Elapsed Time 5E Lesson Plan

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| Teachers: Mrs. Hernandez, Mrs. Cortinas, Mrs. Stevens, Ms. Van Buren |
| Date: February 25, 2016 (STEM Thursday) |
| Subject: Math  Grade level: 3rd |
| Materials:  Station 1: Telling Time   * Connecting Blocks * Handheld Analog clocks * Dry erase board (per student) * Dry erase marker (per student) * Laminated number line (per student) * Word problems laminated on notecards (2-3 per group) * Numbers 1-12 laminated for the connecting blocks * Chart paper for T-Chart (teacher)   Station 2: Elapsed Time   * Hula Hoop * Dry erase boards (per student) * Dry erase marker (per student) * Handheld Analog clocks * Laminated number line (per student) * Word problems laminated on notecards (2-3 per group) * Numbers 1-12 laminated for the hula hoop |
| TEKS:  3.7 Geometry and measurement. The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving customary and metric measurement. The student is expected to:  (C) Determine the solutions to problems involving addition and subtraction of time intervals in minutes using pictorial models or tools such as a 15-minute event plus a 30-minute event equals 45 minutes. |
| Lesson Objectives (Station 1): In this activity, students will create an analog clock using connecting blocks and their bodies as the hour hand and minute hand. The students will also implement the number line and t-chart strategy for telling time. |
| Lesson Objectives (Station 2): In this activity, students will solve and illustrate word problems by incorporating two different strategies to find elapsed time, then present their findings to their group. |
| Key Vocabulary: analog clock, digital clock, duration, elapse, quarter hour, half hour, three-quarters of an hour, AM, PM, noon, midnight |
| ENGAGEMENT (5 minutes)   1. Tell the students that today we will be creating analog clocks and using multiple strategies to tell what time it is. Explain that we will be working in two stations, the front station will focus on telling time, while the back station will focus on elapsed time. 2. If your station 1 (up at the front by the smartboard) Show the students the video: Telling Time.  * Video Study Jams: <http://studyjams.scholastic.com/studyjams/jams/math/measurement/tell-time.htm>   3) Have a student-based discussion of the video, but make sure to clarify the main points, the function of the minute and hour hand, the markings in between the clock numbers.  Probing/Eliciting Questions:   1. How many seconds are in 1 minute? 2. How many minutes are in 1 hour? 3. How many minutes are in between each clock number?   Transition Statement: In the next activity, we will further explore the multiple strategies we could use to help us tell time. We will be learning how to use a number line, a t-chart, and the analog clock. |
| EXPLORATION (10 minutes)  Telling Time:   1. Tell the students that they will be creating an analog clock by using connecting blocks. The materials for the activity will be set up at the front of the room and clearly visible to all students. The teacher will build a handheld analog clock for the students to see. Then, the teacher will assign the students in groups of 2-3. The students will lay in their analog clock along the floor and use their arms as the minute and hour hands of the clock. 2. One student from each group will collect their materials from the teacher and then return to their designated area on the floor. 3. The students will construct their analog clocks along the floor then properly place the clock numbers to their designated area. 4. The teacher will give the students 2-3 minutes to complete their clocks before continuing on with the activity. 5. Once the students have completed their clocks and properly placed their clock numbers they will each take turns in moving their arms to the proper time the teacher calls out for.   Elapsed Time:   1. The teacher will hold up the hula hoop with the clock numbers already displayed on the hula hoop. The teacher will then demonstrate by standing behind the hula hoop and using their arms as the minute and hour hands. 2. The teacher will call on random students to come up and show what time it is using their arms as the minute and hour hands.   Transition Statement: Now that we know how to tell time, let’s see if we can solve these word problems by using the number line, and t-chart strategies. |
| EXPLANATION (20 minutes)  Telling Time:   1. The teacher will explain that this next activity will be more challenging since it involves finding the time to the word problem. 2. The teacher will use a t-chart to show how to solve word problems and by being able to find the time on the clock. The teacher will also demonstrate how to use the number line and analog clock to tell time.   Elapsed Time:   1. The teacher will explain that this next activity will be more challenging since it involves finding the elapsed time to the word problems. 2. Each student will be given a dry erase board and a dry erase marker. The students should be in their groups ready for the word problems. 3. The teacher will work the first three word problems together with the group implementing the number line strategy, the t-chart strategy, and the analog clock. 4. The teacher will then begin to pass out the word problems for each group. Inform the students that each group has different word problems and they are to work together to solve for the elapsed time. Each group will receive a total of 3 word problems. 5. The teacher will walk around the room and observe which methods the students are using to solve the elapsed time word problem.   Transition Statement: You all did a wonderful job solving the word problems and I liked how you used your different strategies to find the proper time. This next activity is going to be more of a group effort because you must show two ways on how to find the proper time, and you must also fill in and complete the word problem. |
| ELABORATION (5 minutes)  Telling Time:   1. The teacher will inform the students that this is their last chance to practice their strategies: number lines, t-chart, and analog clock before coming in front of the class and showcasing their work. 2. Each group will be given word problems and must solve the problem by incorporating two strategies they have learned throughout the lesson.   Elapsed Time:   1. The teacher will inform the students that this is their last chance to practice their strategies: number lines, t-chart, and analog clock before coming in front of the class and showcasing their work. 2. Each group will be given one word problem with fill in the blanks, the students are to be creative here and make up the word problem. To avoid any confusion the word problems already have their set times, and the students must fill in the rest. |
| EVALUATION (5 minutes)  Groups will present their elapsed time word problems and describe the two strategies they used to solve the problem.  Probing/Eliciting Questions:   1. What are three things you learned today? 2. What are two questions you still have? 3. What is your opinion of this lesson? |