

Microworlds Storyline

STC Fourth Grade

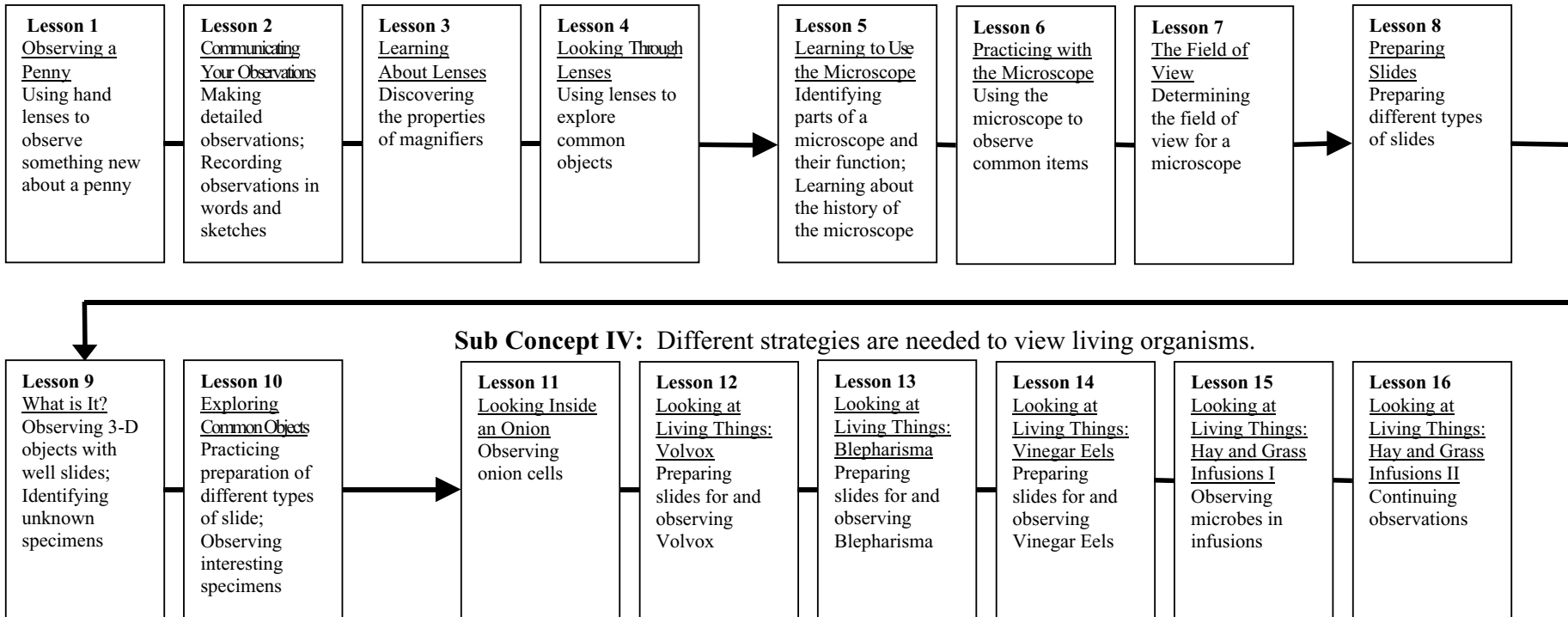
Unifying Concept: Systems, Order, and Organization; Evidence, Models, and Explanation; Form and Function

Big Idea: Magnifiers are tools that extend the sense of sight if they are used effectively. Magnifiers enable us to see microscopic organisms and other matter.

Sub Concept I: Observation gives us relevant information about an object. A magnifier allows us to observe greater detail.

Sub Concept II: A microscope is a magnifier. Each microscope part has a specific function.

Sub Concept III: Different strategies are needed to view items of differing sizes and shapes.



Sub Concept IV: Different strategies are needed to view living organisms.

