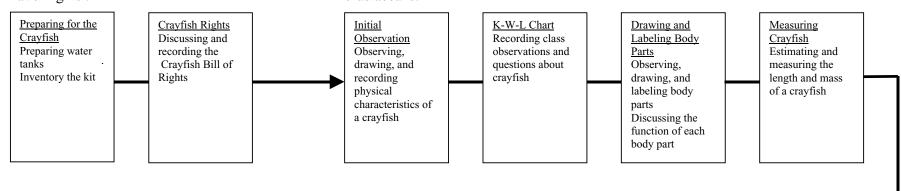
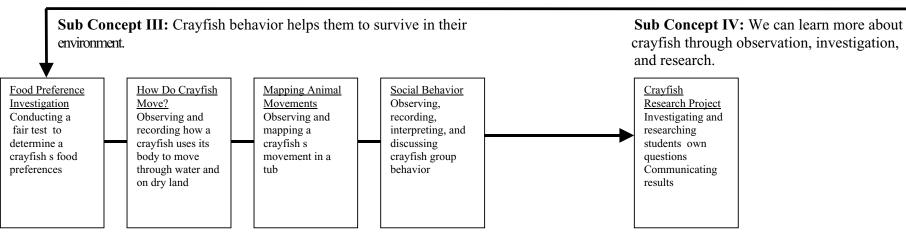
Crayfish Storyline* Fifth Grade

Unifying Concept: Systems, Order, Organization; Evidence, Models, and Explanation; Evolution and Equilibrium; Form and Function **Big Idea:** All organisms have a life cycle. Organisms have special characteristics, behaviors, and adaptations that enable them to survive in their environments.

Sub Concept I: Live animals in the classroom have rights.

Sub Concept II: Each crayfish is unique, although they share the characteristics of all crustaceans.





Description of Assessment: Suggestions include creating a concept map, evaluating the final research project, and evaluating other student work (e.g. science notebooks)

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

National Science Standards: 5-8 Life Science; History & Nature of Science; Science as Inquiry

California Science Standards: 5: Investigation & Experimentation 6b-e, g-l

Bones & Skeletons Storyline Insights Fifth Grade

Unifying Concept: Systems, Order, and Organization; Evidence, Models, and Explanation; Form and Function **Big Idea:** Bones and teeth in a skeletal system have specific structures and functions. **Sub Concept I:** An owl pellet contains the bones and fur from **Sub Concept II:** Major bone groups have specific functions. animals an owl has eaten. Learning Learning Learning Learning Learning Learning Learning Learning Experience 3 Experience 6 Experience 1 Experience 2 Experience 12 Experience 4 Experience 5 Experience 9 The Mysterious The Clues Mystery Bones Amateur **Human Bones** Major Bone Groups **Mystery Bone** Comparing Groups Object Investigating Observing and Zoologist Drawing Locating 6 Skeletons Observing and and sorting the recording the Constructing a human bones bone groups in **Identifying** Describing trying to contents of an characteristics skeleton from known to the human major bone similarities and owl pellet of one bone; groups from identify a owl pellet students; body; differences mystery Inferring its bones Discussing Determining owl pellet between animal object function what students bone group bones skeletons and want to learn function bone function Sub Concept III: Animal teeth and Sub Concept IV: Joints help different parts of the **Sub Concept V:** Bones are living jaws indicate the kinds of food they eat. body move. tissue. Learning Learning Learning Learning Learning Learning Learning Experience 7 Experience 8 Experience 10 Experience 12 Experience 14 Experience 11 Experience 13 Human Bones Teeth and Jaws Mystery Teeth Types of Joints Movement Chicken Wing Living Bone Revisited Classifying Classifying the Identifying Exploring the Dissection Observing the physical struc-(embedded human teeth: skull(s) of owl joints, their functions of Observing Using jaws and pellets movements, bones, muscles, bones, ligature of bones; assessment) Drawing teeth to classify and functions ligaments, and Giving ments. evidence that human bones animals as tendons muscles, and in the skeletal herbivore. tendons in a bones are system carnivore, or chicken wing living tissue omnivore Description of Assessment: Introductory questionnaire, embedded assessments (LE11), final assessment, final questionnaire and

performance assessment, evaluating student work (e.g. science notebooks)

