

Force Fields

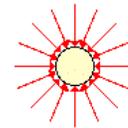
Forces acting from a distance

Field - space around an object (*due charge, gravity, or magnetism*) where specific objects can be affected by the field's qualities

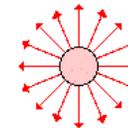
Field model - shows the pattern of infinite paths of field lines of the magnitude and direction of the forces (usually with a limited number of field lines)

DRAW AN EXAMPLE:

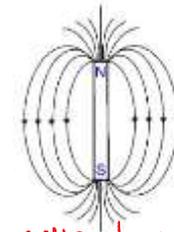
Electric Field Lines for Two Source Charges



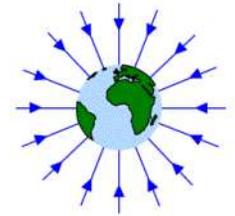
Negative Source



Positive Source



magnetic



gravity

Glue this side into your notebook

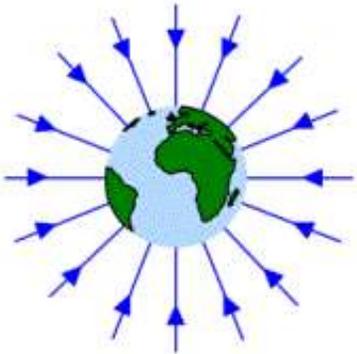
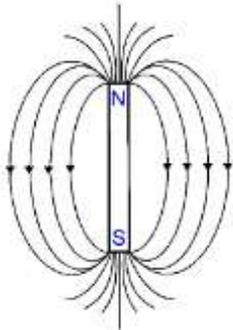
Difference between energy and forces:

energy is what is needed to make a force happen

energy = the ability to do work (move or change something), amount must be conserved

force = uses energy to push or pull things, amount can change in a situation



TYPE OF FORCE	SKETCH OF FIELD MODEL	EFFECT OF DISTANCE AND...
<p>Electrical force</p>	<p>Electric Field Lines for Two Source Charges</p>  <p>Negative Source Positive Source</p>	<p>distance: increased distance = less force</p> <p>type of charge: same charges = repelled, different charges = attracted</p> <p>magnitude of charge: strong charge = more force</p>
<p>Gravitational force</p>		<p>distance: increased distance = less force</p> <p>mass: more mass = more force</p>
<p>Magnetic force</p>		<p>distance: increased distance = less force</p> <p>material: magnetic material = more force</p>