



# Promoting Academic Language Development through Science Content-Based ELD in K-2 Classrooms

Lisa Blount  
Marti Diaz  
Chris Ketel  
Leslie Lauretti  
Veronica Magallanes

Portland Public Schools  
501 N. Dixon St.  
Portland, OR 97227

[www.pps.net](http://www.pps.net)



2014 State English Language  
Alliance Conference





### **Session Overview**

Content-based English language instruction integrates language instruction with core subject areas, meeting both the linguistic and academic needs of Emergent Bilinguals. Consequently, content-based ELD instruction offers a more meaningful path to academic language acquisition. Language learning is not in isolation, but rather reinforces what students are learning in their core classes while focusing on systematic language development. Rigorous academic language development is promoted in a meaningful context through collaboration between classroom teachers and ESL specialists. When Science is the content area used to teach, ELD lessons are hands on and experiential, thus highly engaging for young learners.

### **Session Objectives**

Participants will:

Explore an integrated ELD delivery model

Experience a CBELD lesson

Observe vignettes that include lesson delivery and stakeholder voices

### **References**

Students learning authentic content can be highly motivating because it is relevant. (Weisen, 2001)

Content-based ELD provides background knowledge that often lack in content areas, as well as the grammar used in academic language. (Brown 2004)

The content in content-based ELD is cognitively demanding, and the higher order-thinking and problem-solving nature of content-based ELD will result in cognitive growth , which is an additional benefit beyond language development. (Chamot & O'Malley, 1994)

Lesson	Forms	Functions
Categorizing Solids by Shape		
Comparing How Balls Spin		
Balancing Tagboard Shapes Using Counterweights		



# Balls & Ramps Overview

Topic/Week	FOSS	Content	Content Vocabulary	Function	Form
Week 1 Comparing Balls	Teacher's Guide Connection Learning Experiences 1 & 2	Describe motion of an object when force is applied.	Different types of balls	Compare & Contrast	Comparative Adverbs -er Adjectives for weight, shape, size, texture Positive and negative Present perfect verbs: "has rolled/hasn't rolled"
Week 2 Balls & Straws	Teacher's Guide Connection Learning Experience 4	Students explore the different levels of ability to move balls depending on their size and weight.	Different types of balls, weight, size, Days of the Week	Summarizing	Adjectives: Synonyms, Antonyms Ordinal Adjectives: the first, the second.. Coordinating Conjunctions: but & and Adverbs: slowly, quickly, rapidly, effortlessly, smoothly
Week 3 Comparing Bounciness	Insights PG. 86, 96, 98	Exploring bounciness and talking about characteristics that make good and bad bouncers. Measuring bounciness, comparing bounciness.	Different types of balls Different types of surfaces	Expressing Cause and Effect	Adjectives: rubber, wood, plastic, leather... Antonym adjectives: solid/hollow, heavy/light, smooth/rough, squishy/firm Conjunctions: but, while, because Adjectives to describe surfaces: hard, soft, bumpy, flat Future tense verbs Subjunctive conjunction "while"
Week 4 Roundness of Balls	Insight pgs. 120, 121	Evaluate roundness of balls and how roundness affects the way a ball rolls	Ball, shape, curve, back, shoulders, data, beach ball, golf ball, tennis ball	Evaluate & Interpret	Adjectives: straight, round, bumpy, round, oblong, Reflexive pronouns: yourself, myself, ourselves Adverbs: straight, somewhat, very, not at all Gerunds Positive/Negative verbs: is/is not Possessive Pronouns: my, your, mine, yours
Week 5 How Balls Behave on Ramps	Insight pgs. 142-147, 157-160, 162	Explore the relationship between the height of ramp and how far it rolls	Ramp, inclined plane, inches, block, book, Street, bike jump, roof, door wedge, hill, slide	Evaluate & Interpret	Modal: could Gerunds: leaning, tapping, adding, taking away, building, stacking Adjectives: high, low, steep, flat, Demonstrative Adjectives: this, that Comparative adjectives with -er: steeper, higher, flatter, lower Superlatives adjectives: steepest, highest, lowest, most gradual Conjunction: therefore Adverbs: farther, farthest
Week 6 Comparing Balls	Teacher's Guide Connection Learning Experience # 12	Explore the relationship between the weight of a ball and its action on an incline	Weight, color, size, texture, block, ramp, ball, bottom, top	Predicting/Drawing Conclusions/ Comparing & Contrasting	Comparative adjectives: heavier, lighter, smaller, bigger, smoother, bumpier Modal verbs: might, could, will Adjectives: heavy, light Comparative adverbs: farther, faster, at the same time, the same distance, Superlatives adverbs: the fastest, the quickest

