

## Clock (5<sup>th</sup> Grade)

**PROBLEM:** Design and build a clock.  
 Each student will design and build their own face for a clock. Each will be given a battery operated clock motor and hands to attach to their clock face.



### DESIGN:

You will receive two sheets of white paper, 10 inches by 10 inches in size. First, take one sheet and fold it in half twice, making four equal boxes on the paper. Draw with pencil four different ideas for the face of the clock. Quickly draw simple figures and don't put any detail into the sketches. Select which of the four ideas you would like to develop into the face of your clock. Take the second piece of 10" x 10" paper and draw in detail the face you have selected. You can use markers on the paper to explore the colors to use to express the face of the clock. You can decide to cut away some of the 10 inch by 10 inch surface area to use as plywood over-lays on the larger plywood surface. Take your time to experiment with colors and words and numbers and lines and shapes for the face of your clock. Cut out the shape of the face with a scissors. If you have more than one layer cut them out and glue them together. You will be given two pieces of wood that you can use to make the clock face. One 10" x 10" x 3/8" thick and one 4" x 10" x 1/4" thick.



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**BUILD:**

1. Spend time to draw carefully on the Baltic birch plywood the idea you have decided to use for the face of the clock.
2. Next cut out each of the pieces you have previously designed.
3. It is easier to file and sand the pieces before you assemble them.
4. Assemble the pieces by gluing and nailing them together.
5. Decorate the wood with markers. Add the colors you have selected to the clock face.
6. Then add lines, shapes, words, etc. to the clock face.
7. After you have completed the clock face mark where you want to insert the motor and hands.
8. Drill a hole through the face.
9. When you are satisfied with the face of the clock, your teacher will install the clock motor and hands.

