Accessible Playground
Learning Standards

A Note on Language

This unit promotes the idea that language instruction is necessarily embedded in any content area subjects and must be visible and explicit to all students. The purpose of this unit is to help the students develop the academic language through content-specific vocabulary and the Discourse Moves drawn from the WIDA research on Doing and Talking Math and Science (http://stem4els.wceruw.org/).

The embedded language development of this unit centers around three Key Uses of Academic Language:

- DISCUSS by taking part in collaborative interactions
- EXPLAIN by using evidence-based communication
- ARGUE by making a claim and supporting it with reasons and evidence

By the end of this unit, the students will learn how to communicate information, ideas, and concepts necessary for academic success in the content of English language arts, engineering, and math. They will also be able to communicate that a situation that people want to change or create can be approached as a problem to be solved through engineering.

Specific Standards

Speaking and Listening

- *CCSS.ELA-LITERACY.SL.2.1:* Participate in collaborative conversations with diverse partners about *grade 2 topics and texts* with peers and adults in small and larger groups.
- *CCSS.ELA-LITERACY.SL.2.2:* Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
- *CCSS.ELA-LITERACY.SL.2.3:* Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.
- *CCSS.ELA-LITERACY.SL.2.4:* Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences.
- *CCSS.ELA-LITERACY.SL.2.6:* Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification.

Reading

- *CCSS.ELA-LITERACY.RI.2.1:* Ask and answer such questions as *who, what, where, when, why*, and *how* to demonstrate understanding of key details in a text.
- *CCSS.ELA-LITERACY.RI.2.7:* Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.

Writing

- *CCSS.ELA-LITERACY.W.2.1:* Write opinion pieces in which they introduce the topic or book they are writing about, state an opinion, supply reasons that support the opinion, use linking words (e.g., *because*, *and*, *also*) to connect opinion and reasons, and provide a concluding statement or section.
- *CCSS.ELA-LITERACY.W.2.2:* Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.
- *CCSS.ELA-LITERACY.W.2.6:* With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.

Mathematics

- *CCSS.MATH.CONTENT.2.MD.A.1:* Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
- *CCSS.MATH.CONTENT.2.MD.A.3:* Estimate lengths using units of inches, feet, centimeters, and meters.
- *CCSS.MATH.CONTENT.2.G.A.1:* Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.

Science and Engineering Standards

- *ETS1.A: Defining and Delimiting Engineering Problems:* A situation that people want to change or create can be approached as a problem to be solved through engineering.(K-2-ETS1-1), asking questions, making observations, and gathering information are helpful in thinking about problems (K-2-ETS1-1), before beginning to design a solution, it is important to clearly understand the problem. (K-2-ETS1-1)
- *ETS1.B: Developing Possible Solutions:* Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people. (K-2-ETS1-2)
- *ETS1.C: Optimizing the Design Solution:* Because there is always more than one possible solution to a problem, it is useful to compare and test designs. (K-2-ETS1-3)