## Pull-Down Map Project

## Should be done by an adult!

Remember back in school when the teacher would pull down a map or chart? It was like a window shade. She may have had several of these and when they were rolled up there would be plenty of room to write on the black board. In a home school, wall space is always at a premium. So what do you do? Where do you put all those maps and charts without moving that portrait of Aunt Martha? Here is a simple solution that may bring back memories of your school days with Miss Sandy in the fourth grade. Using an inexpensive window shade you can make your own "pull-down" maps and charts.


What you need:

- A window shade from your hardware or home improvement store.

Have shade cut the same width as your map or chart.

- Mounting hardware for the shade ( 2 sets)
- Hammer for mounting the hardware
- Sharp scissors
- Pencil
- Tape measure or yardstick
- Straight edge at least a long as the shade is wide
- "T"-Square (optional)
- Clear Scotch tape
- Clear packing tape, $2 "$ wide
- LAMINATED map or chart of your choice



Never mind this guy! He really wanted to get into the act.

## Step 1:

Measure the width of the map you are going to use before you go to your home improvement store. Have the store employee cut your shade the same width as your map. Note there are several different grades of window shades. The least expensive have a card board roll with a vinyl shade. These will cost around $\$ 3$ to $\$ 4$ and will work. For best results I recommend you use a $\$ 6$ to $\$ 8$ shade. These have wooden rollers and better springs. A better quality shade should last longer with "kid" use.

TIP:
Buy a cheap shade so if you make a bo-bo you can start over. When you get good at making these you can cut the map or chart out of the cheap shade and mount it into a good (wooden roller) shade.


Step 2:
Unroll the shade on a clean flat surface like a table or floor.

Remove the "stay" from the end of the shade.

## Step 3:



Measure 8 to 10 inches from the "stay" end of the shade. Measure both sides so you have the same measurement from the stay. I measured $9 "$ for this map.


Step 4:

Using a straight edge or T-Square make a line at your 9" mark.

Note: Make sure that your line is square or $90^{\circ}$ to the left and right edge of the shade.


Step 5:
Place your laminated map or chart on the shade so the bottom of the map runs along the line you drew in Step 4.

TIP: Use the map edges not the lamination edges. Maps that are laminated may have a boarder of lamination that may over lap the paper the map is printed on. The top and bottom of this lamination may not be parallel.


Step 6:
Mark the shade at the top of the map on both edges of the shade. This line should be parallel to the first line you drew.


Step 7:
Draw a line where you marked the top of the map.
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Step 8:
Now cut the shade on the two lines. Make your cut as straight as you can.


Your shade should now look like this.

Step 9:
Replace the center piece with your map.


Step 10:
Align map with the top edge of the shade and use the Scotch tape to "HOLD" the map in place. Tape in 4 or 5 spots. Try to keep the map as square as you can.


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## Step 11:

Now re tape the top of the map using the Clear 2" Packing tape.

TIP: Do not try to use one long piece of tape. Use several short pieces of tape. It's OK to over lap the tape. Let the tape go over the edge of the map/shade by an inch or so. Then fold the tape to the back side of the map/shade.

Step 12:
Repeat Step 10 and Step 11 on the bottom of the map.

Note: It is important that you have 8 to 10 inches of shade at the bottom of the pull-down map.



Your shade should look something like this.

Step 13:
Turn the map over and tape the back side along the map/ shade seams with the clear 2" packing tape. Trim off any tape that overhangs the shade.


Step 14:
Roll the map back on the roller and set aside.

Step 15:

Mount the shade hardware following the instructions on the hardware package.
TIP: You can mount the shade hardware on a wooden board like $3 / 8$ or $1 / 2$ inch plywood and mount the board on the wall above your black board. That way when the map is pulled down you have a hard surface behind the map so you can write-on and wipe-off easily.

TIP: When using the above TIP use wax paper behind the wooden board. This should prevent the paint and wall from sticking to the mounting board when it needs to be removed. Also for best results the mounting board should be attached to the studs in the wall.

TIP: You can place several maps on the mounting board one above the other. Place the narrowest map on top and the widest on the bottom.


TIP: If you used a 2 -sided map use a second set of window shade hardware and reverse the brackets. Then remove the map, flip it over and re hang the map on the reverse side. It will still roll up if needed.

Step 16:


Test out your new "Pull-Down" map. If the map/shade is not winding up all the way you can make adjustments to the roller spring to increase the tension.

NOTE: Follow the instructions on the window shade package to do this.

## VOILA!

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