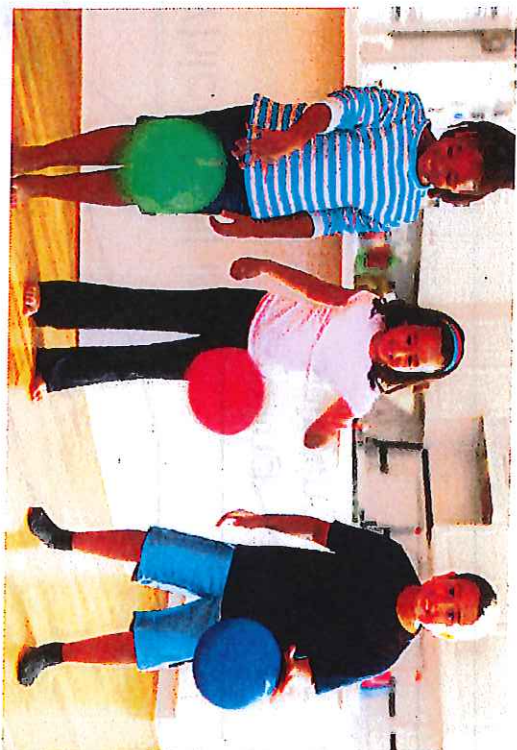


Which ball is bouncing \_\_\_\_\_?

higher  
lower



The \_\_\_\_\_ is bouncing \_\_\_\_\_ than the \_\_\_\_\_.  
type of ball higher lower  
other type of ball



**Function:**  
Describing and Comparing

**Form:**  
Comparative Adverbs and  
Present Progressive



Which ball is \_\_\_\_\_ ?

rolling  
spinning



faster  
slower



The \_\_\_\_\_ is \_\_\_\_\_ than the \_\_\_\_\_.

adjective    type of ball

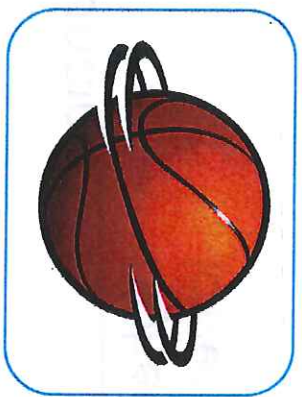
rolling  
spinning

faster  
quicker  
slower

adjective    type of ball



rolling



spinning

**Function:**  
Describing and Comparing

**Form:**  
Adjectives  
Comparative Adverbs  
Present Progressive Verbs



Has the \_\_\_\_\_ ever \_\_\_\_\_ than any other ball?

adjective	type of ball			
		moved rolled bounced spun	faster quicker slower higher lower	

Yes, the \_\_\_\_\_ has \_\_\_\_\_ than the \_\_\_\_\_

adjective	type of ball			
		moved rolled bounced spun	faster quicker slower higher lower	adjective type of ball



moved



rolled



bounced



spun

**Function:**

Describing and Comparing

**Form:**

Adjectives  
 Present Perfect Verbs  
 Comparative Adverbs

# Adjectives

bouncy  
heavy  
light  
round

bumpy  
smooth  
hard  
soft  
rough

large  
big  
huge  
enormous

small  
tiny  
little  
minuscule



Has the \_\_\_\_\_ ever \_\_\_\_\_ than the \_\_\_\_\_?

adjective	type of ball				
		moved rolled bounced spun		faster quicker slower higher lower	adjective ball

No, the \_\_\_\_\_ hasn't ever \_\_\_\_\_ than the \_\_\_\_\_.

