

# CHECKLIST OF CA SCIENCE STANDARDS FOR KINDERGARTEN WOOD AND PAPER

## **PURPOSE**

The 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 **Wood and Paper Module** supports the following Physical Sciences Content Standards for kindergarten.\*

#### PHYSICAL SCIENCES

**PS1** *Properties of materials can be observed, measured, and predicted. As a basis for understanding this concept:*

- PS1a *Students know* objects can be described in terms of the materials they are made of (e.g., clay, cloth, paper) and their physical properties (e.g., color, size, shape, weight, texture, flexibility, attraction to magnets, floating, sinking).
- PS1b *Students know* water can be a liquid or a solid and can be made to change back and forth from one form to the other.
- PS1c *Students know* water left in an open container evaporates (goes into the air) but water in a closed container does not.

The **Wood and Paper 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:*

- ES3c *Students know* how to identify resources from Earth that are used in everyday life and understand that many resources can be conserved.

The **Wood and Paper 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&E4c Describe the relative position of objects by using one reference (e.g., above or below).
- 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 Wood and Paper Investigation 1

Content Standard Focus	Investigation 1: Getting To Know Wood	Teacher Guide (Science Resources) pages
<b>PS1a, I&amp;E4a, I&amp;E4b, I&amp;E4d, I&amp;E4e</b>	<b>Part 1: Introduction To Wood Samples—1 session</b>	<b>44-52</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher introduction with vocabulary instruction (observe, wood)	48
	Teacher demonstration	48-49
	Whole-class hands-on with guiding questions	49
	Teacher explanation (natural wood)	49
	Teacher-led class discussion	50
	Teacher explanation (manufactured wood)	50
	Vocabulary and content review	51-52
	Writing in science notebook	52
<b>PS1a, I&amp;E4a, I&amp;E4b, I&amp;E4d</b>	<b>Part 2: Wood Hunt—2 sessions</b>	<b>53-58 (3-8)</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher-led class discussion (review wood samples)	56
	Teacher demonstration	56
	Whole-class hands-on with wood samples	56
	Teacher-led class discussion with vocabulary review (wood names)	56-57
	Teacher explanation and demonstration	57
	Application of content (label wood in classroom)	57
	Teacher-led class discussion	57
	Vocabulary and content review	57
	Writing in science notebook	57
DATE OF INSTRUCTION	SESSION 2	
	Student reading with discussion questions	58 (3-8)
	Writing in science notebook following reading	58
<b>PS1a, I&amp;E4a, I&amp;E4e</b>	<b>Part 3: Wood and Water—1 session</b>	<b>59-64</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher introduction with vocabulary instruction (communicate)	61
	Teacher-led class discussion (review wood samples)	61
	Teacher demonstration (optional)	61
	Center hands-on with guiding questions and new vocabulary	62
	Teacher demonstration	63
	Center hands-on with wood and basins of water	63
	Teacher-led center discussion	63
	Vocabulary and content review	64
	Writing in science notebook	64



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### FOSS Checklist of CA Science Standards for Wood and Paper Investigation 1 (cont.)

Content Standard Focus	Investigation 1: Getting To Know Wood (continued)	Teacher Guide (Science Resources) pages
<b>PS1a, I&amp;E4c, I&amp;E4d, I&amp;E4e</b>	<b>Part 4: Sink the Pine and Plywood—1 session</b>	<b>65-69</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher introduction with vocabulary instruction (compare)	67
	Teacher-led class discussion (review wood and water)	67
	Teacher demonstration and explanation (test)	67
	Center hands-on with wood, paper clips, and water	68
	Teacher demonstration and explanation of relative position	68
	Teacher-led center discussion	68
	Vocabulary and content review	69
<b>PS1a, I&amp;E4d, I&amp;E4e</b>	<b>Part 5: Sinking Investigation (optional)—1 session</b>	<b>70-74</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher-led class discussion (review sinking wood)	72
	Teacher demonstration (test with pine)	72
	Center hands-on with wood, paper clips, water	72
	Teacher demonstration and explanation (graphing)	73
	Application of content with guiding questions and new vocabulary	73
	Vocabulary and content review	74
	Writing in science notebook	74



