

# CHECKLIST OF CA SCIENCE STANDARDS FOR KINDERGARTEN TREES

## **PURPOSE**

This checklist is

- A sequential listing of instructional activities through each module.
- A place to document teaching and coverage of CA standards.
- A correlation tool showing where each CA standard is addressed.

**Instructional sequence.** The Checklist displays the sequence of instruction as the module progresses through 1) active investigation, 2) reading, and 3) assessment. The chart is broken out by investigation, part, and session number.

Most kindergarten sessions start with active investigation, which may include teacher demonstration, vocabulary introduction, hands-on activity often done in centers, class discussion, teacher explanation, and vocabulary reinforcement. At certain times in an investigation, students read (or are read to) and discuss the reading as a class. Students respond in words or drawings in their science notebooks to a focused prompt about the investigation. FOSS Teacher Guide and *Science Resources* book pages where CA standards are addressed are referenced through the instructional sequence.

**Documentation of teaching and coverage.** Teachers can keep track of the class's progress through the module by recording the date of each instruction session. The completed Checklist can serve as a planning tool for teaching the module a second time.

**Correlation with CA standards.** The Checklist allows teachers to identify all the places in the Teacher Guide and *Science Resources* book where any specific CA standard is addressed. Teachers can quickly find the page references for any point in the instruction. The Checklist provides a table of evidence showing where the CA standards are addressed through multiple exposures and with a minimum of 20-25% hands-on activities integrated cohesively into the instruction.



## FOSS AND CALIFORNIA STANDARDS

The **Trees Module** supports the following Life Sciences Content Standards for kindergarten. \*

### LIFE SCIENCES

**LS2** *Different types of plants and animals inhabit the earth. As a basis for understanding this concept:*

- LS2a *Students know* how to observe and describe similarities and differences in the appearance and behavior of plants and animals (e.g., seed-bearing plants, birds, fish, insects).
- LS2c *Students know* how to identify major structures of common plants and animals (e.g., stems, leaves, roots, arms, wings, legs).

The **Trees Module** supports the following Earth Sciences Content Standards for kindergarten. \*

### EARTH SCIENCES

**ES3** *Earth is composed of land, air, and water. As a basis for understanding this concept:*

- ES3a *Students know* characteristics of mountains, rivers, oceans, valleys, deserts, and local landforms.
- ES3b *Students know* changes in weather occur from day to day and across seasons, affecting Earth and its inhabitants.
- ES3c *Students know* how to identify resources from Earth that are used in everyday life and understand that many resources can be conserved.

The **Trees Module** supports the following Investigation and Experimentation Content Standards for Kindergarten. \*

### INVESTIGATION AND EXPERIMENTATION

**I&E4** *Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:*

- I&E4a Observe common objects by using the five senses.
- I&E4b Describe the properties of common objects.
- I&E4d Compare and sort common objects by one physical attribute (e.g., color, shape, texture, size, weight).
- I&E4e Communicate observations orally and through drawings.

\* *Science Content Standards for California Public Schools: Kindergarten through Grade Twelve* (Sacramento: California Department of Education, 2000).



## Checklist of CA Science Standards for Trees Investigation 1

Content Standard Focus	Investigation 1: Fall Trees	Teacher Guide (Science Resources) pages
<b>LS2a, LS2c, I&amp;E4a, I&amp;E4b, I&amp;E4e</b>	<b>Part 1: Looking At Schoolyard Trees—1 session</b>	<b>43-51</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher introduction with vocabulary instruction (observe)	48
	Teacher-led class discussion (trees) and explanation (drawing)	48
	Pre-assessment (drawing trees)	48-49
	Center hands-on observing outdoor trees with guiding questions	49
	Teacher-led center discussion and vocabulary instruction	49-50
	Teacher demonstration with tree posters	50
	Application of content with students labeling posters	50
	Teacher led discussion of how people use trees as resources	50
	Writing and drawing in science notebook	51
	Vocabulary and content review	51
	Writing in science notebook	51
<b>LS2a</b>	<b>Part 2: A Tree Comes To Class—1 session</b>	<b>52-59</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher demonstration and discussion with class tree	57
	Teacher-led class discussion of care and handling of tree	57
	Teacher demonstration of beginning class scrapbook	57
	Vocabulary instruction (communicate)	58
	Teacher-led class discussion about tree-planting ceremony	58
	Vocabulary and content review	59
	Writing in science notebook	59
<b>LS2a, LS2c, I&amp;E4b, I&amp;E4e</b>	<b>Part 3: Tree Puzzles—1 session</b>	<b>60-63</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher introduction through vocabulary instruction (compare)	62
	Teacher-led class discussion (review pine and oak posters)	62
	Teacher demonstration (puzzle pieces and frame)	62-63
	Center hands-on with puzzles	63
	Vocabulary review	63
<b>LS2a, LS2c, I&amp;E4b, I&amp;E4e</b>	<b>Part 4: Tree-Silhouette Cards—1 session</b>	<b>64-66</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher demonstration with cards (tree shapes, silhouettes)	66
	Center hands-on with guiding questions and new vocabulary	66
	Writing in science notebook	66



