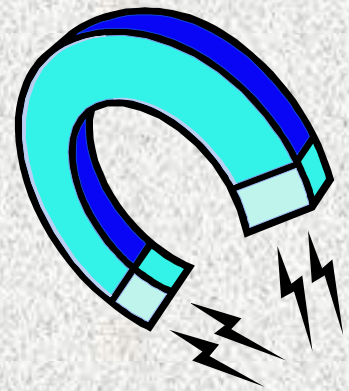


# The Magic School Bus

A Science Chapter Book #12

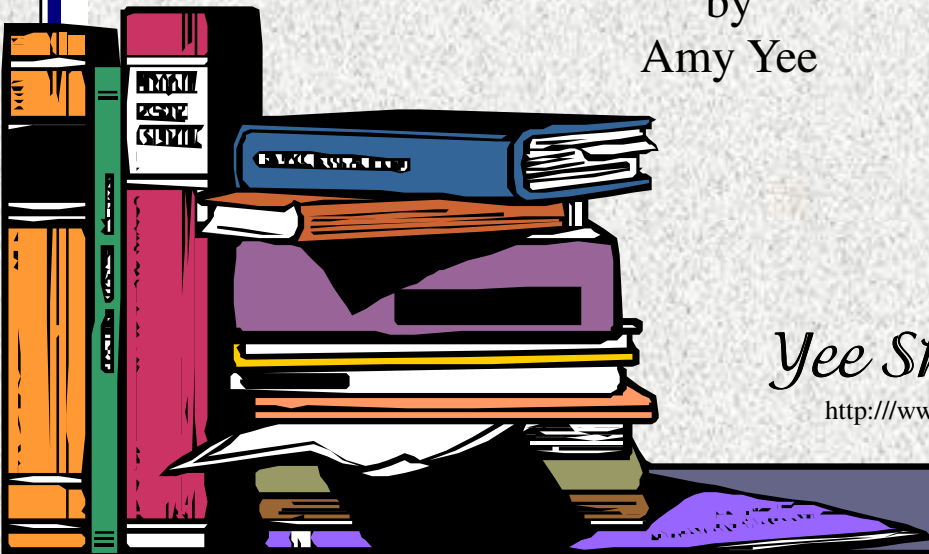
## Amazing Magnetism Lapbook

by  
Amy Yee



*Yee Shall Know*

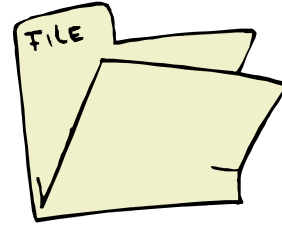
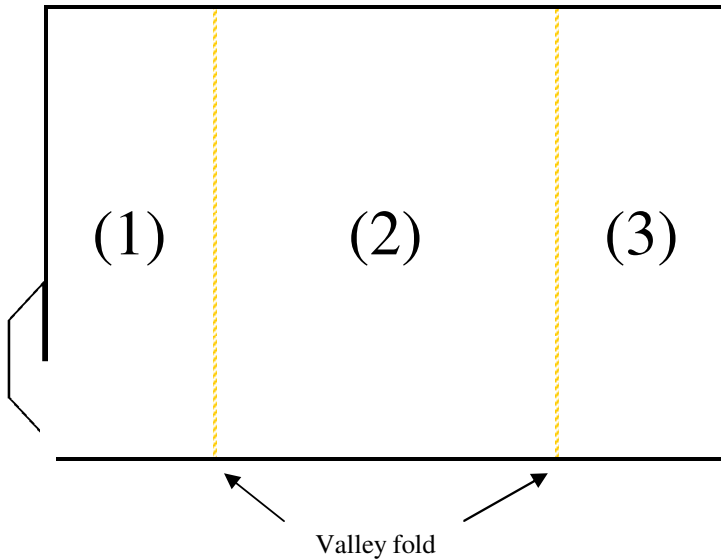
<http://www.yeeshallknow.com>



# Lapbook Basics

Follow the instructions in the following page(s) to complete all the individual pieces that will go into your lapbook. And then assemble as follows:

Open a file folder and fold in the two sides.



Glue the booklets inside. Close the shutters and decorate the cover.

If more space is needed to complete your project, there are several methods to extend your file folder. You can fold another folder in the similar fashion and glue the back of section 3 of your first folder to the back of section 1 of your second folder. You can also lay an additional piece of paper (card stock) just above or below the middle section (2) of the folder. Use packing tape or other strong tape, secure the paper to the folder creating a flap that can be opened to display your student's work. You can also staple the crease between sections two and three of the first folder to the crease between sections one and two of the second folder using a long stapler. This method will give you two additional surfaces to add your student's completed work.