Science Process Skills: Observing, Questioning, Comparing, Communicating, Interpreting, Relating, Inferring, and Predicting National Science Standards: 5-8 Life Science; Science in Personal and Social Perspectives; History and Nature of Science; Science as

California Science Standards: 5: Investigation and Experimentation 6a

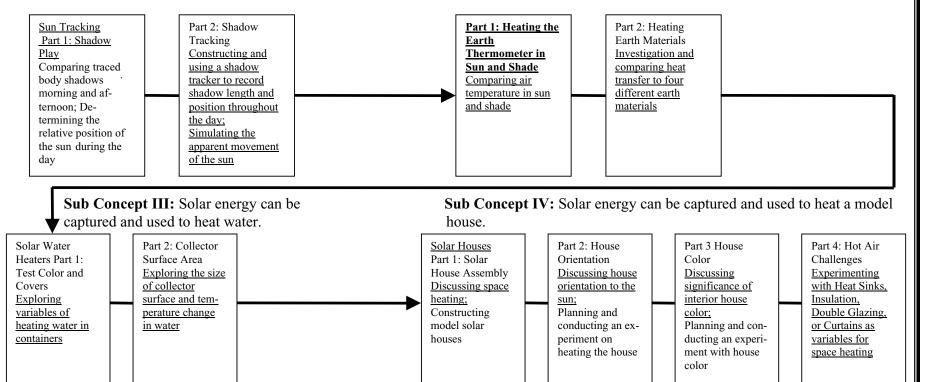
Solar Energy Storyline FOSS Fifth Grade

Unifying Concept: Evidence, Models, and Explanation; Constancy, Change, and Measurement; Evolution and Equilibrium; Form and Function

Big Idea: Solar energy is an alternative energy source. Solar energy can be transferred to materials. Factors influence the effectiveness of the transfer.

Sub Concept I: By observing shadows throughout the day, one can see the effects of the apparent motion of the sun around the earth.

Sub Concept II: The sun heats the Earth s atmosphere and earth materials.



Description of Assessment: End-of-unit assessment includes hands-on task, pictorial assessment, and reflective questions assessment, review student work (e.g. science notebooks)

Science Process Skills: Observing, Questioning, Comparing, Communicating, Organizing, and Relating

National Science Standards: 5-8 Earth/Space Science; Physical Science; Science and Technology; Science in Personal and Social

Perspectives; History & Nature of Science; Science as Inquiry

California Science Standards: 6: Physical Science 3a,d; Earth Science 4b; Investigation and Experimentation 7b-e

Circuits and Pathways Storyline Insights Fifth Grade

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

Big Idea: Electric current flows in a complete circuit — that is a continuous loop that connects the critical points of the battery or other power source.

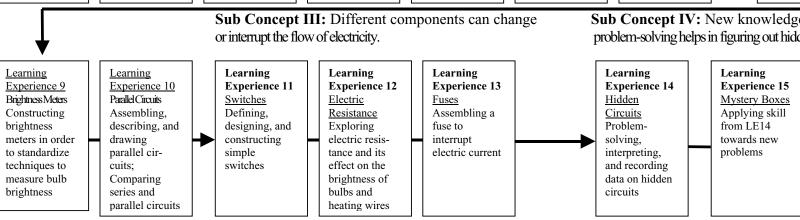
Sub Concept I: A circuit is a pathway along which electric current travels.

