

Gubbins, E. J., Westberg, K. L., Reis, S. M., Dinnocenti, S. T., Tieso, C. L., Muller, L. M., Park, S., Emerick, L. J., Maxfield, L. R., & Burns, D. E., (2002). *Implementing a professional development model using gifted education strategies with all students* (RM02172). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

Interdisciplinary Unit of Study Planning Matrix

Elementary

Grade Level:  
6th

Unit/Topic/Theme:  
Electricity

Discipline	Type I Content and Introductory Activities	Type II Process Training Lessons	Type III Interest-based Independent Projects/Studies
Science	<b>Textbook</b> "Electricity and Magnetism" with corresponding activity log (MacMillan/McGraw-Hill Science)	Hands-on experiences conducting electricity experiments while working in group settings. Using the scientific method and writing up group lab reports as well as individual lab reports.	Create a science fair project to be judged and displayed in the 6th Grade Elementary Science Fair. Using a rubric, evaluate your own science fair project.
	"Electrical Connections" by AIMS		
	<b>Resource Person</b> "Detective A. C. Sparks" from Tipmont R.E.M.C.	Detective A. C. Sparks demonstrates electrical fire hazards and how to prevent them in your home.	Using a rubric, practice judging science fair projects displayed by the teacher to prepare for judging the K-5 Elementary Science Fair.
	"George the Kissing Balloon" (a static electricity attention getter.)	Attention getter to introduce the unit as well as create a problem-solving opportunity: observe and take notes; then based on observations, create your own "George" which will act the same way as the one you observed.	Using a rubric, judge at least 3 student projects at the K-5 Elementary Science Fair.  Create a static electricity game board.
	<b>Interest Development Center</b> Light boxes and cards as well as other items that can be produced using skills from the unit	Attention getter to create interest in the topic and get students excited about being able to create a variety of electrical devices quickly and easily on their own at home.  <u>The Flashlight Repair Company</u> broken flashlights donated by another classroom were given to the students to be fixed.	Create a light box card to be used by another grade level on any subject.  Create a light box to be used with your light box card.  Write a letter to the customer explaining the possibilities you investigated to solve the problem of fixing the flashlight.

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	"Journey Inside the Computer" by Intel	A complete resource kit which gives students the opportunity to apply skills learned during the unit to computers. Also used to create interest in future careers in this field.	Apply new knowledge to using the computer in the classroom as well as at home. Use problem solving skills to analyze why the classroom computer cannot complete requested tasks as needed.
Social Studies	<b>Trade Books</b> "The Story of Electricity" by George Delucy  "Quick, Annie Give me a Catchy Line" by Robert Quackenbush	Repeat experiments conducted by scientists throughout history and create a time line.  A close up look at one scientist and how several failed attempts led up to success due to his persistence. (Discussion about "Winners and Losers").	Choose a scientist to research and become that character when presenting to class.
	<b>Activity Cards</b> "Back to the Dark Ages"  "Bright Ideas"	Write a story about what life would be like without electricity.  Write a shape poem about the invention of the light bulb using the shape of the first light bulb.	Give up an electrical item for one week and write what happened--how did you adapt for the loss of the use of this item?
Math	Application of skills learned from basic math curriculum	Learn how the computer uses binary code to carry out requested tasks.  Calculate your electricity bill.  Calculate amps, ohms, and voltage.	
Language Arts	<b>Trade Books</b> "The Secret Life of Dilly McBean" by Dorothy Haas	Discovering the connection between magnetism and electricity.	

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	<b>Trade Books</b> "Dear Mr. Henshaw" by Beverly Cleary	Drawing a diagram of a lunch box alarm--"Is the procedure given clear enough so someone can repeat his experiment?" Discussion of problem areas. Write your own story about solving a problem you have that would need an alarm system and write a clear procedure so someone else can repeat your experiment.	Build an alarm system to solve a problem you have at home or at school.
Language Arts Continued	"In Came the Darkness" by Peter Z. Grossman	Fact/Opinion: Based on the story, which type of circuit was Con Edison relying on to keep New York City from experiencing a serious blackout?	Design a circuit which will solve the problem in the story.
	"The Origin of Fire" from A Comparative Anthology of Children's Literature collected by Mary Ann Nelson.	Discuss fantasy/mythology. Write a story (fantasy/myth) about the origin of electricity.	
	"The Red Balloon" (video)	Fact/Opinion: Write up a summary defending whether events in the video were fact or fiction.	
	<b>Class Library</b> 40 books from the public library about science fair projects as well as electricity resources. Students brought in selections to add to our library as well.	Used to provide more information about electricity and items that can be created on an individual basis at home. Also used as resources for science fair projects.	