Some students prefer to assemble the lapbook after they have completed all the activities so they can arrange their booklets, while others prefer to affix each booklet to the lapbook after each activity. Either way will work.

**A note on cutting and folding.** In the following templates, please cut on the solid lines. The black dotted lines are folding lines for mountain folds (when you are done folding, the black dotted lines should be on the outside of the fold). The yellow dotted lines are for valley folds (when you are done folding, the line is tucked on the inside of your fold). Do make sure that you use firm pressure to make your creases as sometimes these creases will help the final booklet to fall into their proper positions.

For some younger students you may wish to have them dictate their answers to you or you may write down the answers for them to copy.

Lapbooks not only are fun for kids to do and help with their information retention, they also serve as a permanent record of their learning. The students can refer to it when looking for information, or they can use it in presentations to friends and relatives thus further reinforcing their learning.

I hope your student(s) will enjoy this lapbook and the information learned will remain with them.

## Activities

1. Define: AC, domain, electromagnet, electron, geographic pole, magnetic field.
2. Which metals are attracted to magnets? Which ones are not attracted to magnets?
3. What are natural magnets called?
4. Where are the strongest and weakest parts of a magnet?
5. What do the atom's domain look like in magnets and non-magnets?
6. What people first discovered magnets? What did the people call the magnets? What was they used for? What did the people invent with the magnets?
7. Which poles will attract one another? Which poles will repel one another?
8. How can a temporary magnet be created? How can it be turned back to a non-magnet?
9. How can you create an electromagnet?
10. What are the two poles of a magnet?
11. What are the names for the moving and rotating parts in a simple motor?
12. What effect does AC have on the poles in an electromagnet? How does AC keep the rotor moving in a motor?
13. What are some uses for grippers? How much does it weigh? What amount of force does it apply? How does a person move with it?
14. What creates the earth's magnetic field? What does a compass needle do? Is the magnetic poles the same as the geographic poles?
15. What's one possible method that animals use to find their way?
16. List some everyday items around your house that uses magnets?

## Instructions

1. **Vocabulary.** Cut and fold according to direction on the back cover. Write the definition of each vocabulary under each word.
2. **Which metal is attracted.** Cut, fold, and glue down the headings. List the metals that are attracted to magnets and those that are not attracted to magnets under the appropriate headings.
3. **Natural magnet.** Cut and fold into a match book. Write on the inside the name of natural magnets.
4. **History.** Cut out all the tabbed cards. Who were the first people to discover magnets? What did they call these magnets? How were magnets first used? What did the people invent with these magnets? Stack all the tabbed cards with the cover on top so you can see each of the tabs and staple on the bottom.
5. **Domain.** Cut out and accordion fold the card. Draw the domain in the steel for magnets and non-magnets.
6. **Strong and weak.** Cut and fold card. Label the parts on the magnet that are the strongest and weakest.
7. **Attract or repel.** Cut along all solid lines and fold into a connected match book. Write under each tab if the combination of poles will attract or repel each other.
8. **Temporary magnets.** Cut and fold. Write the answers under each flap.
9. **Electromagnet.** Cut and fold. Write the answer to the question inside.
10. **Poles.** Cut and fold. Write the answer to the question inside.
11. **Simple motor.** Cut and fold. What are the names for the moving and rotating parts in a simple motor?
12. **Alternating Current.** Cut out the three cards relating to AC. Write the answers on each card above the questions. Stack the cards together with the cover on top and the questions showing. Staple on top.
13. **Grippers.** Cut out the cards for the grippers. Write the answer for “What are some of their uses?”, “How much does it weigh?”, “What amount of force does it apply?”, “How does a person move with it?” on each card. Stack the cards with the cover on top and all the tabs showing. Staple on the bottom.
14. **Earth’s magnetic field.** Cut along solid lines and fold. Answer the three questions about earth’s magnetic field, compass, and geographic poles under each flap.
15. **Animals.** Cut, fold, and answer the question about animal’s sense of direction.
16. **Everyday item.** Cut, fold, and glue to make pocket. Cut out cards and write on each card an everyday item that uses magnets and draw a picture of each item.

