

The Force is With Me Activity

Learning Objectives:

1. Students will get a better understanding of Newton's 1st law of motion (object at rest will stay at rest until acted upon by another force)
2. Students will experience the invisible force of friction and how it can apply to Newton's Laws of Motion

Type of Teacher Tool: Small Group and/or Individualized/Differentiation Activity

Targeted Grade Level(s): 6-12

Targeted Curriculum Areas: Math, Science, STEM

Videos/Resources/Materials Needed:

1. Physics 11: Newton's First Law of Motion
2. Physics 12: Newton's Second Law of Motion
3. Physics 14: Newton's Third Law of Motion
4. Styrofoam cups (2 per person or group)
5. Students' head of hair

Teacher Instructions:

1. Use the videos above to inform or remind students of Newton's three Laws of Motion.
2. Give each student, or group, 2 Styrofoam cups.
3. Have student(s) vigorously rub cup on head for about 10 seconds
4. Have student set cup on a smooth surface, gently, without letting go.
5. Students should then gently open their hand, and move it away from the cup slowly. (The cup should follow the student's hand. It may take a couple of tries)

Assessment/Evaluation Option:

1. Have students look up and write a report on other environmental sources of static electricity, their sources, and the problems created in different environments. (i.e. thunderstorms, aviation, shopping carts).

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