

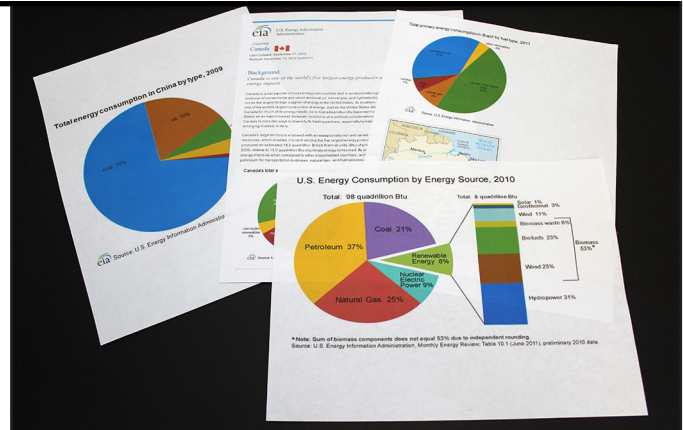


ENERGY BALANCE MOBILES

Activate Research & Collaboration with Kinetic Art!

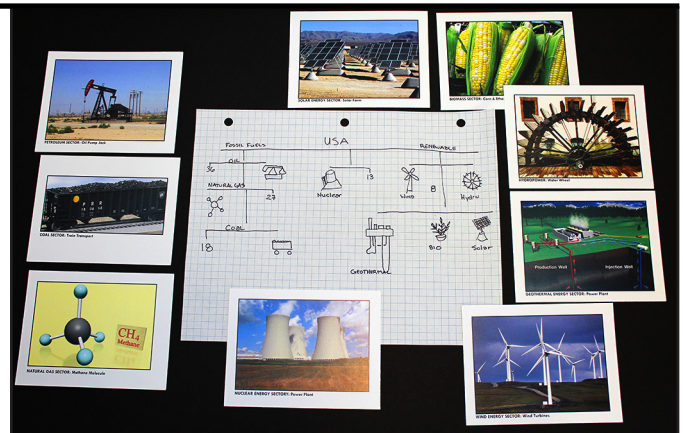
1) Pick Teams & Research

Energy Mobiles are an exciting project to galvanize research, analysis and collaboration. Your mobile is a visual representation of data found on a pie chart. Break into teams of 3-4 students, collect pie charts, and do grade-appropriate research about energy use by country. Dig deep and integrate with other activities - writing, experiments, math lessons, etc. *Note: This program can be adapted for any analysis of data found in pie charts.*



2) Planning & Sketching

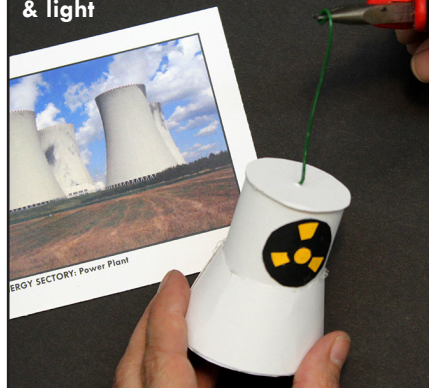
Look at your pie chart and sketch your mobile design. You will create a hanger/bar section for each "slice" of the chart. Use the Inspiration Deck cards to plan mini sculptures to symbolize energy sectors. You'll create bead sections to represent the percentages for each pie chart slice. Write the percentages on your sketch by its symbol. Group all renewables connected on one side of your mobile. Group non-renewables (fossil fuels) on the other and put nuclear in the middle.



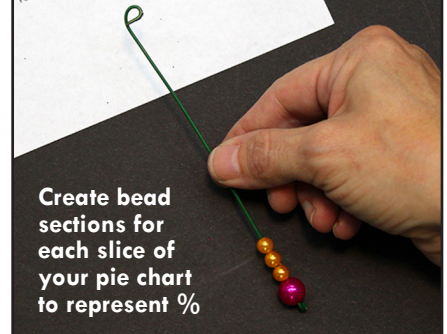
3) Sector Symbols & Beads

Design mini energy sector sculptures for each slice of your chart. Make multiple symbols for renewables if they are grouped into 1 slice based on your research. Attach florist wire to all sculptures. Create bead sections with wire to represent your percentages. Large beads can be 10's, medium are 5's and smalls are 1's.

