**Vocabulary: Pith Ball Lab**



**Vocabulary**

* Coulomb’s law – a law that describes the *electrostatic force* between two charged objects.
	+ Coulomb’s law states that the electrostatic force between two charged objects (*Fq*) is equal to a constant (*k*) multiplied by the product of the charges (*q1* and *q2*) divided by the square of the distance between them (*R*):



* Electrostatic force – the force between charged objects.
	+ Opposite charges (positive and negative) will attract one another.
	+ Similar charges (positive-positive or negative-negative) will repel one another.
* Gravitational force – the force of attraction between all objects in the universe.
	+ The magnitude of the gravitational force between two objects depends on the masses of the two objects and the distance between them.
* Induced charge – the separation of charges in a neutral object caused by a nearby charged object.
	+ If the charged object is positive, electrons in the neutral object move toward the charged object. This results in a negative charge on the near side of the neutral object.
	+ If the charged object is negative, electrons in the neutral object move away from the charged object. This results in a positive charge on the near side of the neutral object.
* Pith ball – a lightweight sphere made of cork or pith (a plant material) that can easily acquire a positive or negative charge.
* Pythagorean Theorem – a law stating that the square of the length of a right triangle’s hypotenuse (*c*) is equal to the sum of the squares of the lengths of the two legs (*a* and *b*): *a2* + *b2* = *c2*.
* Tension – the magnitude of a pulling force exerted by a string, chain, cable, or similar object on another object.
* Vector – a representation that specifies the direction and magnitude of a quantity.
	+ In physics, vectors are used to represent displacement, velocity, acceleration, force, and other quantities that have a specific direction.
	+ Vectors are represented visually by arrows.