electron

electromagnet

domain

AC

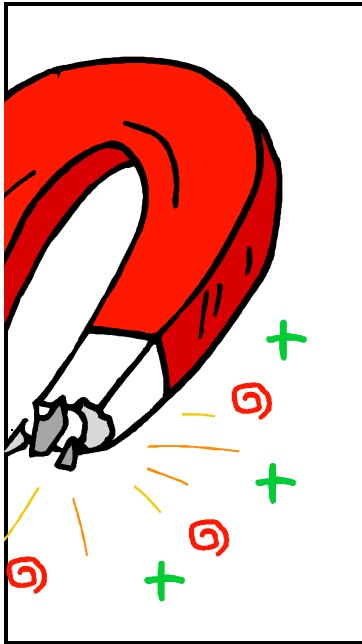
geographic pole

magnetic field

1. Cut along outside solid lines
2. Fold in half lengthwise and open
3. Fold accordion style the other direction
4. Cut along the solid line in the middle
5. Open and fold lengthwise again
6. Form book with covers on the outside
7. Glue back cover to lap-book

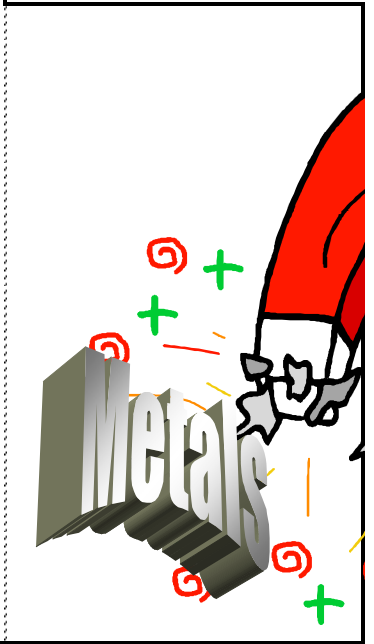


**VOCABULARY**



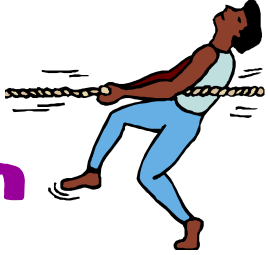
ATTRACTED TO

NOT ATTRACTED TO



Natural  
Magnets  
are  
called

# Field Strength



Label the strongest and weakest points of a magnet.

**N** **S**

Discovered by

Blank area for writing the discoverer's name.

Named

Blank area for writing the name of the discoverer.

Used for

Blank area for writing the uses of magnets.

Invented

Blank area for writing the inventor's name.



# History of Magnets

# Atom's Domain In iron Or Steel

Not Magnet

Magnet

**N-N**

**N-S**

**S-N**

**S-S**

Attract or Repel?

**What are  
the two  
poles of a  
magnet?**

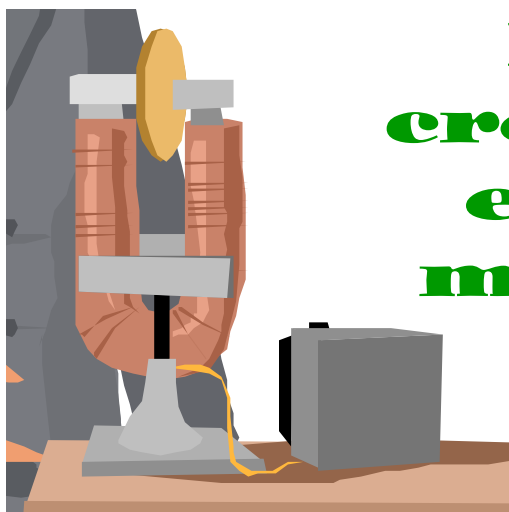


# Temporary Magnets

How to  
Undo?

# Temporary Magnets

How to  
Create?



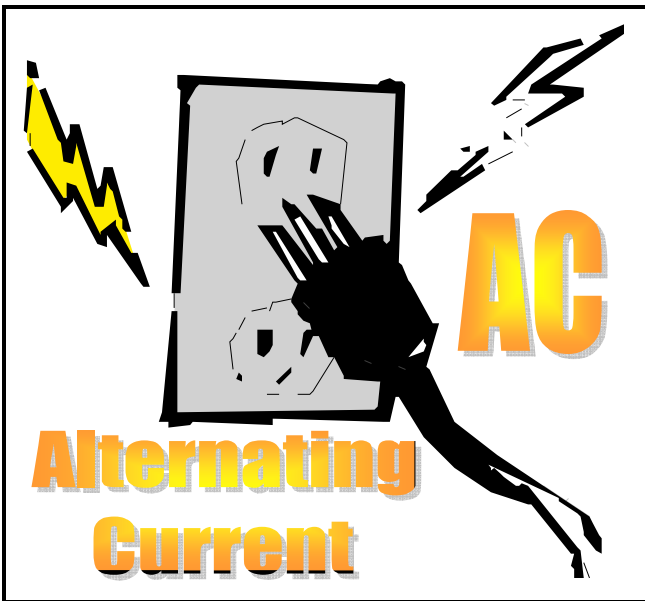
How to  
create an  
electro-  
magnet?

