Uniting Concept: Evidence, Models, and Explanation; Constancy, Change, and Measurement; Form and Function

Big Idea: All organisms have a life cycle. Each cycle stage has special characteristics and needs.

Sub Concept I: The caterpillar is the larval stage in the butterfly's life cycle.

Sub Concept II: The chrysalis is the pupal stage of the butterfly's life cycle.

Sub Concept III: The adult butterfly has unique physical characteristics and needs.

Sub Concept IV: All living things have life cycles.

Description of Assessment: L7 draw a caterpillar, L13 using our data, end-of-unit assessment, review of student work (e.g. science notebook)

Science Process Skills: Observing, Questioning, Comparing, Communicating, Predicting, and Applying

National Science Standards: K-4 Life Science; Science & Technology; Science in Personal and Social Perspectives; History & Nature of Science; Science as Inquiry

California Science Standards: 2: Life Science 2a-d
**Unifying Concept:** Systems, Order, and Organization; Evidence, Models, and Explanation; Constancy, Change, and Measurement; Form and Function

**Big Idea:** Soil is made up of different components each of which has unique identifiable properties. Many factors, including type of soil, affect plant growth.

**Sub Concept I:** Soil components have unique properties that can be identified using simple tests.

**Description of Assessment:** Pre-unit lists (Lesson 1), post-unit: revisit lists from Lesson 1, additional assessments suggested at end of guide; review of student work (e.g. science notebook)

**Science Process Skills:** Observing, Questioning, Comparing, Communicating, Predicting, and Inferring

**National Science Standards:** K-4 Life Science; Earth/Space Science; Physical Science; Science & Technology; History and Nature of Science; Science as Inquiry

**California Science Standards:** 2: Earth Science 3c; Investigation and Experimentation 4b

VIPS 2000
Sink or Float Storyline
Delta Second Grade

Unifying Concept: Evidence, Models, and Explanation; Constancy, Change, and Measurement; Form and Function
Big Idea: Buoyancy is both the tendency of an object to float in a liquid as well as the upward force a liquid exerts on an object placed in it.

Sub Concept I: The type of material an object is made of is one of the factors that determines whether it will sink or float.

Sub Concept II: Different liquids have different degrees of buoyancy.

Sub Concept III: Changing the shape of clay (into a boat) affects its buoyancy.

Description of Assessment: End-of-unit assessment, hands-on task, picture interpretation, and verbal question; review of student work (e.g. science notebook)

Science Process Skills: Observing, Questioning, Comparing, Communicating, Predicting, and Applying

National Science Standards: K-4 Physical Science; Science & Technology; History & Nature of Science; Science as Inquiry

California Science Standards: 2: Physical Science 1a, b; Investigation and Experimentation 4a, c, d, g

VIPS 2000
Unifying Concept: Systems, Order, and Organization; Evidence, Models, and Explanation; Constancy, Change, and Measurement; Form and Function

Big Idea: All plants have a life cycle. Each part of a plant plays a special role in its development.

Sub Concept I: There is diversity of a plant life all around us.

Sub Concept II: Seeds are the part of the flowering plant that can grow into new plants.

Sub Concept III: The bean plant changes as it grows.

Sub Concept IV: Several factors affect plant growth — light, water, space, temperature, and growing medium (soil).

Description of Assessment: Introductory questionnaire, embedded assessment (LE6) germination, final assessment and final questionnaire, review of student work (e.g. science notebook)

Science Process Skills: Observing, Questioning, Comparing, Communicating, Predicting, and Inferring

National Science Standards: K-4 Life Science; History and Nature of Science; Science as Inquiry

California Science Standards: 2: Life Science 2 a, e, f; Investigation and Experimentation 4a-g

*optional VIPS 2000