Elapsed Time

Context: This is a 5th grade STEM activity for Math. By the end of this skill, you will be able to determine an amount of elapsed time in hours and minutes within a 24-hour period.

Skills Needed: Ability to use scissors, crayons, markers, glue and brads.

Goals of Activity: To create a clock will moving hour and second hands. The clock will be used as a math manipulative when determining elapsed time.

Time Frame: 90 minute class periods to complete.

Group Size: Individual project

Materials: Cereal box, construction paper, paper plate, craft sticks, paper towel roll, yarn, miscellaneous material, and other materials that may be available.

Tools: Scissors, tape, hole punch, brads, crayons, markers, stapler

Safety Measures: Review use of safety procedures for provided materials

Classroom Set-Up: Materials and tools will be located in the back of the classroom on the round table. There will be two round tables, one in each corner. The table will have the exact same supplies and identified as table A and B. The students will be assigned specific tables so they will be able to freely move around. Students will work at their desk, on the floor, or at the back table. Teacher will assist students as they work.

Find the elapsed time.

Start: 10:04 A.M.
End: 8:37 P.M.

_____ hours _____ minut

QUICK VIEW

Grade: 5

Time: 90 minute sessions

Group: Individual

Safety: Review skills for materials provided

Goals:

- Critical thinking skills
- Research skills
- Problem solving skills
- Telling time

Standards: Math SOL

Math: K.9, 1.8, 2.12, 3.11, 4.9, and 5.10

Standards for Technological Literacy

STL11

Elapsed Time

Background: In fourth grade you learned that elapsed time is the amount of time between a start time and an end time. You learned how to determine elapsed time hours and minutes within a 12 hour time period.

Challenge: Your challenge is to design and construct a clock that you can use to assist with learning how to determine elapsed time hours and minutes within a 24 hour time period. It must include your name, hour hand, and minute hand. It must contain two moving parts and be standing. Your design must be neat and creative. You will present your clock to the class.

Criteria:

- Label the hours and minutes on the clock accurately and large enough to be seen
- Hour hand is shorter than the minute hand
- Stand on the desk to avoid from lying flat
- Have your name
- Two moveable parts
- Neat and creative

Materials: Cereal box, construction paper, paper plate, craft sticks, yarn, paper towel roll, miscellaneous material, and other materials that may be available.

Tools: Scissors, tape, hole punch, brads, crayons, markers, stapler, glue

STL. 11   Build a clock using the design process
K.9 Time to the hour
1.8 Time to the half hour
2.12 Time to the nearest 5 minutes
3.11 Time to the nearest minute and elapsed time in hour increments
4.9 Elapsed time hours and minutes within a 12 hour time period
5.10 elapsed time in hours and minutes within a 24-hour period.

Created by Angelnet Stith
5th grade Design Brief
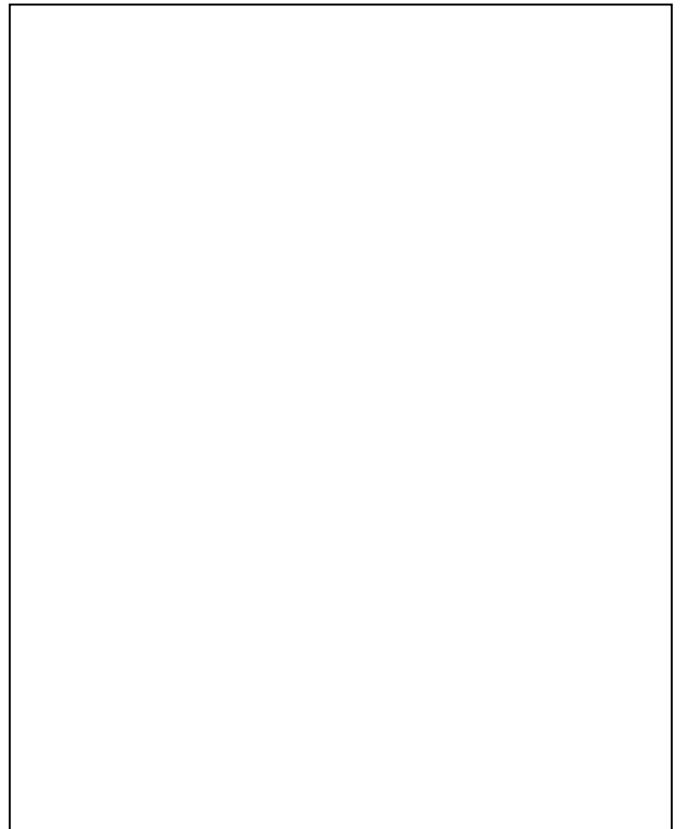Belfield Elementary

Portfolio for: Elapsed Time

Name: _____   **Date:** _____

I. **What is the problem?**
State the problem in your own words.

_____

_____

_____

_____

2. **Brainstorm solutions.**
Sketch or describe possible ideas and solutions.

3. **Build your clock.**

4. **What is your moveable part?**

_____

_____

_____

_____

5. Notes for progress	YES	NO
• Label the hours and minutes on the clock accurately and large enough to be seen		
• Hour hand is shorter than the minute hand		
• Stand on the desk to avoid from lying flat		
• Have your name		
• Two moveable parts		
• Neat and Creative		

6. **What issues did you come across while making your clock and how did you solve them?**

Name: _____   **Date:**_____

Rubric for: Elapsed Time

Criteria Assessed	Beginner	Apprentice	Master	Expert
Portfolio				
Completion	3 or more incomplete sections, lacking detail	No more than 2 sections incomplete, lacking some detail	All sections complete	All sections complete and creative
Clock				
Label	Did not label the hours and minutes	The hours and minutes are inaccurate, small and/or difficult to see.	The hours and minutes are accurately displayed and large enough to be seen	The hours and minutes are accurately displayed, large enough to be seen, and creative
Hour and Minute Hands	Did not include hour and minute hands	Included only one hand	Included both hands accurately	Hands are creatively designed
Moveable Part	Did not include a moveable part	Moveable part included, but did not function properly	Moveable part included and functioning	Moveable part included, functioning, and creatively designed
Stands	Did not have any stands	Included only one or two legs but did not stand	Included legs and were able to freely stand	Legs were creatively designed
Creativity	Lacking in creativity and little effort shown	Shows some creativity but lacks neatness	Shows creativity and neatness	Shows a higher level of creativity and neatness