# Motor

Rotating  
Part

# Simple

Stationary  
Part



How does AC keep the rotor moving in a motor?

What effect does AC have on the poles in an electromagnet?

**Use**

Blank area for notes under the 'Use' header.

**Weight**

Blank area for notes under the 'Weight' header.

**Force**

Blank area for notes under the 'Force' header.

**Move**

Blank area for notes under the 'Move' header.

***Crimpers***

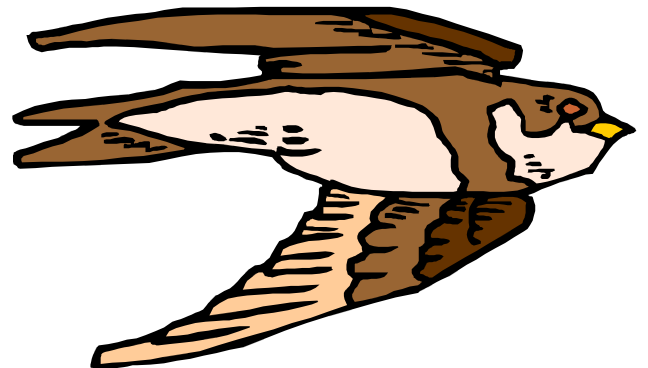
Blank area for notes under the 'Crimpers' header.

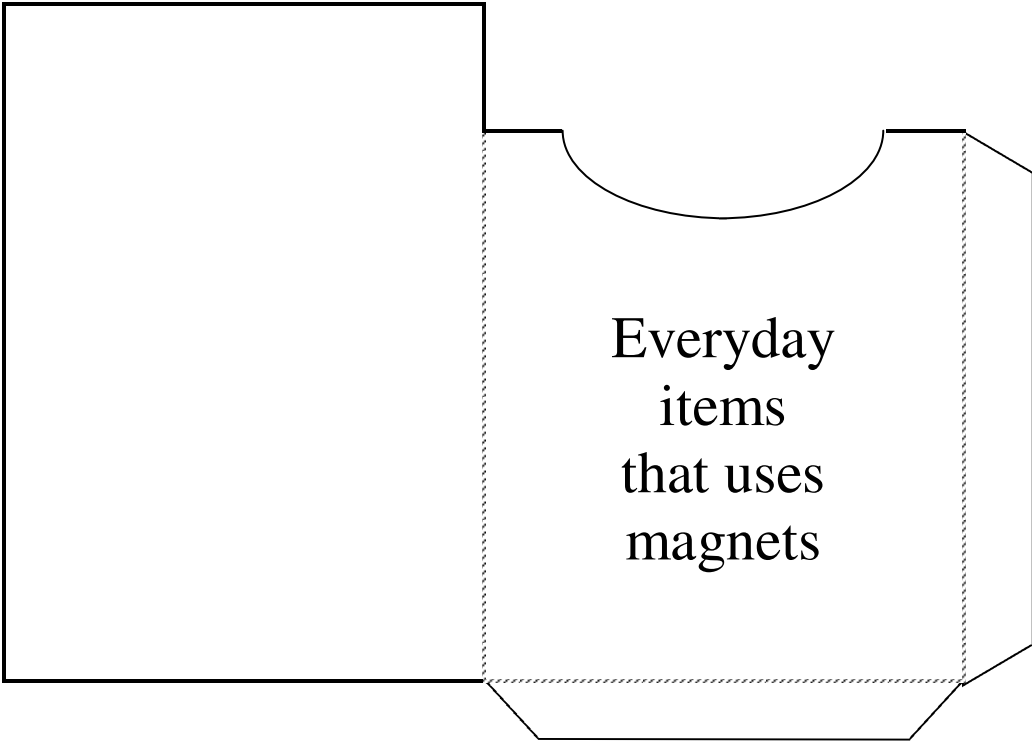
What creates  
the earth's  
magnetic  
field?

What does  
a compass  
needle do?