Learning Learning Learning Learning Learning Learning Learning Learning Experience 8 Experience 1 Experience 2 Experience 3 Experience 4 Experience 5 Experience 6 Experience 7 What Do We Circuits and Motors Lighting the Bulb What s Inside a Conductors and Predictions #1 Prediction #2 Series Circuits Nonconductors Predicting and (embedded Assembling, Already Exploring Assembling a Bulb? Know? Comparing and batteries and complete Observing the verifying assessment) describing, and Creating a motors; circuit to light critical contact classifying predictions of Drawing in drawing series K-W-L chart a bulb; points of a bulb materials that complete wires on a circuits; Observing the critical contact do or do not circuits Observing bulb on electricity Drawing diagram to brightness points for a complete conduct complete a circuits battery electricity circuit

> **Sub Concept IV:** New knowledge and systematic problem-solving helps in figuring out hidden circuits.

Sub Concept II: Two examples of circuits

are series and parallel.



Description of Assessment: Introductory questionnaire, embedded assessments (LE7 and LE14), final assessment and final questionnaire and performance assessment, evaluating student work (e.g. science notebooks)

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

National Science Standards: 5-8 Physical Science; Science and Technology; Science in Personal and Social Perspectives; History and Nature of Science; Science as Inquiry

California Science Standards: 5: Investigation and Experimentation 6b

Reading the Environment Storyline* Insights Fifth Grade

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

Big Idea: Our world is constantly changing. Our ability to recognize these changes and understand what causes them can provide us with valuable information about our environment.

Sub Concept I: Change is a constant process.

Learning
Experience 1
What is
Change?
Observing,
recording, and
discussing
change and
evidence of
change

Experience 2
What is
Evidence?
Inferring
causes of
change based
on evidence
and previous
experience

Learning
Experience 3
Evidence on
the Sidewalk
Observing
change and
evidence of
change at
school

Learning
Experience 4
The Change
Scavenger
Hunt
Looking for
evidence of
different kinds
of change at

school

Sub Concept II: Weathering and erosion are agents of natural (non-human) changes.

Learning
Experience 5
Non-Human
Causes of
Change
Finding
evidence of
change caused
by non-human
forces

minerals, rocks, and fossils.

Learning
Experience 6
Changes Over
Time
Setting up
demonstrations
of erosion and
weathering

Learning
Experience 11
More Evidence
of Geologic
Change
Observing and
recording
results from
LE6

Experience 12
Changing Rocks
Comparing
natural weathering and erosion with a
classroom simulation; Inferring
causes for the
weathering of
buildings

Sub Concept III: We can observe changes over time.

Learning
Experience 14
Rock to Sand
and Sand to
Soil
(embedded
assessment)
Observing how
sand and rock
fragments can
form soil

Learning
Experience 7
The Class
Sites
Observing
and recording changes
at an outdoor
site;
Predicting
changes

Learning
Experience 13
Backtothe Sites
Mapping
conditions at
the site;
Verifying L7
predictions
Making new
predictions

Learning
Experience 17
The Last Site
Visit
Observing and recording evidence of change;
Determining desirable changes
Discussing ways to influence change

Learning
Experience8
Geologists for a
Day Evidence
from
Neighborhood
Rocks
Observing,
describing,
categorizing, and
drawing neighborhood rocks

Learning
Experience9
What is
Geologic
Time?
Making a
time line

Experience 10
Geologist for
Another Day of
Rocks
Classifying
rocks
according to
how they were
formed

Sub Concept IV: Geologic change over time can result in the formation of

Learning

Experience 15
Evidence of
Geologic
Change Fossils
Learning how
fossils are
formed;
Simulating fos-

sil formation

Learning
Experience 16
Biography of a
Rock
Writing the
history of a
rock showing
changes over
time

Description of Assessment: Introductory questionnaire, embedded assessment (LE14), final assessment: final questionnaire and performance assessment, evaluating student work (e.g. science notebook)

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

National Science Standards: 5-8 Earth/Space Science; Physical Science; Science in Personal and Social Perspectives; History and Nature of Science; Science as Inquiry

California Science Standards: 5: Investigation and Experimentation 6a

*optional