## Elapsed Time - A Co-Teaching Lesson Plan

## Co-Teaching Approaches

A " $(\mathrm{Y})$ " in front of the following list items indicates the approach is outlined in the lesson. An "( N )" in front of the following list items indicates the approach is not outlined in the lesson.

- (N) Parallel Teaching
- (N) Station Teaching
- (N) Alternative Teaching
- (Y) Team Teaching
- (N) One Teach/One Observe
- (Y) One Teach/One Assist


## Subject

Grade 5 Mathematics

## Strand

Measurement

## Topic

Determining the amount of elapsed time
SOL
5.11 The student will solve practical problems related to elapsed time in hours and minutes within a 24 -hour period.

## Outcomes

Students will be able to determine the amount of elapsed time in hours and minutes within a 24 -hour period

## Materials

- Classroom demonstration clocks
- Classroom schedule
- Elapsed Time activity sheet (attached)


## Vocabulary

elapsed time, hours, minutes

## Co-Teacher Actions

| Lesson <br> Component | Co-Teaching <br> Approach(es) | General Educator (GE) | Special Educator (SE) |
| :--- | :--- | :--- | :--- |
| Anticipatory Set | One Teach/ One <br> Assist | Have a discussion with classroom about <br> the word elapsed. Brainstorm different <br> definitions or synonyms of the word. Talk <br> about what we do or how we used elapsed <br> time in our daily lives. <br> Because elapsed time within a 12-hour <br> period is an SOL in Grade 4, check for <br> prior knowledge and understanding of this <br> concept. Have partners work through this <br> problem and be ready to share their results <br> (students may draw representations to <br> solve this): | Rotate throughout the classroom <br> prompting students to participate. If <br> necessary, initiate the conversation with <br> teacher to spring discussion. <br> The SE monitors students as they work <br> asking questions about how and why <br> students are solving the problem. Select <br> to shith the whole class. |
| Johnny left his house at 8:00 a.m. to go <br> play in the park with his friends. They <br> played on the swings until 8:40, then went <br> to the basketball court. They played <br> basketball until 10:15. After a 10-minute <br> break, they played another basketball <br> game until 11:50. Johnny had to leave the <br> park at that time to be home by lunch. <br> How much time did Johnny spend on each <br> activity? Break his morning into time <br> intervals for each activity. |  |  |  |
| The GE monitors students as they work, <br> asking questions about how and why |  |  |  |


| Lesson <br> Component | Co-Teaching Approach(es) | General Educator (GE) | Special Educator (SE) |
| :---: | :---: | :---: | :---: |
|  |  | students are solving the problem. Select students with different solution strategies to share with the whole class. <br> The teachers are looking for students to share solution strategies using pictures of clocks, a number line approach showing jumps from one time to the next, a solution using numbers/arithmetic only, a solution using benchmark times (going to next hour or half-hour as reference point), etc. If one of these approaches is not used by a student, lead the class through a discussion of that strategy. |  |
| Lesson Activities/ Procedures | Team Teaching | 2. Create a scenario that involves | 1. Create a simple scenario, such as how much time has passed since the school day started. Say, "The bell rang to start school at 7:40 a.m. It is now 1:20 p.m. How much time has elapsed? Because we don't usually have clocks with movable hands available, we might want to use other methods to figure out elapsed time." Show how this problem can be solved using a timeline or a T-chart (students may be more successful with one method over the other). <br> Ask students to suggest a landmark time to |