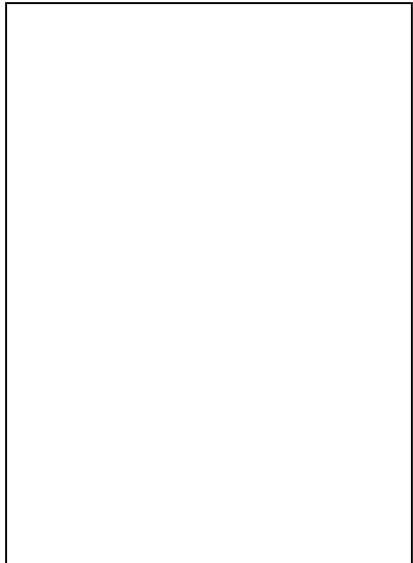
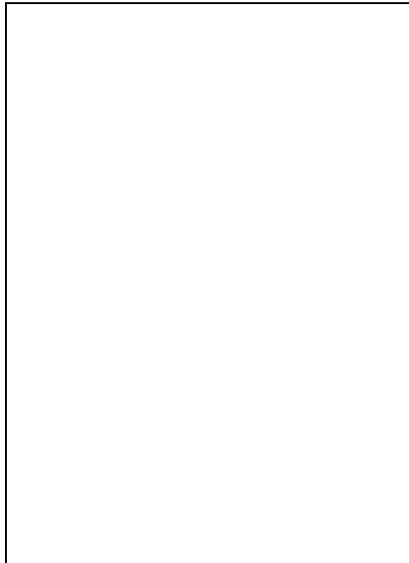
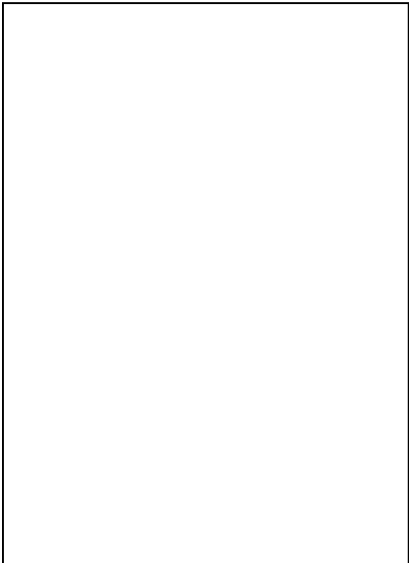
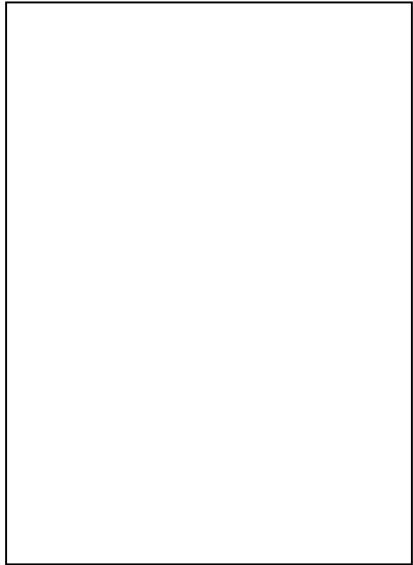
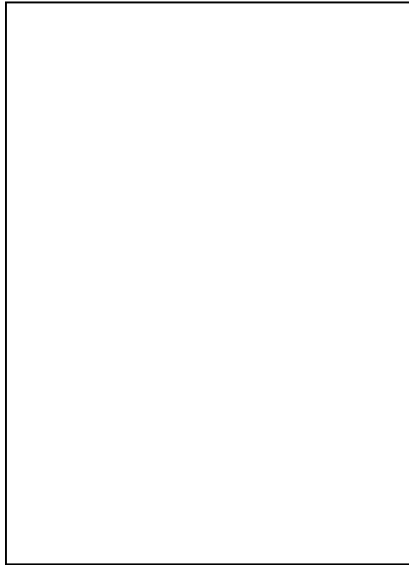
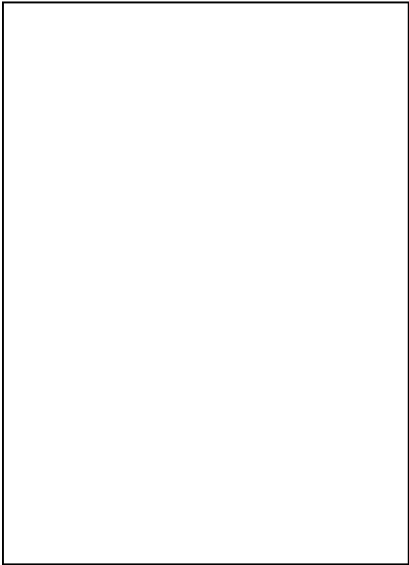
Is the magnetic  
poles the same  
as the  
geographic  
poles?

*What's one possible  
method that animals use  
to find their way?*





Everyday  
items  
that uses  
magnets



# Extra Pictures

