

# Coulomb's law the Coulomb law in Physics

Cecilia electro static lab with tape and ballon!!!

1. Coulombs law introduction
  - a. Static electricity and charges
  - b. How forces interact
  - c. Which way forces travel
  - d. The math!!!
2. Inverse square Law
  - a. Introduce  $1/x^2$
  - b. Set up classroom to resemble x-y axis
    - i. Tape off x and y axis such that floor tiles are the grid lines
  - c. Have volunteers be the calculators and others be the axis and points
  - d. Go through plotting exercise taking points from 10 to 0.1
  - e. Have students who are on graph hold string and lay it down
  - f. Go through and ask activation question
    - i. Have two students be a positive charges, have them get very close and have rest of class say where they think that is on the graph we just made
    - ii. Do inverse have them very far away and have the class say where they think that is.
    - iii. Connect back to static electricity activity lab with tape and ballon and hair
    - iv. The only places where we saw movement or a force on the objects was when they were closer
    - v. Maybe even do the tape lab again
    - vi. Connect  $1/x^2$  dependence with other parts of physics like gravity