

Overview Chart for Hands-on Activities – Quarter 4

Hands-on Activity	Student Objectives
31&32 Using a Thermometer <i>page 353</i>	<ul style="list-style-type: none"> • understand how to read the temperature scales on a thermometer calibrated in degrees Fahrenheit (°F) and degrees Celsius (°C) • measure and compare the temperatures of cold water and warm water • use the readings on thermometers left in sun and in shade to infer that the Sun is a source of heat on Earth • identify other sources of heat besides sunlight
33 What Is a Shadow? <i>page 365</i>	<ul style="list-style-type: none"> • observe and describe a shadow • operationally define <i>shadow</i> • identify the three things needed to produce a shadow
34 Shadow Drawings <i>page 373</i>	<ul style="list-style-type: none"> • learn the correct order of the three things necessary to produce a shadow • identify a silhouette • make silhouettes of their hands • compare their hand-silhouettes with their actual hands and note their similar shapes
35 What Makes a Shadow? <i>page 383</i>	<ul style="list-style-type: none"> • note that light passes through some objects and not others • predict whether certain objects will produce shadows or not • observe that objects produce light shadows, dark shadows, or no shadows, depending on how much light they allow to pass through them
36 Shadows Change Places <i>page 393</i>	<ul style="list-style-type: none"> • record the changes in the position of a shadow from morning to midday to afternoon • note changes in the Sun’s position in the sky during the course of a day • infer that shadow changes are caused by changes in the Sun’s position in the sky
37&38 Simple Circuits <i>page 405</i>	<ul style="list-style-type: none"> • discuss and define the parts of a circuit • construct simple circuits • test several arrangements of circuit elements
39 A Paper-Clip Switch <i>page 415</i>	<ul style="list-style-type: none"> • construct a switch and place it in a circuit • trace the path of electric current through the circuit • infer the practical importance of switches
40 Circuit Experiments <i>page 425</i>	<ul style="list-style-type: none"> • build a one-battery/one-bulb circuit and observe the brightness of the lighted bulb • build a two-battery/one-bulb circuit and compare the brightness of the lighted bulb with its brightness in the one-battery circuit • infer that the additional battery in the circuit increased the strength of the electric current flowing through the circuit

Process Skills	Vocabulary	Delta Science Reader
observe, use numbers, measure, compare, infer, generalize	temperature, thermometer	
observe, define based on observations, compare, infer	shade, shadow	<i>Sunshine and Shadows,</i> pp. 2–7
observe, generalize, compare	silhouette	<i>Sunshine and Shadows,</i> pp. 3, 4–7
observe, compare, predict, generalize		<i>Sunshine and Shadows,</i> pp. 3, 4–7
observe, predict, record data, compare, infer	Sun	<i>Sunshine and Shadows,</i> pp. 2–9
observe, experiment, predict, conclude	battery, circuit, closed circuit, electrical energy, electric current, electricity, open circuit, system	
build and use models, infer, communicate	switch	
observe, compare, infer	battery terminal	