Forced Corrosion of Steel/Iron

 In this demo we are forcing the ANODIC reaction of iron corrosion by pulling electrons out of the iron and "pumping" them over to the graphite rod where it allows a CATHODIC reaction of that converts water to hydrogen and GAINS electrons in the process. The overall reaction would go spontaneously but we are making it go faster with a battery (an electron pump).

Cathodic Protection of Steel

 In this demo we are stopping or slowing down the ANODIC reaction of iron corrosion by pumping electrons into the iron and also causing the CATHODIC reaction of water going to hydrogen. We are "pumping" the electrons over from the graphite rod where it allows anodic reactions to take place that generate the electrons (LOSE electrons). The overall reaction would NOT go spontaneously so we need the battery to accomplish the cathodic protection.

Copper plating