Make sure symbols are small & light



Use small beads for 1's, medium for 5's and large for 10's



Create bead sections for each slice of your pie chart to represent %

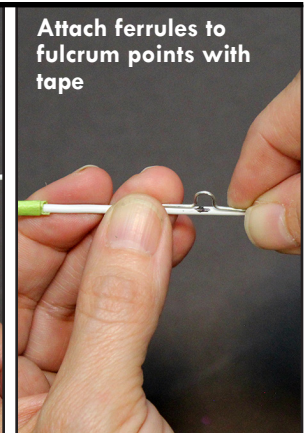
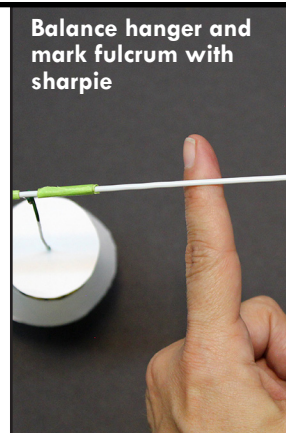
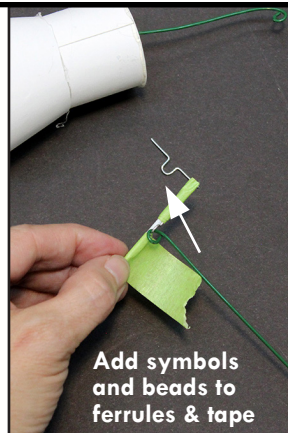
4) Make Bars & Ferrules

Cut coat hangers into 8 to 12" bars for your energy sector segments. Check your sketch for the number of bars you'll need. Bend and trim paperclips into a U shape with two straight ends to create ferrules. Attach one end of the ferrule to each end of your hangers with scotch or aluminum tape.



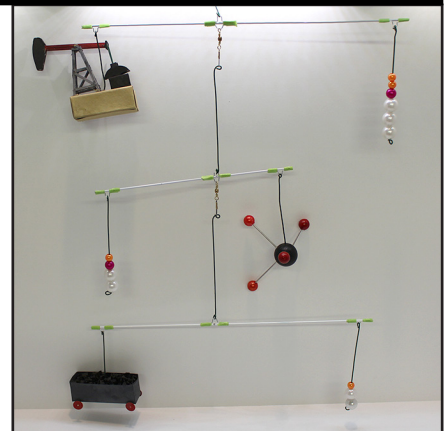
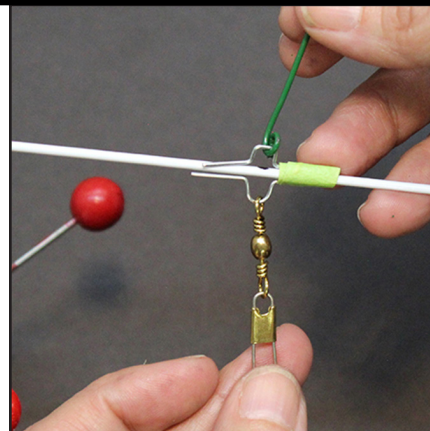
5) Assemble Segments

Add your sculptures and bead sections to your ferrules. Tape the other ferrule end to secure. Balance the segment on your finger and mark the fulcrum (balance point) with a sharpie. Tape ferrules to the top and bottom of this point to combine with other bars. You only need one ferrule if it's a bottom bar.



6) Create Sector Trees

Line up sector segments to design 1 renewable and 1 non-renewable sector tree. Nuclear should be a single segment and won't get attached until final assembly (Step 7.) Cut florist wire to attach to your center ferrules between each bar. Add fishing swivels to the florist wire between each section to make the bars spin.



7) Final Assembly

Tape 1 ferrule onto each end of a long coat hanger or welding wire. Add your renewable tree to one side and your non-renewable tree to the other. Use a fishing swivel so each tree spins. Balance the long bar and find the center fulcrum point. Tape ferrules to both the top and bottom of this point. Attach your nuclear segment to the bottom center ferrule with a swivel. Attach a swivel and hook to the top ferrule. Hold the hook and test that your mobile spins freely and is in balance. Add a flag or design element to represent your country. Hang your mobile and show, share & celebrate!

