

Theme/Unit Name: Forces and Motion, Kindergarten

Content Area Big Idea: I want my students to understand that pushes and pulls can have different strengths and directions and that pushing or pulling on an object can change the speed or direction of its motion and can start or stop it.

NGSS.K-PS2-1 Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.

Literacy Big Idea: I want my students to understand that when reading literary texts, it is important to retell specific events, including key details, in order to write a narrative about a single event (making a toy move), which occurs in a specific order and contains the author's reaction to the event.

CCSS.ELA.RL.K.2 With prompting and support from adults, retell familiar stories, including key details.

CCSS.ELA.W.K.3 Use a combination of drawing, dictating, and writing to narrate a single event or loosely linked events, tell about the events in the order in which they occurred, and provide a reaction to what happened.

Building Oracy and Background Knowledge

Concept Attainment: Pile of toys/cars in the middle of the floor (ball, car, wagon, wheelbarrow, pull toy, spray bottle, etc.). Take a toy and make it go. What do you notice about all of these toys?

Sentence prompts:

I made this toy _____ by _____.

The toy _____ when I _____.

Total Physical Response

force, motion, push, pull, toward, away, speed up, slow down,
stop, go, change directions, gravity, velocity, friction, slope

Fishbowl: Use sentence prompts to model partner language and demonstrate expectations for concept attainment.

CCSS.ELA.L.K.5 Explore word relationships and nuances in word meanings.

Content

NGSS.K-PS2-1 Students will be able to move an object quickly or slowly and change the direction of the object by using the forces push or pull.

NGSS.PS2.A: Forces and Motion: Pushes and pulls have different strengths and directions. Pushing or pulling an object can change the speed or direction of its motion and can start or stop it.

NGSS.PS2.B Types of interactions: When objects touch or collide, they push one another and can change motion.

NGSS.PS3.C Relationships Between Energy and Forces: A bigger push or pull makes things speed up or slow down more quickly.

CROSS-CUTTING CONCEPT: Students will understand that simple tests can be designed to gather evidence to support or refute student ideas about causes.

Formative Assessment:
Kidwatching of Student participation in TPR,

CCSS.ELA.L.K.6 Use words and phrases acquired through conversations, reading, and being read to, and responding to texts.

CCSS.ELA.SL.K.4 Describe familiar people, places, things, and events and, with prompting and support, provide additional detail.

CCSS.ELA.SL.K.6 Speak audibly and express thoughts, feelings, and ideas clearly.

Reading Comprehension

Small Group Instruction/Guided Reading: force and motion books, LEA to GR

Read aloud nonfiction books on Push/Pull: Pushes and Pulls (Claybourne), Motion (Stille), Forces Make Things Move (Brubaker Bradley)

Use Say Something strategy to enhance comprehension throughout readings (at the end of intentionally planned pages):

I learned _____. I know _____. I want to remember _____.

Read aloud fiction books: Pig Pumpkin, The Enormous Turnip, or Little Blue Truck – fiction story on pulling, reenact

Three Little Pigs – discussion of the force of air on the pigs' houses. Introduction of narrative structure: First, next, then, last (and corresponding TPR)

CCSS.ELA.RL.K.1 Ask and answer questions about key details in a text.

CCSS.ELA.RL.K.2 Retell familiar stories, including key details.

CCSS.ELA.RL.K.10 Actively engage in group reading activities with purpose and understanding.

Writing

Language Experience Approach: Shared experience: How to make a car move on various surfaces. Materials: car for each student or pair of students. Time to explore surfaces, both inside and outside. Shared write after experiences (use of vocabulary such as friction, surface, velocity, gravity).

Narrative writing: Flipbook to retell 3 Little Pigs (first, next, then, last), use picture support to help students sequence.

CCSS.ELA.W.K.3 Use a combination of drawing, dictating, and writing to narrate a single event or several loosely linked events, tell about the events in the order in which they occurred, and provide a reaction to what happened.

CCSS.ELA.W.K.7 Participate in shared research and writing projects.

Word Study and Fluency

Print concepts: directionality, spacing, applying sounds to writing – focus during LEA and summative writing activity

Phonological awareness (syllables and sounds) – focus during LEA, independent writing

Dictation - introduction: focus on spacing, punctuation, and capitalization.

Words (by week) :

1. Is, it, in - Is it in here? It is!
2. To, at, that - Take that car. Push it to me.
3. Go, be - Go fast! You will be first.
4. Look, play - Look at me play with my car.

CCSS.ELA.RF.K.1: Understand the organization and basic features of print.

CCSS.ELA.RF.K.2: Demonstrate an understanding of spoken words, syllables and sounds.

Summative Assessment

Build a ramp (and landing pad) that you think will create the fastest car (**NGSS.K-PS2-1**). Class races to find out fastest design. Students will write a scaffolded narrative based on their experience with sending the car down the ramp, including the proper sequence of events and their reaction to what happened. Illustrations show force/s represented (**CCSS.ELA.W.K.3**).

Bridge - Transfer		Bridge – Transfer - Extension (includes: Listening, Speaking, Reading, and Writing in the other language) After students have learned the concept of forces and motion and	Bridge: Metalinguistic Focus While the teacher plans a specific metalinguistic teaching point in advance of the Bridge, the teacher also accepts and highlights other areas of metalinguistics noticed by the students.
English	Español		
Force	fuerza		
Motion	movimiento		
Push	empujar		
Pull	jalar		

Toward	hacia	the elements of narrative writing and have successfully completed the summative assessment, they will transfer their knowledge.	CCSS.ELA.RL.K.1 Ask and answer questions about key details in a text.	CCSS.ELA.RL.K.2 Retell familiar stories, including key details.	CCSS.ELA.RL.K.10 Actively engage in group reading activities with purpose and understanding.	CCSS.ELA.RL.K.5 Recognize common types of texts.	Students will listen traditional fairy tales such as : <i>Pulgarcirto, La tortuga y la liebre, Los tres cerditos, and others that apply.</i>	While the class reads and discusses these fairy tales, the concepts of force and motion will be highlighted and practiced through sequencing the retell.	Syllables: Words have syllables regardless of the language. Each syllable has one vowel sound CCSS.ELA.RF.K. 2 Demonstrate understanding of spoken words, syllables, and sounds.
Away	lejos								
Speed up	acelerar								
Slow down	reducir la velocidad								
Stop	parar								
go	ir								
First	primero								
Next	después								
Then	luego								
last	último								

- How did you feel as a learner?
 - I felt _____.
- What did you learn about biliteracy instruction?
 - One thing I learned about biliteracy instruction is _____.