Forces & Motion Web Plan

Shiloh Coore
DOL Project
Week 7

Skills Developed Across Domains

Math:

- Comparing and contrasting materials and their physical attributes.
- Compare and Describe using measurable attributes.
- Describe relative location using positional words.
- Investigating different 2D and 3D shapes.

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Songs and Music:

- By using songs with dance moves , children will be able to demonstrate their ability to perform basic non-locomotor skills while maintaining balance.

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ELA:

- Ask and answer questions about a text.
- Describe relationship between illustrations and story
- compose informative texts about a topic add drawing or visuals to descriptions to provide additional detail

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Science :

- Obtain, evaluate , and communicate information to compare and describe motion.
- Compare the similarities and differences in a group of organisms.
- SKP2. Obtain, evaluate, and communicate information to compare and describe different types of motion.
  a. Plan and carry out an investigation to determine the relationship between an object's physical attributes and its resulting motion (straight, circular, back and forth, fast and slow, and motionless) when a force is applied. (Examples could include toss, drop, push, and pull.)
- Construct argument for the best way to move an object.

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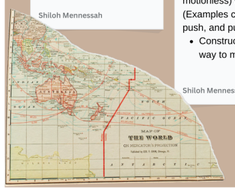

Book List

-Ricky, the rock that couldn't roll By: Mr.Jay
-Newton and Me By: Lynne Mayer
-Equal, Shmequal By: Virginia Kroll

Technology

Videos
cars with wheels
iPad game "Starfall" (Gwinnett County Approved)
Interactive Powerpoints
Songs and dances found on youtube

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Topic & Subtopics

Introduction To Motion
-What is Motion?
-What moves?
-How do we move?

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Nonliving Things

-Nonliving things cannot move on their own
-Identify things we make move

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Forces

-Different ways we can move things.
-What happens when we use different forces.

Living Things

-Do all living things move?
-Different ways people move.
-Different ways animals move.

Stopping and Colliding

-ways to safely stop something
-Colliding cars vs. Colliding Balls activity.

Pulling and Pushing

-Pulling and things that cannot be pulled
-Pushing and things we cannot push
-Investigate when it's better to Push or pull.

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Speed

Use more or less force to race cars on flat surfaces or ramps. Demonstrate with heavy and lighter objects.

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Student Projects

- Have Students identify a motion and represent it with a drawing.
- Have students choose an object and use vocabulary words to describe how it would move.
- Have students create a blockade for a spinner in small groups.
- Create ways using classroom materials (string, paperclips, wheels, sticks) to pull or push different objects.
- Have small groups build ramps using materials and race cars.

Parent Involvement

- Parents will be notified of the upcoming unit and its experiments Via Friday Folders.
- Parents will be asked to contribute items commonly found at home such as small balls, toy cars, pool noodles, paper towel tubes, or "Small school appropriate items that roll"

Word Wall

- Motion
- Living
- Nonliving
- Walk
- Run
- Crawl
- Fly
- Hop
- Slither
- Motionless
- Drop
- Push
- Pull
- Up
- Down
- Forward
- Backwards
- Heavier
- Lighter
- Faster
- Slower
- Circular
- Straight
- Further
- Closer
- Block
- Collide

Demonstrations:

- Rolling cars and balls on a flat surface and ramp.
- Demonstrate different movements.
- Videos of animals and how they move.
- Slideshow activities (can this move?)
- Dropping, rolling, pushing, pulling different objects
- "is it faster to pull or push this object?" Demonstration using heavier and lighter objects
- Colliding cars vs. Balls demonstration and investigation

Guided Investigation:

- Show students a series of objects and ask them how many ways it can be moved.
- Have students come up with different ways living or nonliving things move.
- Have students investigate whether it's better to push or pull different objects.
- Provide students with differently shaped and weighted objects to compare movement.
- Colliding cars vs. balls : Have students investigate the similarities and differences.
- Writing prompts.

Reciprocal Questioning:

- Allowing students to discuss and ask questions during lessons.

Teaching Strategies

Attention getters:
At the beginning of lessons I will show a video or picture relevant to the lesson and ask students to share their noticings or wonderings.

Writing Prompts:

- Draw something moving and write how it moves
- Draw vocabulary words
- Respond to questions about texts.

Experiments : Small groups

- Have students exhibit forces on different objects and communicate their findings.
- Give students a variety of objects to experiement pushing and pulling. Have them write their findings on a chart.
- Have students race different objects and discuss what qualities affect the speed. Do this using ramps, flat surfaces, heavy objects, light objects, and different shapes.
- Give students different shaped objects to experiment with and discuss how each shape moves.
- Have the students create a blockade that stops a spinner. Experiment with which one is most effective. Discuss why as a group.
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Teaching Strategies