## Checklist of CA Science Standards for Wood and Paper Investigation 2

Content Standard Focus	Investigation 2: Changing Wood	Teacher Guide ( <i>Science Resources</i> ) pages
<b><i>PS1a, I&amp;E4b, I&amp;E4e</i></b>	<b>Part 1: Sanding Wood—1 session</b>	<b>86-89</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher introduction and explanation (sandpaper, wood worker)	88
	Center hands-on with guiding questions and new vocabulary	88-89
	Vocabulary instruction (sawdust)	89
	Vocabulary and content review	89
	Writing in science notebook	89
<b><i>PS1a, PS1c, I&amp;E4c, I&amp;E4e</i></b>	<b>Part 2: Sawdust and Shavings—1 session</b>	<b>90-94</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher-led class discussion (review of sawdust)	92
	Teacher explanation (shavings) and demonstration	92
	Center hands-on with guiding questions	92
	Teacher-led center discussion with sawdust, shavings, water	92
	Teacher explanation of relative position	92-93
	Vocabulary instruction (waterlogged)	93
	Center hands-on with screens and guiding questions	93
	Teacher-led center discussion with open and closed cups of water	93
	Vocabulary and content review	94
	Writing in science notebook	94
<b><i>PS1a, PS1c, I&amp;E4b, I&amp;E4e</i></b>	<b>Part 3: Making Sawdust Wood—2 sessions</b>	<b>95-99</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher-led class discussion (review pine, particleboard, sawdust)	97
	Teacher demonstration and explanation (evaporate)	97
	Teacher-led discussion (check open and closed cups of water)	97
	Teacher explanation and demonstration (making saw dust wood)	98
	Center hands-on with guiding questions	98
	Vocabulary review	99
DATE OF INSTRUCTION	SESSION 2	
	Content review of sawdust wood and particleboard	99
	Writing in science notebook	99



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### FOSS Checklist of CA Science Standards for Wood and Paper Investigation 2 (cont.)

Content Standard Focus	Investigation 2: Changing Wood	Teacher Guide ( <i>Science Resources</i> ) pages
<b>PS1a, I&amp;E4a, I&amp;E4b, I&amp;E4e</b>	<b>Part 4: Making Sandwich Wood—2 sessions</b>	<b>100-105 (9-12)</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher-led class discussion (review plywood, layers)	102
	Teacher explanation and demonstration (gluing, laminating)	102
	Center hands-on with wood and glue	103
	Teacher-led center discussion with new vocabulary	103
	Vocabulary and content review	104
	Writing in science notebook	104
DATE OF INSTRUCTION	SESSION 2	
	Student reading with discussion questions	105 (9-12)



## Checklist of CA Science Standards for Wood and Paper Investigation 3

Content Standard Focus	Investigation 3: Getting to Know Paper	Teacher Guide ( <i>Science Resources</i> ) pages
<b>PS1a, I&amp;E4a, I&amp;E4b, I&amp;E4d, I&amp;E4e</b>	<b>Part 1: Paper Hunt—2 sessions</b>	<b>114-120 (13-18)</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher demonstration and explanation (paper, paper samples)	117
	Application of content	117
	Teacher-led discussion with properties of paper samples	117
	Teacher explanation (paper hunt)	117
	Application of content	118
	Teacher-led class discussion of uses of different papers	118
	Teacher demonstration (label items made of paper)	118
	Application of content	118
	Vocabulary and content review	119
	Writing in science notebook	119
DATE OF INSTRUCTION	SESSION 2	
	Student reading with discussion questions	120 (13-18)
<b>PS1a, I&amp;E4a, I&amp;E4b, I&amp;E4d, I&amp;E4e</b>	<b>Part 2: Writing and Drawing on Paper—1 session</b>	<b>121-125</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher-led class discussion (paper samples) and explanation	123
	Center hands-on with demonstration and guiding questions	123-124
	Vocabulary instruction (soaked, absorbed)	123-124
	Teacher-led center discussion (compare writing on papers)	124
	Vocabulary and content review	125
	Writing in science notebook	125
<b>PS1a, I&amp;E4a, I&amp;E4b, I&amp;E4d, I&amp;E4e</b>	<b>Part 3: Folding Paper—1 session</b>	<b>126-130</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher-led class discussion (review properties of paper)	128
	Teacher demonstration (paper folding)	128
	Center hands-on with guiding questions	128-129
	Teacher-led center discussion	129
	Center hands-on with sorting papers and discussion (properties)	129
	Vocabulary and content review	130
	Writing in science notebook	130



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### FOSS Checklist of CA Science Standards for Wood and Paper Investigation 3 (cont.)

