John Travoltage: ​Potential Energy

Did you know? Potential energy can be in many forms. Electric potential energy is related to the force one charged particle can have on another charged particle when they are brought close enough. The particles will repel each other if they have the same charge or attract each other if they have the opposite charge. Generally, negatively charged particles will flow toward positively charged particles, creating a spark.

# Investigation Question

How can kinetic energy be converted into potential energy in your body?

Prediction

**Procedure**

# Part I

1. Move John’s leg back and forth on the carpet to build up an electrical charge in the body for 15 seconds.

2. Record your observations.

Observations

# Part II

1. Reset the simulation.​

2. Move John’s hand up to touch his nose.

3. Move John’s leg back and forth on the carpet to build up an electrical charge in the body until he can’t hold any more electrons.

4. Move his hand slowly down to the doorknob.

5. Record your observations.

Observations

# Conclusion

1. Describe the potential energy in this simulation.

2. Describe the kinetic energy in this simulation.

# Fill out the table below.

|  |  |
| --- | --- |
| **Section of the Simulation** | **Potential or Kinetic** |
| **Moving leg** |  |
| **Electron flowing into the body** |  |
| **Electrons in the body** |  |
| **Electrons flowing out of the body** |  |
| **Static shock hitting the doorknob** |  |