

# CHECKLIST OF CA SCIENCE STANDARDS FOR KINDERGARTEN ANIMALS TWO BY TWO

## **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 **Animals Two by Two 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).
- LS2b *Students know* stories sometimes give plants and animals attributes they do not really have.
- LS2c *Students know* how to identify major structures of common plants and animals (e.g., stems, leaves, roots, arms, wings, legs).

The **Animals Two by Two 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&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 Animals Two by Two Investigation 1

**FOSS**

Content Standard Focus	Investigation 1: Goldfish and Guppies	Teacher Guide (Science Resources) pages
<b>LS2a, LS2c, I&amp;E4e</b>	<b>Part 1: The Structure of Goldfish—1 session</b>	<b>48-56</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher introduction with vocabulary instruction (observe)	53
	Teacher demonstration with aquarium and goldfish	53
	Center hands-on with guiding questions and new vocabulary	54
	Writing and drawing in science notebook	54
	Vocabulary and content review	55-56
<b>LS2a, LS2b, I&amp;E4c</b>	<b>Part 2: Caring for Goldfish—2 sessions</b>	<b>57-64</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher introduction with vocabulary instruction (communicate)	59
	Center hands-on with goldfish observation, feeding, and guiding questions, and new vocabulary	59-60
	Teacher-led center discussion	60
	Teacher explanation and demonstration	60
	Center hands-on with adding plants and guiding questions	61
	Teacher explanation of positional/spatial words	61
	Vocabulary and content review	62
	Writing in science notebook	62
DATE OF INSTRUCTION	SESSION 2	
	Read fiction trade book (Fish Out of Water) with discussion questions	63-64
	Making class chart of events following reading	64
<b>LS2a, I&amp;E4c, I&amp;E4e</b>	<b>Part 3: Goldfish Behavior—1 session</b>	<b>65-69</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher-introduction and demonstration (adding tunnel)	67
	Teacher-led class discussion	67
	Whole-class hands-on with demonstration and guiding questions using spatial words	67-68
	Vocabulary and content review	69
	Writing in science notebook	69
<b>LS2a, I&amp;E4e</b>	<b>Part 4: Comparing Guppies to Goldfish—2 sessions</b>	<b>70-76 (3, 4-7)</b>
DATE OF INSTRUCTION	SESSION 1	
	Vocabulary instruction (compare)	72
	Center hands-on with guppies and goldfish and guiding questions	72-73
	Vocabulary and content review	74
	Writing in science notebook	74
DATE OF INSTRUCTION	SESSION 2	
	Student reading with discussion questions	75-76 (3, 4-7)



## ANIMALS TWO BY TWO CHECKLIST

### Checklist of CA Science Standards for Animals Two by Two Investigation 2

Content Standard Focus	Investigation 2: Land and Water Snails	Teacher Guide ( <i>Science Resources</i> ) pages
<b>LS2c, I&amp;E4c, I&amp;E4e</b>	<b>Part 1: Land Snails—1 session</b>	<b>89-93</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher introduction and explanation (proper handling of snails)	91
	Center hands-on with guiding questions and vocabulary instruction (spatial words, mucus trail, snail structures)	91-92
	Writing and drawing in science notebook (optional)	92
	Vocabulary and content review	93
	Writing in science notebook	93
<b>LS2a, I&amp;E4e</b>	<b>Part 2: Snail Races—1 session</b>	<b>94-98</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher-led class discussion (review of snails)	96
	Center hands-on with snails, race tracks, and guiding questions	96-97
	Vocabulary and content review	98
	Writing in science notebook	98
<b>LS2a, I&amp;E4e</b>	<b>Part 3: Observing Water Snails—2 sessions</b>	<b>100-105 (8-11)</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher demonstration and explanation (compare water and land snails)	102
	Center hands-on with both snails and guiding questions	102-103
	Vocabulary review	104
	Writing in science notebook	104
DATE OF INSTRUCTION	SESSION 2	
	Student reading with discussion questions	105 (8-11)
<b>LS2a, LS2b, I&amp;E4d</b>	<b>Part 4: Shells—2 sessions</b>	<b>106-111</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher-led discussion and explanation (sort shells)	108
	Center hands-on with shell sorting and guiding questions	108-109
	Vocabulary and content review	110
	Writing in science notebook	110
DATE OF INSTRUCTION	SESSION 2	
	Read fiction trade book ( <i>Some Smug Slug</i> ) with discussion questions	111