<b>Content Standard Focus</b>	<b>Investigation 3: Getting to Know Paper</b>	<b>Teacher Guide (Science Resources) pages</b>
<b><i>PS1a, PS1c, I&amp;E4a, I&amp;E4d, I&amp;E4e</i></b>	<b>Part 4: Paper and Water—2 sessions</b>	<b>131-135</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher introduction and demonstration (water drops on paper)	133
	Center hands-on with guiding questions	133-134
	Teacher-led center discussion (soak paper overnight)	134
DATE OF INSTRUCTION	SESSION 2	
	Teacher-led class discussion and vocabulary instruction (evaporate)	134
	Vocabulary and content review	135
	Writing in science notebook	135
	Application of content (paper museum for sorting)	135



## Checklist of CA Science Standards for Wood and Paper Investigation 4

Content Standard Focus	Investigation 4: Changing Paper	Teacher Guide (Science Resources) pages
<b>PS1a, PS1c, I&amp;E4e</b>	<b>Part 1: Paper Recycling—2 sessions</b>	<b>146-151</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher-led class discussion (review paper, wood) and explanation (recycling)	149
	Center hands-on with demonstration and guiding questions	149-150
	Teacher-led center discussion with new vocabulary	150
DATE OF INSTRUCTION	SESSION 2	
	Vocabulary and content review	151
	Writing in science notebook	151
<b>PS1a, I&amp;E4e</b>	<b>Part 2: Papier-Mâché—2 sessions</b>	<b>152-157</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher introduction and demonstration (papier-mâché)	154
	Center hands-on with demonstration and guiding questions	154-155
DATE OF INSTRUCTION	SESSION 2	
	Center hands-on with papier-mâché bowls	156
	Teacher-led center discussion with dry bowls	156
	Vocabulary and content review	157
	Writing in science notebook	157
<b>PS1a, ES3c, I&amp;E4e</b>	<b>Part 3: Reuse and Recycle Resources—1 session</b>	<b>158-161 (19-23)</b>
DATE OF INSTRUCTION	SESSION 1	
	Student reading with discussion questions	160 (19-23)
	Teacher explanation (natural resources)	160
	Whole-class hands-on with materials to sort and recycle using magnets	160-161
	Teacher-led class discussion (recycling programs)	161
	Vocabulary and content review	161
	Writing and drawing in science notebook	161
<b>PS1a, PS1b, I&amp;E4a, I&amp;E4e</b>	<b>Part 4: Changes to Water—2 sessions</b>	<b>162-165</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher-led class discussion and demonstration (water, freezing)	164
	Whole-class hands-on with water in bags to freeze overnight	164
DATE OF INSTRUCTION	SESSION 2	
	Teacher-led class discussion and explanation (liquid, ice, volume, melt)	164-165
	Whole-class hands-on with melting ice and new vocabulary	165
	Vocabulary and content review	165
	Writing in science notebook	165



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### Checklist of CA Science Standards for Wood and Paper Investigation 5

Content Standard Focus	Investigation 5: Constructions	Teacher Guide (Science Resources) pages
<b>PS1a, I&amp;E4e</b>	<b>Part 1: Paper Boxes—1 session</b>	<b>176-181</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher demonstration and explanation (boxes, trace flat box)	179
	Center hands-on with guiding questions and new vocabulary	179-180
	Vocabulary and content review	181
	Teacher-led class discussion (compare tracings to boxes)	181
<b>PS1a, I&amp;E4b, I&amp;E4c, I&amp;E4e</b>	<b>Part 2: Paper Weaving—2 sessions</b>	<b>182-188 (Fabric 3-15, 16-24)</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher introduction and demonstration (paper weaving)	185-186
	Center hands-on with guiding questions and new vocabulary	186
	Vocabulary and content review	187
	Writing in science notebook	187
DATE OF INSTRUCTION	SESSION 2	
	Student reading with discussion questions	188 (Fabric 3-15, 16-24)
<b>PS1a, ES3c</b>	<b>Part 3: Using Materials—2 sessions</b>	<b>189-193 (24)</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher explanation and demonstration (sculptures)	191
	Center hands-on with guiding questions	191-192
	Vocabulary and content review	192
	Writing and drawing in science notebook	192
DATE OF INSTRUCTION	SESSION 2	
	Student reading and singing with discussion questions	193 (24)