

Lesson Plans 8/26 - 8/30  
**August 26 - 30, 2019**

MON. AUG. 26TH

TUE. AUG. 27TH

WED. AUG. 28TH

THU. AUG. 29TH

FRI. AUG. 30TH

8th Grade Science  
**MAP Testing**

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8th Grade Science  
**Changes in Motion,  
Force, and Direction**

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**Standards**

**MS-PS2** Motion and Stability: Forces and Interactions Next Generation Science Standards

**MS-PS2-2** Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object. Next Generation Science Standards Science

**Objective**

Students will be able to demonstrate understanding of what mass is and how it affects force and laws of motion

**Critical Questions**

1. What is required to force something to move?
2. What is required to force something to stop moving?
3. Do you think it is easier to force a less massive object to start or stop moving or a more massive one?
4. Do you think that mass, whether it is a speck of sand or a large boulder, resists change of motion?

**Materials**

- 1 Balloon (per group)
- 1 Ball, steel, large, 25 mm, approximate (per group)
- 1 Scooter, floor (per group)
- 1 Block, wood, standard 2 by 4, 15 cm in length, approximate (per group)
- 1 Book, stack (per group)

**Bellringer**

Students view two different pictures of people pushing cars and decide which produces biggest change in motion

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**Critical Questions**

1. What is force?
2. How do forces affect motion?
3. Does an object always move if a force is applied?

**Bellringer**

Watch "tug-o-war" video <http://bit.ly/2l6H1PZ>

- What happens when the forces are balanced? (**There is a stand still**).
- What happens if the forces are unbalanced? (**One team wins**).
- What causes the forces to be unbalanced? (**One side pull stronger, one side gets more people, someone lets go, etc...**)
- Explain that not just in tug of war, but many other instances, unbalanced forces cause a change in motion.

**Engage**

Calculating net force activity <http://bit.ly/2Gf0lsQ>

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**Bellringer**

Practice on Net Forces worksheet <http://bit.ly/2XS9q7u>

**Engage**

1. Students get in groups and read powerpoint about force <http://bit.ly/2JFehjS>  
2. Each individual student goes to Phet simulation site to practice with different amount of force and other variables: <http://bit.ly/2J0jggR>

**Assessment**

Create one question from PowerPoint to ask partner next to you

**Accommodations and Modifications**

**Notes**

 Man-Pushing-His-Car-e1423171910611.jpg

 They\_started\_our\_car\_by\_pushing\_it\_backwards\_up\_the\_hill\_-3854246685-.jpg

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### Engage

Activity 1: - Balloon and steel ball

Activity 2: Scooter and books activity

Activity 3: Same as activity 2 but taping books to scooter

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### Assessment

1. Based on the flicking of the balloon and the steel ball, what statement can be made about the relationship between mass and inertia?
  2. How was Setup 2 similar to wearing a seat belt during a car accident?
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### Accommodations and Modifications

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### Notes

### Assessment

One question Socrative: What is net force?

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### Accommodations and Modifications

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### Notes