











CURRICULUM GRID

	Projects											
UK National Curriculum = Covered	Getting Started	Electric Fortune Teller	Buzz Wire Maze	Haunted House Theremin	Thermo Magic Show	Drop Zone	Gravitron	Pirate Ship	Centrituge			
cience - UK National Curriculum - 2013 - Year 4												
Construct a simple series electrical circuit, identifying and naming its basic parts.												
Recognise some common conductors and insulators, and associate metals with being good conductors.												
esign and Technology - UK National Curriculum 2013 - Key Stage 2												
Understand and use electrical systems in their products.												
K Curriculum Science - Physics - UK National Curriculum 2013 - Key stage 3												
Understanding differences in resistance between conducting and insulating components (quantitative).												
Understanding moment as the turning effect of a force												
Understanding forces being needed to cause objects to stop or start moving, or to change their speed or direction of motion (qualitative only).												
Energy as a quantity that can be quantified and calculated; the total energy has the same value before and after a change.												
K National Curriculum Science - UK National Curriculum 2013 - Year 3- Key stage 3												
Describe magnets as having two poles												
Predict whether two magnets will attract or repel each other, depending on which poles are facing.												
Notice that some forces need contact between two objects, but magnetic forces can act at a distance.												
Observe how magnets attract or repel each other and attract some materials and not others.												
Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials.												

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	Next Generation Science Standards Fully covered	Projects											
Objective Number		Getting Started	Electric Fortune Teller	Buzz Wire Maze	Haunted House Theremin	Thermo Magic Show	Drop Zone	Gravitron	Pirate Ship	Centrifuge			
Fourth C	irade - Next Generation Science Standards - 4.Energy												
4-PS3-2	Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.												
4-PS3-1	Use evidence to construct an explanation relating the speed of an object to the energy of that object.												
4-PS3-3	Ask questions and predict outcomes about the changes in energy that occur when objects collide.												
Middle S	chool Physical Science - Next Generation Science Standards - MS.Forces and Interactions												
MS-PS2-3	Ask questions about data to determine the factors that affect the strength of electric and magnetic forces.												
MS-PS2-2	Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.												
MS-PS1-4	Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.												
MS-PS2-4	Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects.												
MS-PS3-1	Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.												
MS-PS3-5	Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.												
Third Gra	ade - Next Generation Science Standards - 3.Forces and Interactions												
3-PS2-3	Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.												
3-PS2-4	Define a simple design problem that can be solved by applying scientific ideas about magnets.												
3-PS2-1	Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.												
3-PS2-2	Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.												

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