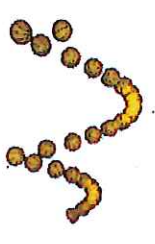
adjective	ball				
		moved rolled bounced spun		faster quicker slower higher lower	adjective ball



moved



rolled



bounced



spun

**Function:**  
Describing and Comparing

**Form:**  
Adjectives  
Negative Present Perfect Verbs  
Comparative Adverbs

Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Word Bank

**Past tense Verbs:** balanced, attached

**Nouns:** clothespins, counterweights

**Body parts:** nose, claws, tail, side

**Prepositions:** on, under, next to

**Numbers:** one, two, three, four, etc.

**Directions:** Try to balance the crawfish by putting one or two clothespins on a body part of the crawfish and placing one of its other body parts on your finger. Describe your findings below.

When the crawfish was on its \_\_\_\_\_, I attached \_\_\_\_\_  
body part number

counterweight(s) \_\_\_\_\_ its \_\_\_\_\_ and it  
preposition body part

\_\_\_\_\_.  
balanced/didn't balance

When the crawfish was on its \_\_\_\_\_, I attached \_\_\_\_\_  
body part number

counterweight(s) \_\_\_\_\_ its \_\_\_\_\_ and it  
preposition body part

\_\_\_\_\_.  
balanced/didn't balance

When the crawfish was on its \_\_\_\_\_, I attached \_\_\_\_\_  
body part number

counterweight(s) \_\_\_\_\_ its \_\_\_\_\_ and it  
preposition body part

\_\_\_\_\_.  
balanced/didn't balance



## **K-2 Science CBELD District Key Elements**

### **The team included:**

- ELD TOSAs
- Classroom Teachers
- Immersion Teachers
- ELD Teachers
- Print Shop Staff
- Warehouse Staff
- Media Library Staff
- Administrators
- Secretaries

### **The planning materials included:**

- Multnomah Education School District Scope & Sequence
- A Focused Approach to Systematic ELD Matrix & Binder
- Salem/Keizer ELD Alignment Document modified by PPS Immersion Teachers
- Rigler School's Year-Long Plan
- ELP Standards
- PPS K-2 Science Curriculum

### **Process included:**

- TOSAs turn science kit lessons into 5-day, backward-planned ELD units that increase in linguistic complexity
- TOSAs Cover ELP Standards functions by month (i.e. September-expressing needs and likes, October -describing people places and things, etc... )
- Fall 2012-June 2013-Alignment by teams of teachers
- Fall 2012-June 2013-TOSAs development of K,1,2 CBELD units
- Fall 2012-June 2013- Teachers pilot lessons with support from TOSAs
- Summer 2013-ELD, Immersion, Classroom Teachers, and TOSAs continue developing and differentiating units.
- Summer 2013- Interpersonal Communication Skills Unit produced
- Fall 2013-February 2014 ELD Instructional Specialists Revise Units
- Fall 2013-Initial CBELD Training

### **Ongoing CBELD projects include:**

- Creating PPTs for all visuals
- Pre and Post Unit assessments
- Developing reading and writing connections
- Translating Home Connections
- Developing One page plans
- Updating Connect
- Surveys
- Addendums for beginning and early-advanced proficiency levels differentiation

### **Professional Learning opportunities include:**

- Orientation sessions
- Release time in Pilot schools in buildings to unpack kits in grade level teams with TOSA support available
- After school unpacking time for all other schools at our central office
- Pilot school forum to share ideas and concerns

keh.