Description of Assessment: Post-unit assessment, includes revisiting list from Lesson 1, student self-evaluation, and evaluating student products (e.g. science notebooks)

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

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

California Science Standards: 4: Life Science 3d

Solar System Storyline

Delta Fourth Grade

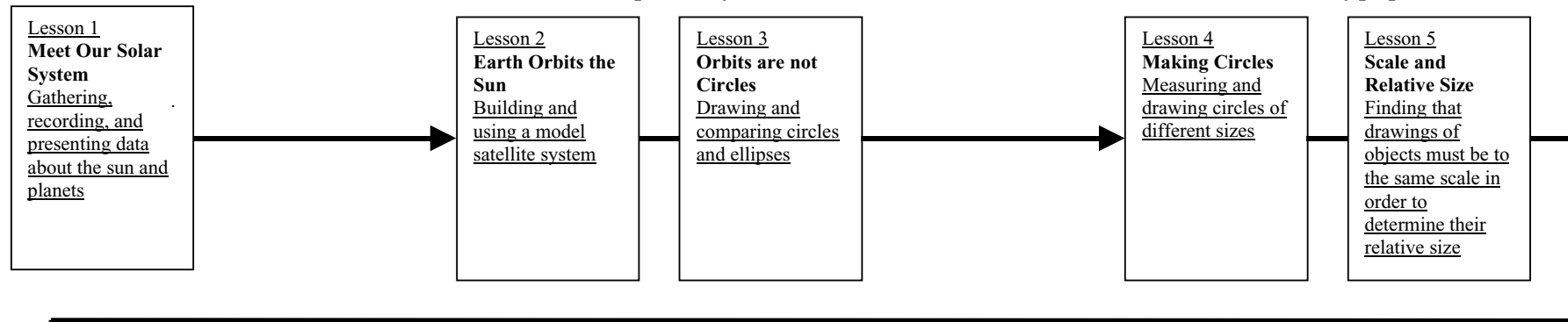
Unifying Concept: Systems, Order, and Organization; Evidence, Models, and Explanation; Constancy, Change, and Measurement; Evolution and Equilibrium

Big Idea: Our solar system includes our sun (a star) and all its satellites — planets, moons, asteroids, meteoroids, and comets.

Sub Concept I: A system is a group of items that form a united whole.

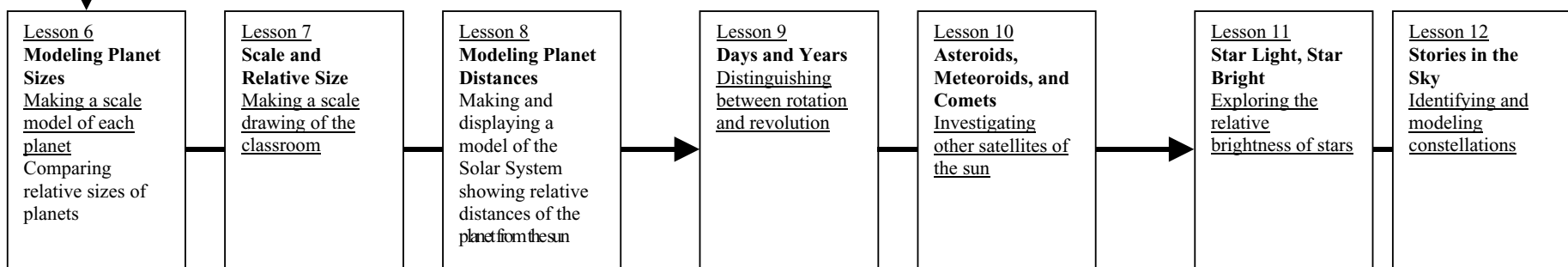
Sub Concept II: Gravitational force between the sun and its satellites creates planetary orbits.

Sub Concept III: Models represent large objects and/or distances for study purposes.



Sub Concept IV: Along with planets, asteroids, meteoroids, and comets travel around the sun.

Sub Concept V: There are over 100 stars in the Milky Way Galaxy.



