Pennsylvania Governor's Institute
for Mathematics Educators
2004

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Topic/Theme: Telling Time to the Half Hour

Level: 1 grade, remediation/Learning Support at any level

Time Element: 5 thirty-minute lessons

NCTM Standards Addressed:

Understand measurable attributes of objects and the units, systems, and processes of measurement. In pre-kindergarten through grade 2 all students should recognize the attributes of length, weight, area, and time. (page 398)

PA Math Standards Addressed:

Pennsylvania's public schools shall teach, challenge and support every student to realize his or her maximum potential and to acquire the knowledge and skills to: Tell time (analog and digital) to the minute. (2.3.3.D)

Math Assessment Anchors Addressed:

Demonstrate an understanding of measurable attributes of objects and figures, and the units, systems and processes of measurement. Tell time (analog) to the minute. (M3.B.1.1.1)

Reading Assessment Anchors Addressed:

Demonstrate the ability to understand and interpret nonfiction texts appropriate to grade level. Identify the meaning of vocabulary from various subject areas. (R3.A.2.1)

Demonstrate the ability to understand and interpret nonfiction texts appropriate to grade level. Distinguish between essential and nonessential information within a text. (R3.A.2.6)

Objectives:

- The students will tell time on an analog and digital clock to the half hour.
- The students will identify the meaning of vocabulary associated with telling time.

Instructional Strategies and Plan (include strategies used to help different types of learners, i.e. auditory, visual, etc.):

DAY 1:

Activity 1: To engage the students bring them all together and read It's About Time, Max! While reading stop to discuss the times mentioned and elicit prior knowledge of telling time.

Activity 2: While holding a large clock, let the students explore the clock by asking them what they notice about the clock. List the vocabulary on the board that they discuss. Also, discuss that one hour is 60 minutes and that the minute hand moves around the clock one full time in an hour.

Activity 3: Make clocks from tag board/paper plate (may be precut). Number the hours on the clock (depending on population you may put numbers on the clock for them). Cut out the hour hand on blue paper, and the minute hand on orange. Show the students times to the hour and have them demonstrate on their clocks the time that is shown. Teacher may model the time on the clock for them.

DAY 2:

Activity 1: Review day one by holding up flash cards and have them display the time on their clock.

Activity 2: Have the students stand up and do the Human Clock. Each student is given one blue card with numbers 1-12, in any order. Let them order themselves into a number line, then have them form a circle. Have one student in the center and one to hold a string from the center to form the hour hand. Have another student form the minute hand. Using cards with the hours again, have them show the hour by physically moving to point to the correct numbers, making sure that the minute hand moves around the clock. (Allow each student to take a turn.)

DAY 3:

Activity 1: Review times to the hour by holding up the flash cards again and they should display the times on their clocks.

Activity 2: Introduce time to the half hour by reviewing that one hour is 60 minutes and half of that is 30 minutes, and have them count on their clocks by 5 minutes until they reach thirty. The teacher will model how the hands move and then have them practice moving the hands. Showing them that the hour hand needs to also be half way between numbers. The teacher will also discuss the new vocabulary such as thirty minutes after and half past. Also, show them the way the digital clock looks.

Activity 3: Show the students the times to half hour and have them display that time on their clock.

DAY 4:

Activity 1: Review times to the hour and half hour by doing the Human Clock.

Activity 2: Make journals of teacher's choice for each student. Have the students keep track of activities from the end of the school day until the time that school begins on the next day. Having them list the activity and the time that it took place. They will hand it in the next day.

DAY 5:

Activity 1: Review times to the hour and half hour and then go over their journals talking about common activities and the times they occurred.

Activity 2: Review times by playing time bingo for hour and half hour. While playing the teacher would make a note of the children who are still struggling with the concept, may be in checklist form.

Materials/Resources:

1. Number cards
2. Flash Cards
3. Yarn
4. Paper
5. Pencils
6. Stapler
7. Brass Fasteners
8. Oak tag/paper plates
9. Houghton Mifflin Mathematics, 2002
10. It's All About Time, Max!, by Kitty Richards, Illustrated by Gioia Frammenghi, Math Matters Series The Kane Press

Interdisciplinary Connections:

- **Reading**

1. The Time Book by John Cassidy, Palo Alto, CA, Klutz Press 1991
2. The Wonderful Counting Clock, New York, Simon & Scholastic Books for Young Readers
3. The Grouchy Ladybug, Eric Carle
4. Pigs On a Blanket, Fun With Math & Time, by Amy Axelrod, Aladdin Paperbacks, Simon & Schuster
5. The Sun's Day, Mordicai Gerstein, New York: Harper & Row Publishers, 1989.

- **Technology**

Math Literature http://home.nyc.rr.com/teachertools/mathliterature.html
Time Teachers www.cyberbee.com/games/timeteacher.html
Telling Time Game www.time-for-time.com/game.htm
Arithmatic Math For Kids www.netrover.com/~kingskid/Math/mat.htm
First Grade Skills www.internet4classrooms.com/skills_1st.htm

Assessment Strategies:

- **Formative Evaluation (checking student understanding during the lesson):**

During all activities any of the following assessments may be completed:
Checklists
Observation
Informal questioning

- **Summative Evaluation (how will it be determined that the objectives were achieved?):**

  Journals that were completed on Day 4 and 5
  Informal teacher observation during time bingo

Correctives/Remediation:

If any students are struggling they may complete any of the following activities for review:

Time Concentration- the students play in pairs, may be heterogeneous groups, and play a matching, memory game to match analog, digit and word form of the times.

Transferring the time to a number line- create a number line using digital times from 1:00 to 12:00 using flash cards/concentration cards have them match to the number line

Review time to hour by using a clock with only an hour hand and hours labeled on clock.

Extensions/Enrichment:

If any students are excelling with this topic, or come already knowing these concepts they may complete any of these activities:

TV Time- Provide partners with a TV listing from your local newspaper. Have the children list three times that their favorite shows begin. Partners take turns showing the times on the clock.

Peer Buddies- have them work with students who are struggling to play various remediation games.

Time Order- Provide the students with index cards with times to the hour and half hour from 8am to 3pm and have them put them into time order.

Special Accommodations (special needs students)

- **Description of the Special Needs Student Selected:**

  A student with Asperger's syndrome who is above grade level on decoding and fluency in reading. He also memorizes quickly and recites facts well. He has a great difficulty with problem solving and inferential thinking. He also has poor fine motor skills and poor organizational skills. He also struggles with multi-step sequences and problem solving.

- **Accommodations to Use with this Student:**

  The student should deal well with the above activities, however some may need adapted. One activity that would need adapted would be the Journal. For this student a journal could be provided that has block sections for the times, and the activity could already be labeled. He could also be able to have someone scribe

for him. He may also have a peer buddy for any activity that requires multi-steps, so his buddy could provide correct modeling and on task behavior.