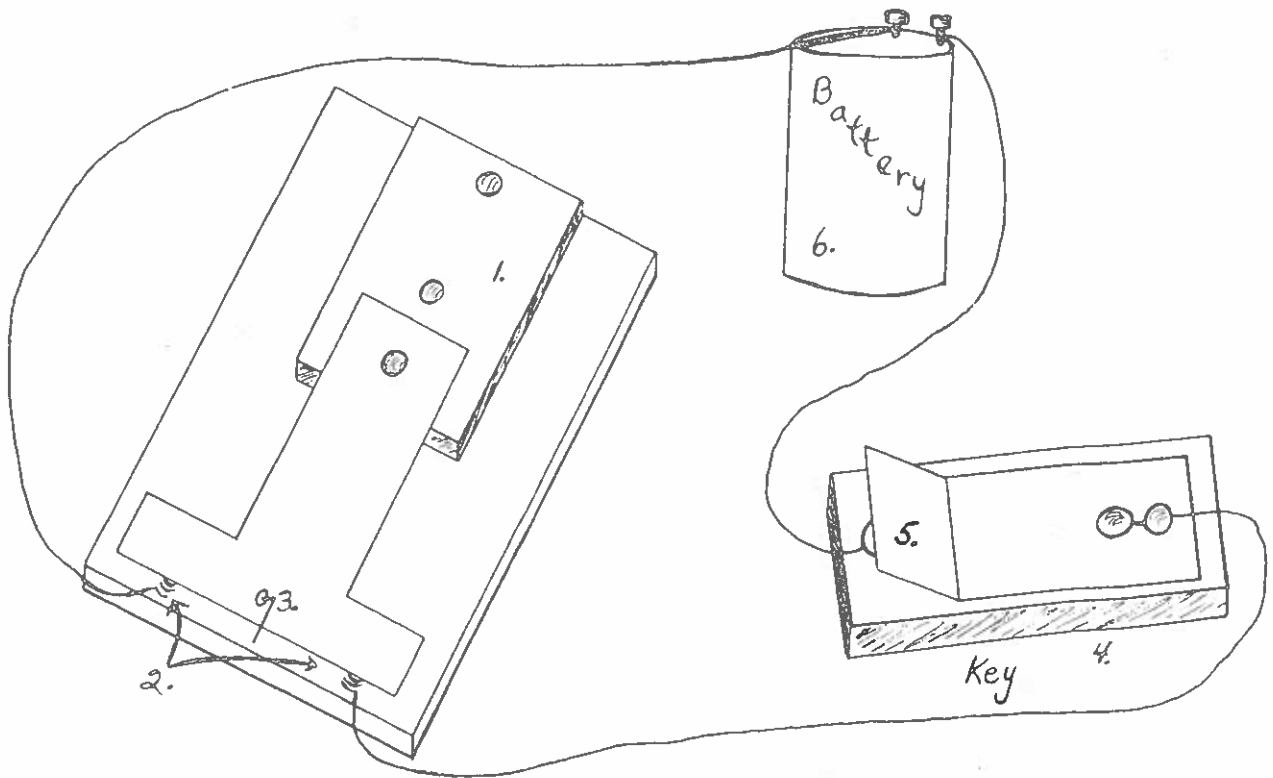


How to Make a Telegraph Set



Extra Credit Due:
March 7th ; 8th

MATERIALS NEEDED:

FLAT PIECE OF WOOD

T-SHAPED PIECE OF TIN

2 SMALLER BLOCKS OF WOOD

INSULATED WIRE

5 IRON NAILS

TIN STRIP OF METAL (BRASS, COPPER, OR TIN)