**Checklist of CA Science Standards for Animals Two by Two Investigation 3**

<b>Content Standard Focus</b>	<b>Investigation 3: Big and Little Worms</b>	<b>Teacher Guide (<i>Science Resources</i>) pages</b>
<b><i>LS2a, LS2c</i></b>	<b>Part 1: <i>The Structure of Red Worms</i>—1 session</b>	<b>124-128</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher demonstration and explanation (soil, earth worms, proper handling of worms)	126
	Center hands-on with worms, guiding questions, and new vocabulary	126-127
	Writing and drawing in science notebook	127
	Vocabulary and content review	128
	Writing and drawing in science notebook	128
<b><i>LS2a</i></b>	<b>Part 2: <i>Red Worm Behavior</i>—1 session</b>	<b>129-132</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher-led class discussion (review worm structure) and explanation (observing worm behavior)	131
	Center hands-on with guiding questions and new vocabulary	131
	Vocabulary and content review	132
	Writing in science notebook	132
<b><i>LS2a, I&amp;E4e</i></b>	<b>Part 3: <i>Comparing Red Worms to Night Crawlers</i>—2 sessions</b>	<b>133-138 (12-15)</b>
DATE OF INSTRUCTION	SESSION 1	
	Center hands-on with guiding questions and explanation (compare red worms and night crawlers)	135-136
	Vocabulary and content review	137
	Writing in science notebook	137
DATE OF INSTRUCTION	SESSION 2	
	Student reading with discussion questions	138 (12-15)



# ANIMALS TWO BY TWO CHECKLIST

## Checklist of CA Science Standards for Animals Two by Two Investigation 4

Content Standard Focus	Investigation 4: Pill Bugs and Sow Bugs	Teacher Guide (Science Resources) pages
<b>LS2a, LS2c, I&amp;E4e</b>	<b>Part 1: Isopod Observations—1 session</b>	<b>150-154</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher-led class discussion (review fish, snails, worms) and explanation (isopods)	152
	Center hands-on with demonstration, guiding questions, and new vocabulary	152-153
	Teacher-led center discussion of isopods with new vocabulary	153
	Vocabulary and content review	154
	Writing in science notebook	154
<b>LS2a, I&amp;E4d, I&amp;E4e</b>	<b>Part 2: Identifying Isopods—1 session</b>	<b>155-158</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher-led class discussion (review isopods) and explanation (sow bugs and pill bugs)	157
	Center hands-on with isopod sorting, guiding questions, and vocabulary introduction (flatter, rounder, moisture, protect)	157
	Vocabulary and content review	158
	Writing in science notebook	158
<b>LS2a, I&amp;E4c</b>	<b>Part 3: Isopod Races—2 sessions</b>	<b>159-164 (16-19, 20-23)</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher introduction (isopod races)	161
	Center hands-on with isopod races and guiding questions	161
	Vocabulary and content review	162
	Writing and drawing in science notebook	162
DATE OF INSTRUCTION	SESSION 2	
	Student readings with discussion questions	163-164 (16-19, 20-23)
<b>LS2a, I&amp;E4e</b>	<b>Part 4: Animals Living Together—2 sessions</b>	<b>165-169 (24)</b>
DATE OF INSTRUCTION	SESSION 1	
	Teacher introduction (terrarium)	167
	Center hands-on to build and maintain terrarium with guiding questions	167-168
	Vocabulary and content review	168
	Writing and drawing in science notebook	168
DATE OF INSTRUCTION	SESSION 2	
	Read nonfiction trade book ( <i>Animals Two By Two</i> ) with discussion questions	169
	Student reading with discussion questions	169 (24)