Lesson 2 Standards

Science (NGSS - Next Generation Science Standards):

1. **K-PS3-1 (Energy)** – Use evidence to construct an explanation for how plants and animals depend on the environment to survive. Plants need sunlight, water, and air to live and grow.

2. **1-LS1-1 (Structure and Function)** – Use materials to design and build a structure that will reduce the warming effect of sunlight on an area.

3. **2-LS4-1 (Biological Evolution: Unity and Diversity)** – Life forms share common characteristics but change over time to survive in different environments.

4. **3-LS4-3 (Adaptation)** – Construct an argument with evidence that in a particular environment, some organisms survive well, some survive less well, and some cannot survive at all.

5. **5-ESS3-1 (Earth and Human Activity)** – Human activities, such as those related to resource use, affect the Earth's systems, including ecosystems and biodiversity.

Language Arts (Common Core State Standards - CCSS for ELA):

1. **CCSS.ELA-LITERACY.SL.K.1, SL.1.1, SL.2.1** – Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups.

2. **CCSS.ELA-LITERACY.SL.4.1, SL.5.1** – Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 and 5 topics and texts, building on others' ideas and expressing their own clearly.

3. **CCSS.ELA-LITERACY.RI.K-5.4** – Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 4 topic or subject area.

4. **CCSS.ELA-LITERACY.W.K-5.8** – Gather information from provided sources to answer a question.

Mathematics (CCSS for Math):

1. **CCSS.MATH.CONTENT.K.MD.A.1** – Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.

2. **CCSS.MATH.CONTENT.3.MD.B.4** – Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object.

Social Emotional Learning (SEL):

- **Self-awareness and self-management** – This standard typically involves recognizing and managing one's emotions, thoughts, and behaviors. It includes skills like managing stress and setting personal goals.

- **Social awareness** – This involves recognizing and understanding the emotions and perspectives of others.

- **Responsible decision-making** – This focuses on making ethical, constructive choices about personal and social behavior.

Key Concepts Addressed in the Standards:

- **Adaptations** – Plants have specialized structures or behaviors that help them survive in difficult conditions, such as strong roots to anchor in sand or water-conserving features for dry environments.

- **Environmental Challenges** – Harsh sunlight, strong winds, salty seawater, and shifting sand are examples of challenges that plants face, making them perfect candidates for learning about resilience and survival strategies.

- **Dune Ecosystems** – Dune plants are essential in maintaining ecosystem stability, tying into broader environmental science and sustainability concepts.