

Books

Animal Caused Outages (out of print), Southern Engineering Corporation, 1996 ISBN: 0917599160

Web Sites

A 1996 Blackout leaves the Western states in darkness. News coverage of the event.
http://www.nandotimes.com/newsroom/ntn/nation/070396/nation4_13199.html

The latest power and outage news from around the nation. Lists six additional web sites for information.

http://www.sptnetpower.com/outage_news.htm

National Science Content Standards

Content Area	Standards
Physical Science	C1, C4, C6
Earth Science	C4
Science and Technology	A1, A2, A3, A4, A5, B2, B3, B4, B5
Science in Personal & Social Perspectives	C2, D2, E3, E4, E5
History and Nature of Science	A1, A2, B1, B2, B3, C1, C3

Materials

Activity	Material	Amount
May the Circuit Be Unbroken	Batteries (1.5V [D] with holders)	3 per group
	Flashlight bulbs (2.47V, .3 amps with holders)	3 per group
	Wire leads with alligator clamps	per group
	Electric motors (small)	2 per group
	Rubber tubing	per group
	Cardboard (at least 30cm x 40cm)	1 per group
	Tape (masking or gears to connect the 2 motors)	per group
Share and Share A Light	D-cell batteries (a few)	per group
	Light bulbs (a few)	per group
	Wire leads with alligator clips (a few)	per group
	Steel wool	per group
	Thermometer	1 per group
	Switches (as needed)	per group
	Wooden boards or stiff cardboard	per group

Blackout!

To return to the lesson, select Exit from the File pull-down menu.

	White paper (several pieces)	per group
May the Force Be With You	Magnets (at least 2 bar magnets)	per group
	Iron filings	per group
	Cardboard	per group
	Steel rod	1 per group
	Compasses (at least 4)	per group
	Wire leads with alligator clamps (including 1 long)	per group
	Steel nail	1 per group
	Paper clips	per group
	Modeling clay (1 piece)	per group
	Lamps (at least 2)	per group
Making Electricity - The Old Way	Wire (insulated, 3 meter piece)	1 per group
	Multimeter or homemade galvanometer	1 per group
	bar magnet	1 per group
Making a Galvanometer (optional)	Wire (several pieces)	per group

To return to the lesson, select Exit from the File pull-down menu.