Date: 12.12.2013

Teacher: Tuğba Özcan

Number of Students: 17-18

Grade Level: 5-D

Time Frame: 40 minutes

**Measuring Time Problems**

1. Goal(s)

• To develop students 'understanding about the elapsed time

2A. Specific Objectives (measurable)

- Students will be able to learn how to find the elapsed time given the starting and the ending time
- Students will be able to solve word problems
- Students will be able to recognize the importance of time.
- Students will be able transform hours to minutes or seconds and also translate days to weeks or days to year or week to year

2B. Ministry of National Education (MoNE) Objectives

- Zaman ölçü birimlerini tanır, birbirine dönüştürür ve ilgili problemleri çözer.

2C. NCTM-CCSS-IB or IGCSE Standards:

- The students will be calculate times in terms of the 24-hour and 12-hour clock; read clocks, dials and timetables. (IGCSE)
- Students will be able to write the time to the nearest minute and measure the time intervals(CCSS)
- Students will be able to solve problems involving measurement and estimation of intervals of time(CCSS)

3. Rationale

- The students need this lesson because they will solve the real life problems about the time by measuring time.
- The students need this lesson because they will relate it with other measuring problems for example geometrical measuring problems.

4. Materials

- The board marker.

5. Resources

- MEB Ortaokul Matematik 5. Sınıf 1. Kitap
- http://www.egitimhane.com/5-sinif-matematik-zamani-olcme-sunusu-d97092.html

6. Getting Ready for the Lesson

- The students will work individually in engagement, explain and extent parts.
- The students will work in pairs and individually in explore and evaluation parts.
- The pairs will consist of desk mates.
- The teacher will prepare the worksheets before the lesson( there are 18 students in the class)

7. Prior Background Knowledge

- The students should know reading times.
- The students should know how they convert hours to minutes or second or reverse.
- The students should make operations with times.

**Lesson Procedures**

*Transition: Hi guys I am your mathematics teacher during this period, I am a trainee teacher in the Bilkent University. I hope we will have a good lesson together*

8A. Engage (5 minutes)

- Start the lesson by asking the students if I say how many years and days and hours passed up to now can you estimate my birthday?
- Wait for the students to answer
- Discuss the answers with all class

*Transition: "Now, I want you to find how many years how many months and how many days and how many hours you have been living so far."*

B. Explore (5 minutes)

- The teacher will give students four minutes to find how many years how many months and how many days they have been living so far.
- The teacher will move around the class and observe students.
- The teacher will give one more minutes to the students if necessary.
- The teacher will say them to find their friends' birthday who sit next to each other without saying the exact time but only saying the elapsed time up to now(students study with their pairs)
- The teacher will want students to write on their notebook how old their friends are and what is their friends' birthday

*Transition: please remember your friends' birthday and congratulate them that day. Now please look at the board.*

C. Explain (10 minutes)

- The teacher will write a problem on the board and want students to write the problem on their notebooks. The problem is that: if it is 11.20 now and i got the school at 8 am how long I have been at school? How would solve a problem like that?
- The teacher will ask their answers and solutions after 30 seconds and then explain the solution on the board
- The teacher will want students to write one or two sentences what they explore with this problem.

*Transition: The teacher will say "open your books and do the first three exercises on page 92"*

D. Extend (10 minutes)

- The teacher will give 10 minutes to solve this problem.
- The teacher will walk around the students and help them if they need and note her checklist the students' assessment

*Transition: now I want you to write a single sentence on your notebook about what you learned today and where do you use this learning in your daily life.*

E. Evaluate (throughout the lesson)

- The teacher will observe students during the lesson.
- The teacher take notes during the lesson and control the students' names from her checklist about their assessment while they are studying on the problems on the book

9. Closure & Relevance for Future Learning

- The teacher will summarize the lesson by saying today we have learned what the elapsed time is and how to calculate it.
- Teacher will say that " ok you all made a good job today and thank you very much for this enjoyable lesson.
- Teacher ask a last question which is " we started doing math at 11 am. And now it is 12.30 am. How long have been doing math?" and closed this session.

10. Specific Key Questions:

- Can you compare your age with your friends? [Analysis]
- Can you estimate the birthday of your friend? [Evaluation]
- How can you calculate our ages ? [Analysis]
- How can you calculate the time differed up to now? [Analysis]

11. Modifications

- If students cannot remember to calculate their ages the teacher will give some clue.
- If students cannot remember transform hours to minutes or seconds and also translate minutes and seconds to hours.
- If the students cannot share any idea the teacher will wait twenty seconds more.
- If the students need more time while they solve the exercises the teacher will give one more minutes.
- If the students cannot solve the exercises the teacher will come back the definitions or previous examples and explain again.