

Objective:	TEKS: 8.6 ABC
The student will be able to calculate speed, acceleration and how unbalanced forces change the direction of a moving object. Students will be able to apply Newton's three laws to moving objects.	FORCE AND MOTION, NEWTON'S 3 LAWS TEKS: 6.8 ABCD 8.6 ABC
Engage	Roll a toy car across the floor or table. Ask students to write their observations in their journals (interactive notebooks) Go to NASA e Clips video on Newton 3 Laws: http://www.nasa.gov/audience/foreducators/nasaclips/search.html?terms=newton%20laws Students watch the clip and take notes (use 6 window foldable or interactive journal). Students write down three questions they have. Have students identify the potential and kinetic energy of the car's movement.
Explore	Discovery engineering force/motion labs: Separate the class into groups of 3. Each group completes a different lab activity: 1) Roving on the Moon car (2) Pop Fly! (3) Marshmallow Blaster (4) Hovercraft (5) Feel the Heat (6) Down to the Core (7) 2-wheel balloon car (8) 4-wheel balloon car. Students answer the following on their investigation: How can you measure distance? How can you determine speed? Describe all three of Newton's Laws in the movement of your object.
Explain	Students create a Prezi and conduct a demonstration of their object to answer each of the following: 1- How can you measure distance? 2- How can you determine speed? 3- Describe all three of Newton's Laws in the movement of your object. Each student in the group is responsible for one section of the presentation. The whole group works on first two sections.
Elaborate	Each student completes a data table in their journal. Half the students determine speed using a mini bowling set. The other half determine speed using toy cars. Each team discusses the limitations of the experiment. Groups explain how speed was calculated. (Homework: calculate s/d/t word problems and decide which law is which in word scenarios.
Evaluate	Students create mini display boards explaining force and motion using their individual experiments.

Explain: Students create a Prezi and conduct a demonstration of their object to answer each of the following: 1- How can you measure distance? 2- How can you determine speed? 3-Describe all three of Newton's Laws in the movement of your object. Each student in the group is responsible for one section of the presentation. The whole group works on first two sections.

Prezi: each section requirements are listed below:

- 1- Names/period
- 2- How can you measure distance? (Input from whole group.)
- 3- How can you determine speed? (Input from whole group).
- 4- (student name) Describe Law 1 in the movement of your object.
- 5- (student name) Describe Law 2 in the movement of your object.
- 6- (student name) Describe Law 3 in the movement of your object.
- 7- What did you learn from the activity, what questions do you have still?

Evaluate: Students create mini display boards explaining force and motion using their individual experiments.

Use the foldable mini display fold. Explain force and motion using your activity.

- 1- Name/period.
- 2- Define force and motion.
- 3- Explain force and motion using your activity.
- 4- Include Newton' 3 Laws. How do they apply to your activity?