Description of Assessment: End-of-unit assessment includes a hands-on task, picture interpretation, and verbal problem solving; review student work (e.g. science notebooks)

Science Process Skills: Observing, Questioning, Comparing, Communicating, and Ordering

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

California Science Standards: 0

VIPS 2000

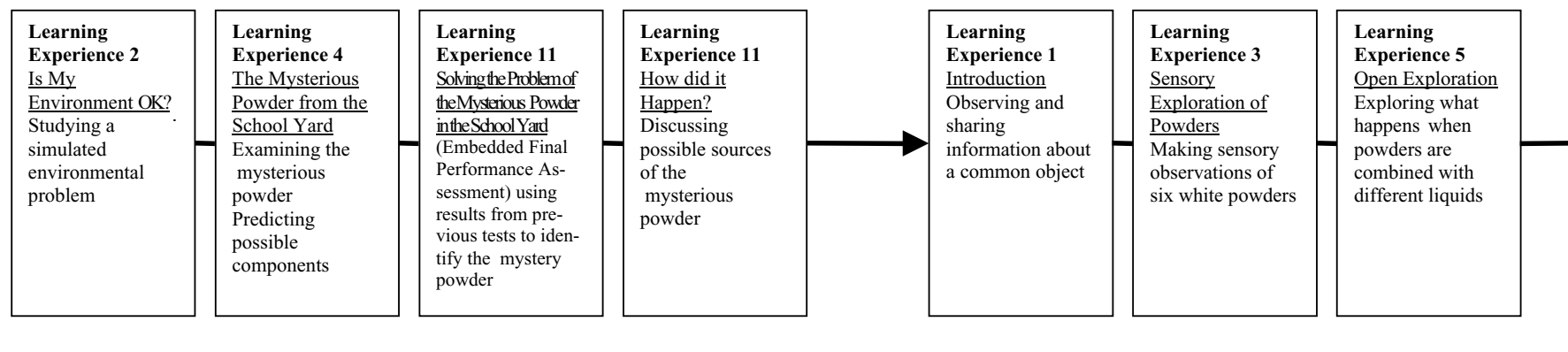
The Mysterious Powder Storyline Insights Fourth Grade

Unifying Concept: Evidence, Models, and Explanation; Constancy, Change, and Measurement

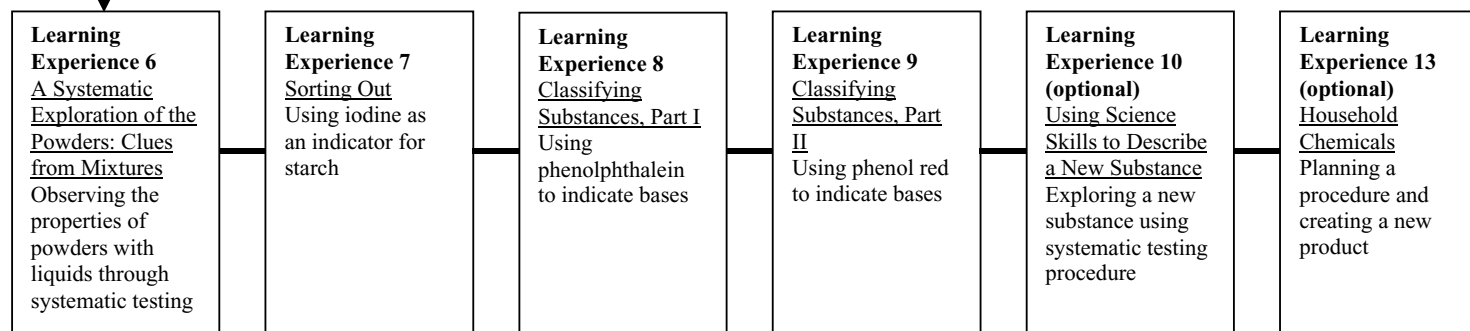
Big Idea: Substances have specific chemical and physical properties. Knowledge about the properties can be used to solve problems.

Sub Concept I: With the right tools and tests, we can solve an environmental problem.

Sub Concept II: We use questioning, investigating, and exploring with our senses to find out about objects.



Sub Concept III: Systematic testing, as a fair test, provides useful and detailed data.



