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Newton's Laws of Motion Lesson Plan

Lesson Segment Focus Newton's 3 Laws of Motion

Lesson 2 of 5

Course & topic addressed Science - Motion

Date 9/9/2019 Grade 3

Student Outcomes

Specific learning objectives for this lesson.	Students to understand the basics of why things move and how they move.
Describe the connection to previous lessons. (Prior knowledge of students this builds upon)	The first lesson was vocabulary and getting an understanding of the terminology we will be using for this lesson.
Knowledge of students background (personal, cultural, or community assets)	

State Academic Content Standards

List the state academic content standards with which this lesson is aligned. Include state abbreviation and number & text of the standard.	3-PS2-2; Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.
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Academic Language Support

What planned instructional supports might you use to assist students to understand key academic language to express and develop their content learning? What will you do to provide varying supports for students at different levels of academic language development?	Discuss the vocabulary as a whole class and let them discuss in groups what each word means with a fun worksheet.
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Key Vocabulary

What vocabulary terms/content specific terminology must be	Sir Isaac Newton, Law, Motion, Rest, Acceleration, Force, Gravity, Reaction
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addressed for students to master the lesson?	
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Materials

Materials needed by teacher for this lesson .	Small bouncy ball, a basketball, a slope for incline, different textured surfaces for friction, and then we will use some of the desks and things around the classroom.
Materials needed by students for this lesson .	Nothing!

Lesson Timeline with Instructional Strategies & Learning Tasks (**This should be VERY DETAILED**)

Amount of Time	Teaching & Learning Activities	Describe what YOU (teacher) will be doing and/or what STUDENTS will be doing during this part of the lesson.
	<u>Introduction:</u>	We will go over the vocabulary again to ensure that each student understands the terms we will be using. Explain who Sir Isaac Newton is and why he made these laws.

	<u>Instruction:</u>	<p>We will divide up into groups and let each group work different stations.</p> <p>First group: Will practice the first law.</p> <p>Second group: Will practice the second law.</p> <p>Third group: Will practice the third law.</p> <p>They all will take turns pushing the ball and utilizing the tools to get a better understanding of the laws.</p>
	<u>Closure:</u>	<p>Have a whole class discussion about what we learned and take turns saying their favorite part.</p>

Accommodations/Modifications

<p>How might I modify instruction for:</p> <p>Remediation?</p> <p>Intervention?</p> <p>IEP/504?</p> <p>LEP/ESL?</p>	<p>.(try)</p> <p>Remediation would be me taking the time to individually help the few students that aren't quite understanding. Intervention would be switching up the groups maybe. Or the whole class just doing each experiment together.</p>
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Differentiation:

How might you provide a variety of instructional methods/tasks/instructional strategies to ensure all student needs are met?	(try) I would physically do each area first and show them exactly what needs to be done. I would also have pictures at each group station to explain detailed what to do for the students who need to see it first.
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Assessments: Formative and/or Summative

Describe the tools/procedures that will be used in this lesson to monitor students' learning of the lesson objective/s (include type of assessment & what is assessed).	<input checked="" type="checkbox"/> Formative / <input type="checkbox"/> Summative	
	<input checked="" type="checkbox"/> Formative / <input type="checkbox"/> Summative	
	<input checked="" type="checkbox"/> Formative / <input type="checkbox"/> Summative	

Research/Theory

Identify theories or research that supports the approach you used.	
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Lesson Reflection/Evaluation

What went well? What changes should be made? How will I use assessment data for next steps?	<i>TO BE FILLED IN AFTER TEACHING</i>
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Include supporting material such as slides, pictures, copy of textbook, and handouts for any activities students will be using as part of your lesson.

*adapted from: <http://webcache.googleusercontent.com/search?q=cache:EsQcNWuG1ZoJ:web.mnstate.edu/harms/StudentTeachers/edTPA-LessonPlan.doc+&cd=2&hl=en&ct=clnk&gl=us;> [http://www.moreheadstate.edu/getmedia/cd3fd026-939f-4a47-a938-29c06d74ca01/Lesson-Plan-and-Reflections.aspx;](http://www.moreheadstate.edu/getmedia/cd3fd026-939f-4a47-a938-29c06d74ca01/Lesson-Plan-and-Reflections.aspx)
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Newton's Laws of Motion

1st Law An object in rest, stays in rest

When a ball is on the floor, it doesn't just roll around by itself. It will stay in rest until a force makes it move.

An object in motion, stays in motion.

When a ball is already rolling, it doesn't stop until it is forced to. This would be friction that helps it stop.

2nd Law The more force, the more acceleration

To move a big truck, we would need to use more force than we would need for a bike.

The more mass an object has, the more force is needed to move it or stop it.

To stop a train takes way more force than it takes to stop a bouncy ball from rolling across the floor.

3rd Law For every action, there is an equal and opposite reaction

When a rocket takes off into space, the fuel propels it forwards by shooting backwards.

This law is happening every second and we don't even realize it.

This is happening right now as we are sitting in our chairs, or when we are walking. The earth's gravity is always using force to keep us on the ground.