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| :---: | :---: | :---: | :---: |
|  |  | computing hours and minutes, such as the amount of time you are at school each day. For example, "You arrive at school at 7:35 a.m. each day. You leave school at 2:50 p.m. How long are you at school each day?" Use the timeline strategy for this problem. <br> Begin marking the timeline, counting by hours, marking the new time and how many hours have elapsed. (It will be helpful to emphasize counting the "jumps" rather than the marks.) <br> Allow students to work in pairs monitoring their discussions, listening for their strategies, and selecting several to share their thinking and strategies with the class. <br> (On the timeline, students can count the six hours that have passed. <br> Continue the timeline to count minutes. Below is one possible way minutes can be counted. Students can add up the total number of minutes on the timeline [38 minutes-emphasize easy numbers to use, such as counting by fives or tens].) <br> Have students share their strategies with the class. Ask students to compare and | compute minutes in this problem. For example, adding 20 minutes will get us to the "on-the-hour" landmark of 8:00 a.m. Thus, mark 8:00 a.m. on the number line. Getting from 8 to 1:00 would require an additional 5 hours. By adding 20 minutes to the $1: 00$, we get to $1: 20$. Thus, the amount of elapsed time between 7:40 and $1: 20$ is 5 hours, 40 minutes. (Color coding can really support students here.) <br> Monitor students as they work, listening for misconceptions, language learned, solution strategies. Select several students to share their thinking and solution strategies with the class. <br> Support students with organizational strategies, if needed. |


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| :--- | :--- | :--- | :--- |
|  | Parallel Teaching | contrast the strategies. <br> Students will complete the Elapsed Time <br> activity sheet as independent practice. | Pull a small group of students to provide <br> read-aloud and prompting throughout the <br> independent practice. |
| Guided/ <br> Independent <br> Practice | Team Teaching | Have students return to whole group and <br> review one last problem, having the time <br> go over a 12-hour block. Model on the <br> board and discuss as class. | Have students return to whole group and <br> review one last problem, having the time <br> go over a 12-hour block. Model on the <br> board and discuss as class. |
| Closure | Team Teaching | While students work, participate and ask <br> questions. Teachers are gaining insight <br> into their understanding of the assignment. <br> As the information is completed, the GE <br> will prompt students in order to clarify any <br> miscues. | Same as GE. |
| Formative <br> Assessment <br> Strategies | Team Teaching | Complete daily spiral homework <br> assignment. | Same as GE. |
| Homework |  |  |  |

## Specially Designed Instruction

- Teacher can "think aloud" and have students verbalize in choral fashion with teacher
- Chunk the learning into sections, such as hours, half hours, ten minute increments, etc.
- Use a model clock that the student can manipulate independently
- Color code the sections of the clock


## Accommodations

- Students with a calculator accommodation may use calculators.
- Read aloud the activity sheet, as needed
- Use laminated timelines for students to write on.


## Modifications

- For those students requiring a modified curriculum, focus on computing elapsed time only in hours or minutes.


## Notes

- "Special educator" as noted in this lesson plan might be an EL teacher, speech pathologist, or other specialist co-teaching with a general educator.

The following pages are intended for classroom use for students as a visual aid to learning.

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## Elapsed Time

Name: $\qquad$ Date: $\qquad$
Directions: Solve each of the following showing all of your work - drawing a picture, using a number line, using benchmark times, etc. Try to use as many different solution strategies as you can.

1. My family left on our day trip at 7:15 a.m. We did not get home until 5:00 p.m. How long were we gone?
2. Last night, the baby woke up about 11:15 p.m. and did not get back to sleep until 3:30 a.m. How long was the baby awake?
3. The doughnut shop begins making fresh doughnuts at 6:30 a.m. daily, all day. They make their final fresh batch at 8:00 p.m. How long during the day are they making fresh doughnuts?
4. Yesterday, Dad left for work at 7:30 a.m., and he did not get through work until 4:40 p.m. How long was Dad's workday yesterday?
5. Our church held a sleep-over last Friday night beginning at 8:45 p.m. Parents had to pick up their children the next morning at 7:15 a.m. How long was the actual sleep-over?
6. My little sister was not feeling well last night, so she went to bed early at 7:20 p.m. She slept straight through until 6:30 a.m. How long did she sleep last night?
7. Write a story that shows an elapsed time of 8 hours, 15 minutes.
8. Write a story that shows an elapsed time of 10 hours, 23 minutes.