1 ALUMINUM NAIL

BATTERY

3 METAL THUMBTRACKS

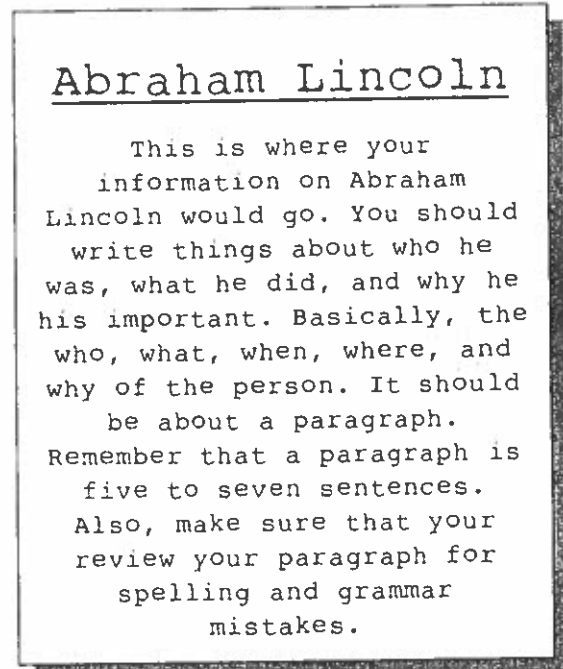
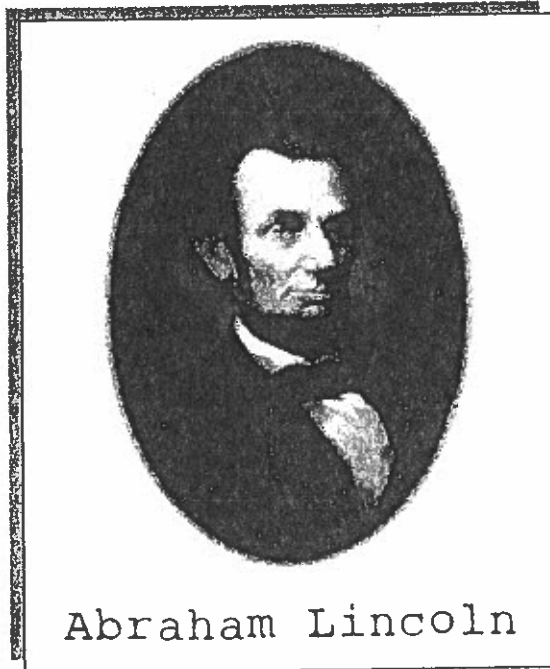
DIRECTIONS: TWO SETS ARE NEEDED FOR 2-WAY COMMUNICATION

1. NAIL A SMALL BLOCK OF WOOD ON A BASE WITH THE T-SHAPED TIN PIECE IN PLACE AS SHOWN.
2. HAMMER TWO IRON NAILS INTO ONE END OF THE BASE AND COIL INSULATED WIRE AROUND EACH ABOUT 30 TIMES. ONE WIRE GOES TO BOTH NAILS. LEAVE LONG ENDS. ONE END GOES TO THE BATTERY AND THE OTHER TO THE KEY. THE NAILS ARE NOW ELECTRO-MAGNETS.
3. HAMMER A BENT ALUMINUM NAIL AS SHOWN. IT SHOULD NOT TOUCH THE TIN PIECE.
4. THE KEY IS THE THIN STRIP OF METAL ON A SMALL WOOD BLOCK. WRAP BARE WIRE AROUND THE TWO THUMBTRACKS HOLDING THE THIN METAL PIECE IN PLACE. PRESS TACKS DOWN FIRMLY.
5. BEND THE THIN METAL UP ABOUT $\frac{1}{2}$ " FROM THE BLOCK. WRAP BARE WIRE AROUND THE 3RD THUMBTRACK UNDER THE BEND. THE METAL STRIP SHOULD TOUCH THE TACK WHEN PRESSED DOWN AND SPRING UP WHEN RELEASED.
6. TOUCHING THE KEY TO THE TACK COMPLETES THE CIRCUIT. THIS CAUSES THE ELECTROMAGNETS (NAILS) TO PULL THE "T" DOWN TO MAKE A CLICKING SOUND. THE "T" SPRINGS UP AND DOWN WITH THE FLOW OF ELECTRICITY. THE CLICKS FORM DOTS AND DASHES OF THE TELEGRAPH CODE. DASHES ARE HELD LONGER.

Famous Faces Trading Cards

Create "trading cards" featuring important people from the American Wars of 1790-1900. One side should include a picture and the name of the person. The other side should include the person's name as well as 5-7 sentences on who they are, what they did, and why they are important. Cards should be on something stronger than printer paper (notecards, cardstock, ect.) and do not have to be normal trading card size.

Example:



- *Thomas Paine
- *Nathan Hale
- *Friedrich von Steuben
- *John Paul Jones
- *Nathanael Greene
- *Oliver Hazard Perry
- *Antonio López de Santa Anna
- *Zachary Taylor
- *Theodore Roosevelt
- *Patrick Henry
- *Ethan Allen
- *Ulysses S. Grant
- *Jefferson Davis
- *Dorothea Dix

- *King George III
- *George Washington
- *George Rogers Clark
- *Charles Cornwallis
- *Tecumseh
- *Andrew Jackson
- *Sam Houston
- *José Martí
- *Emilio Aguinaldo
- *John Adams
- *Abraham Lincoln
- *Horace Greeley
- *Clara Barton
- *Harriet Tubman

- *Thomas Jefferson
- *Marquis de Lafayette
- *Bernardo de Galvez
- *Francis Marion
- *William Henry Harrison
- *Steven Austin
- *John C. Frémont
- *William Randolph Hearst
- *Edward Braddock
- *Samuel Adams
- *George McClellan
- *Robert E. Lee
- *Elizabeth Blackwell
- *William Tecumseh Sherman