Description of Assessment: Introductory questionnaire, embedded assessment (LE6), embedded final performance assessment (LE11), final questionnaire, evaluating student work (e.g. science notebooks)

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

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

California Science Standards: 4: Investigation and Experimentation 6c-f

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Changes of State Storyline*

Insights Fourth Grade

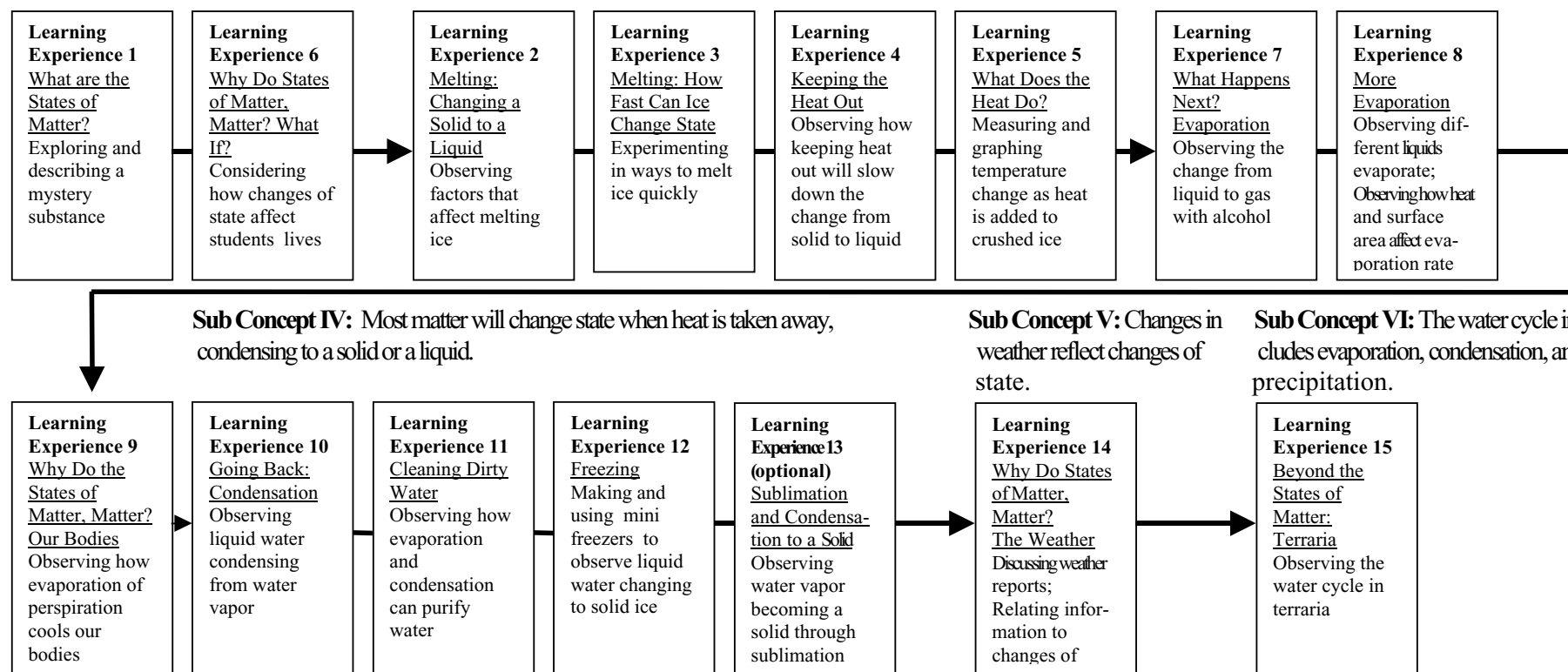
Unifying Concept: Systems, Order, and Organization; Evidence, Models, and Explanation; Constancy, Change, and Measurement; Evolution and Equilibrium

Big Idea: There are three states of matter — solid, liquid, and gas. Changes of state occur by adding or taking away heat energy.

Sub Concept I: Solids, liquids, and gases have unique properties.

Sub Concept II: Adding heat energy can cause a solid to melt into a liquid.

Sub Concept III: Adding even more heat energy results in evaporation — the process of a liquid changing into a gas or vapor.



Description of Assessment: Introductory questionnaire, embedded assessment (LE11), embedded final assessment (LE15), final questionnaire, review student work (e.g. science notebooks)

Science Process Skills: Observing, Questioning, Comparing, Communicating, Ordering, Inferring, and Applying

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

California Science Standards: Investigation and Experimentation 6c-f

*optional VIPS 2000