *most aphids, some aphids, many aphids*), as well as some complex sentences with long noun phrases that may be unfamiliar to students (e.g., *As they feed in dense groups on the stems of plants, aphids transmit diseases. Whereas the caterpillars of most butterflies are harmless, moth caterpillars cause an enormous amount of damage.*). He guides the students to “unpack” the meanings in these phrases and sentences through lively discussions.

Mr. Chen strategically selects the language from the texts that he will focus on in instruction, and he also points out to students that this language is a model for students to draw upon when they write about or discuss the science content. He structures opportunities for the students to practice using the new language in collaborative conversations and in writing. For example, he asks them to provide rich oral descriptions of the characteristics and behavior of the caterpillars and butterflies they have been observing, using their science journals and books they have at their tables. To support their descriptions, he asks them to draw a detailed picture of one insect and then shows them a chart where he has written the words *structure* in one column and *functions* in another. The class briefly generates some ways to describe the physical structures of insects (e.g., head, thorax, abdomen) and functions (to sense and eat....to move and fly....to hold organs to survive or reproduce) of these structures. He writes these brainstormed phrases and words on a chart for students to use as they label and discuss their drawings.

He asks the students to engage in a partner discussion to first describe the characteristic structures and function for behavior of the insects and then to discuss how the insects are beneficial or detrimental to the plants and why, using evidence from their science journals. He prompts them to use a chart with reminders for effectively contributing to conversations (e.g., take turns, ask good questions,

give good feedback, add important information, build on what your partner says). Following their collaborative conversations, Mr. Chen asks the students to work together to write a concise explanation that captures their discussion and to use precise language (by expanding their ideas with adjectives or prepositional phrases and structuring their sentences by combining ideas, for example). He asks them to first discuss with their partners what they will write, and he tells them that they must both write and write the same thing. This requires the students to negotiate and justify their ideas, which, Mr. Chen observes, supports them to clarify their thinking.

When he reviews the students' writing, he uses a guide based on the CA ELD Standards and tailored to the writing goals of this unit of study, in order to gain a better understanding of which language resources students are "taking up" and feeling confident about using and which language resources he needs to focus on more intensively.

Primary CA ELD Standards addressed in Designated ELD: ELD.2.1, 4, 6, 10, 12; ELD.PII.2.3-7

CA CCSS for ELA/Literacy: SL.2.1, L.2.6; W.2.2, 4

Related Next Generation Science Standards:

2-LS2-2A (Interdependent relationships in ecosystems)