**Checklist of CA Science Standards for Trees Investigation 1 (cont.)**

<b>Content Standard Focus</b>	<b>Investigation 1: Fall Trees (continued)</b>	<b>Teacher Guide (Science Resources) pages</b>
<b>LS2c, I&amp;E4e</b>	<b>Part 5: Tree-Part Cards—1 session</b>	<b>67-69</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher discussion (review parts of tree)	69
	Center hands-on with tree-part cards and guiding questions	69
	Vocabulary review	69
<b>LS2c, I&amp;E4e</b>	<b>Part 6: Tree-Part Booklets—1 session</b>	<b>70-72</b>
DATE OF INSTRUCTION	SESSION 1	
	Center hands-on with tree-part booklets and guiding questions	72
	Vocabulary and content review	72
	Writing in science notebook	72
<b>LS2a, LS2c, I&amp;E4a, I&amp;E4b, I&amp;E4e</b>	<b>Part 7: Adopt Schoolyard Trees—1 session</b>	<b>73-77</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher explanation (adopt a schoolyard tree)	75
	Center hands-on outdoor mini-field trip with guiding questions	75-76
	Class hands-on (adding to scrapbook)	76
	Vocabulary and content review	77
<b>LS2c</b>	<b>Part 8: Plant the Class Tree—1 session</b>	<b>78-81</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher-led class discussion to plan tree-planting ceremony	80
	Class hands-on (planting tree, taking photos)	80
	Vocabulary and content review, and answering questions on chart	81



## Checklist of CA Science Standards for Trees Investigation 2

Content Standard Focus	Investigation 2: Leaves	Teacher Guide ( <i>Science Resources</i> ) pages
<b>LS2a, LS2c, I&amp;E4a, I&amp;E4e</b>	<b>Part 1: Leaf Walk—1 session</b>	<b>90-94</b>
DATE OF INSTRUCTION	SESSION 1	
	Read nonfiction trade book ( <i>How Do We Learn?</i> )	92
	Center hands-on mini-field trip to visit trees, collect leaves with guiding questions	92
	Center hands-on with matching, pressing, labeling leaves, and vocabulary instruction (size, shape, edge, tip, smell)	93
	Vocabulary and content review	94
	Writing in science notebook	94
<b>LS2a, I&amp;E4b, I&amp;E4d</b>	<b>Part 2: Leaf Shapes—1 session</b>	<b>95-100</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher-led class discussion and demonstration (leaf shapes)	98-99
	Center hands-on with leaf shapes and geometric shapes	99
	Vocabulary and content review	100
	Writing in science notebook	100
<b>LS2a, ES3a, I&amp;E4d, I&amp;E4e</b>	<b>Part 3: Comparing Leaves—2 sessions</b>	<b>101-106 (3-13)</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher demonstration and explanation (review “compare” and explain outdoor leaf hunt)	103
	Class hands-on outdoors with leaf hunt cards and guiding questions	103
	Vocabulary and content review	104
DATE OF INSTRUCTION	SESSION 2	
	Student reading with discussion questions	105 (3-13)
	Class hands-on with landform cards and writing in science-notebooks	106
	Center hands-on with sorting landform cards	106
	Writing in science notebook	106
<b>LS2a, I&amp;E4d</b>	<b>Part 4: Leaf Silhouettes and Outlines—2 sessions</b>	<b>107-109</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher demonstration (leaf silhouettes and outlines)	109
	Center hands-on with leaf silhouettes and outlines	109



