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

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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)

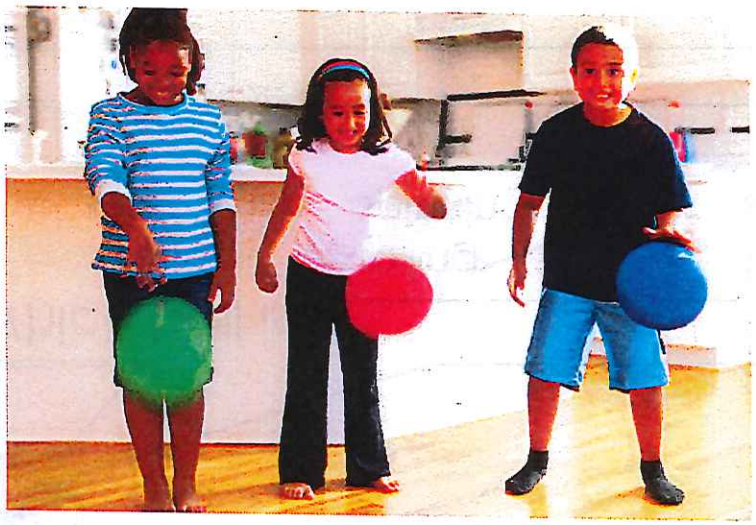
Lesson	Forms	Functions
Categorizing Solids by Shape		
Comparing How Balls Spin		
Balancing Tagboard Shapes Using Counterweights		

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, taping, 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

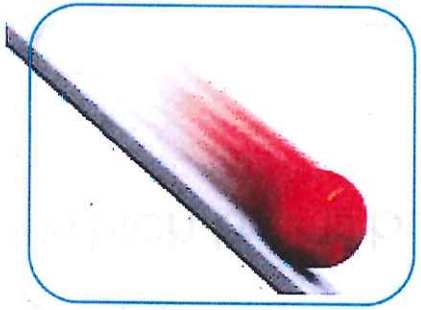
Which ball is _____ _____?

rolling
spinning

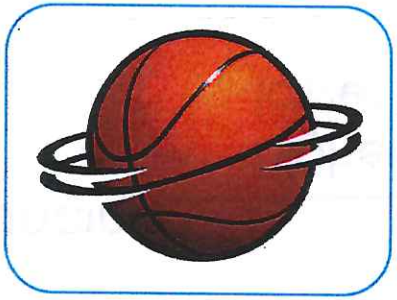
faster
slower

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

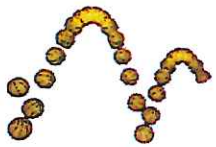
moved, rolled, bounced, spun

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

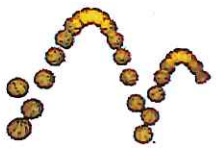
bouncy	bumpy	large	small
heavy	smooth	big	tiny
light	hard	huge	little
round	soft	enormous	minuscule
	rough		

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 _____ (body part), I attached _____ (number) counterweight(s) _____ (preposition) its _____ (body part) and it _____ (balanced/didn't balance).

When the crawfish was on its _____ (body part), I attached _____ (number) counterweight(s) _____ (preposition) its _____ (body part) and it _____ (balanced/didn't balance).

When the crawfish was on its _____ (body part), I attached _____ (number) counterweight(s) _____ (preposition) its _____ (body part) and it _____ (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