**Checklist of CA Science Standards for Trees Investigation 2 (cont.)**

<b>Content Standard Focus</b>	<b>Investigation 2: Leaves (continued)</b>	<b>Teacher Guide (<i>Science Resources</i>) pages</b>
<b><i>LS2a, I&amp;E4d, I&amp;E4e</i></b>	<b>Part 5: <i>Leaf-Silhouette Games</i>—1 session</b>	<b>110-113</b>
DATE OF INSTRUCTION	SESSION 1	
	Center hands-on with cards and reference strip	112
	Vocabulary and content review	113
	Writing in science notebook	113
<b><i>LS2a, I&amp;E4d, I&amp;E4e</i></b>	<b>Part 6: <i>Leaf Books</i>—2 sessions</b>	<b>114-118</b>
DATE OF INSTRUCTION	SESSION 1	
	Center hands-on with pressed leaves and leaf books	116
	Writing in leaf books	116
DATE OF INSTRUCTION	SESSION 2	
	Read fiction trade book ( <i>Our Very Own Tree</i> ) with discussion questions	117-118



### Checklist of CA Science Standards for Trees Investigation 3

Content Standard Focus	Investigation 3: Trees through The Seasons	Teacher Guide (Science Resources) pages
<b>LS2c, I&amp;E4a, I&amp;E4b, I&amp;E4e</b>	<b>Part 1: What Comes From a Fall Tree?—1 session</b>	<b>132-134</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher demonstration (outdoor hunt for things under trees)	134
	Center hands-on with hunt, sorting things and guiding questions	134
<b>LS2c, ES3c, I&amp;E4a</b>	<b>Part 2: Food From Trees—1 session</b>	<b>135-137</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher-led class discussion (review senses, seeds) and demonstration (observing insides of fruits and nuts)	137
	Center hands-on with guiding questions and new vocabulary	137
<b>LS2c, ES3b, I&amp;E4e</b>	<b>Part 3: Visiting Adopted Trees in Fall—2 sessions</b>	<b>138-143 (14-17, 18-21, 22-24)</b>
DATE OF INSTRUCTION	SESSION 1	
	Center hands-on with observing trees, drawing, and adding to scrapbook with new vocabulary	140
	Vocabulary and content review	141
	Writing in science notebook	141
DATE OF INSTRUCTION	SESSION 2	
	Student readings with discussion questions	142 (14-17, 18-21, 22-24)
	Teacher-led class discussion and demonstration (begin weather calendar)	143
<b>LS2c, ES3b, I&amp;E4e</b>	<b>Part 4: Winter Evergreen Hunt—1 session</b>	<b>144-147</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher-led class discussion and explanation (winter, evergreen)	146
	Center hands-on with evergreen trees, leaves, needles, scales, and guiding questions and new vocabulary	146-147
<b>LS2c, ES3b</b>	<b>Part 5: Winter Twigs—1 session</b>	<b>148-151</b>
DATE OF INSTRUCTION	SESSION 1	
	Center hands-on with guiding questions, explanation (winter twigs, buds, scars, growth ring) and add to scrapbook	150-151
<b>LS2c, ES3b, I&amp;E4e</b>	<b>Part 6: Visiting Adopted Trees in Winter—1 session</b>	<b>152-156</b>
DATE OF INSTRUCTION	SESSION 1	
	Center hands-on with reviewing scrapbook, observing trees, drawing trees, and add to scrapbook	154
	Vocabulary and content review	155-156

**Checklist of CA Science Standards for Trees Investigation 3 (cont.)**

<b>Content Standard Focus</b>	<b>Investigation 3: Trees through The Seasons (continued)</b>	<b>Teacher Guide (<i>Science Resources</i>) pages</b>
<b><i>LS2c, ES3b, I&amp;E4e</i></b>	<b><i>Part 7: Forcing Spring Twigs—1 session</i></b>	<b>157-159</b>
DATE OF INSTRUCTION	SESSION 1	
	Center hands-on with guiding questions and explanation (observe spring twigs, forcing)	159
<b><i>LS2c, I&amp;E4a</i></b>	<b><i>Part 8: Spring Bark Hunt—1 session</i></b>	<b>160-162</b>
DATE OF INSTRUCTION	SESSION 1	
	Center hands-on with guiding questions and demonstration (bark hunt with photos)	162
<b><i>LS2c, ES3b</i></b>	<b><i>Part 9: Visiting Adopted Trees in Spring—1 session</i></b>	<b>163-166</b>
DATE OF INSTRUCTION	SESSION 1	
	Center hands-on with visiting trees, measuring circumference, drawing, writing, and add to scrapbook	165
	Vocabulary and content review	166