Nasco Education™ LESSON PLAN

Math

Developed with Ann F. Lamb, Ed.D.

Volume 42 | Gr. 3–4

Telling time and elapsed time

Common Core State Standards

Measurement and Data 3.MD

Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.

Measurement and Data 4.MD

Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.

Materials list

- Blank piece of paper, any color
- Ruled notebook and pencil
- Paper plates (**9725840**)
- Walking tempo music

Objectives

Students will be able to:

- Tell, write, and show time utilizing minute intervals
- Tell, write, and show elapsed time intervals
- Determine the elapsed time utilizing their personal life experience
- Determine intervals of time for assignment completion

Academic vocabulary

- Elapsed time
- Duration
- Time

Lesson prep

1. Make a class set of start times for each class throughout the students' week, include classes you do not teach as well as lunch and recess. Write each start time on its own paper plate.
2. On a separate paper plate, write the name of the activity and a short explanation of what students do in each class, including the classes you do not teach as well as lunch and recess.
3. Create an answer key and post it at four to six self-check points for students to self-assess. The answer key should have the start time opposite the short explanation of what students do during that time.

Start time	Activity
8:00 a.m.	Language Arts – Silent reading and word work
8:50 a.m.	Math – Work on subtraction facts
9:35 a.m.	Gym – Play kickball
10:05 a.m.	Recess – Play with kids on the playground

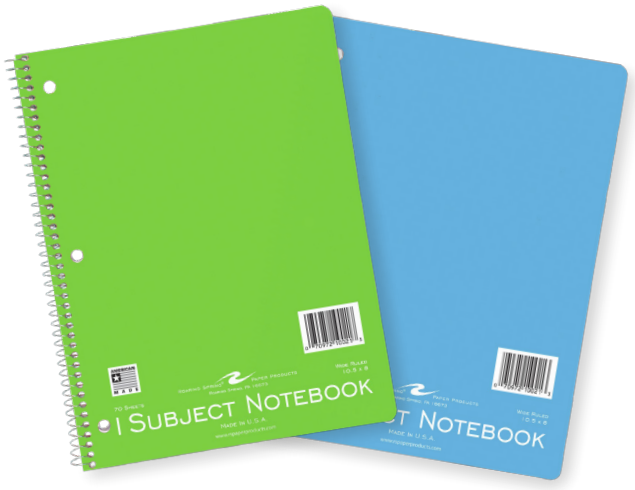
Lesson introduction

1. Have students sketch the current analog and digital time in their notebook.
2. Tell students when you say "Go," they will get themselves into a line **without** talking according to the time they wake up to get ready for school. They will arrange themselves in a line from the earliest riser to the latest riser.
3. Tell students when you say "Go," they will **bend the line** to determine the elapsed time between their wake-up times.

Bend-the-line instructions:

- Show the students an analogy by folding a piece of paper in half. Hold the paper horizontally and say "To the right is the earliest rising time and to the left is the latest rising time."
- Fold the paper and say "When I say 'Go,' you are going to bend the line you're currently in, so the earliest riser is directly across from the latest riser — without talking!"
- Do a silent check for understand by saying "I'm looking for 100% understanding of what to do when I say 'Go.'"
- If there aren't 100% silent thumbs up, repeat the instructions until there are.

4. Once students have bent the line, they should each end up across from another student. Tell them that the student across from them will now be their partner. Say "Go!" Tell students to write their wake-up time in the air or on their partner's back.
5. Tell students to write the duration of time between their wake-up time and their partner's wake-up time in the air or on each other's backs.
6. Then, have students to silently return to their workspace and open their notebooks. Have them write down "duration" and what they think is the definition of time duration. Tell the students to keep their notebooks out and open.

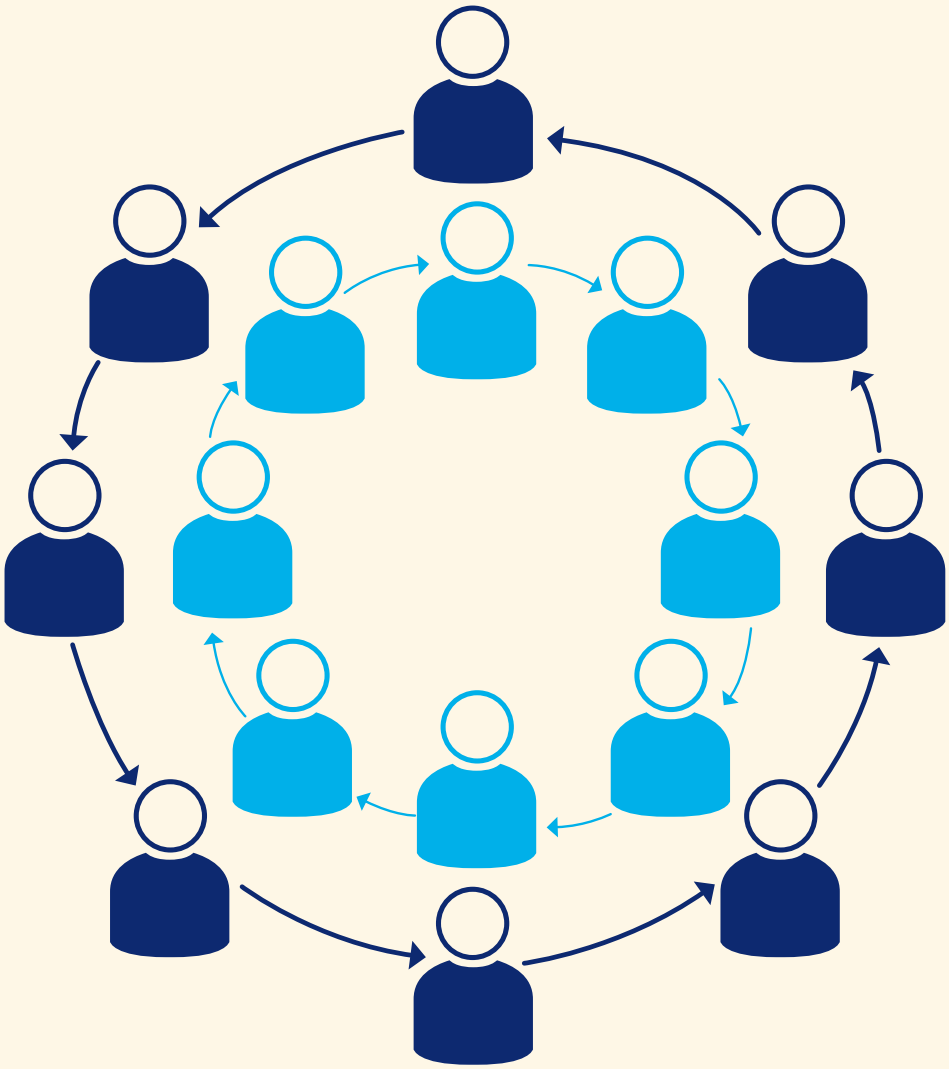


Activity 1

1. Tell students to sketch the current analog and digital time in their notebook.
2. Then, have students find their bend-the-line partner and skip to the paper plates you've laid randomly on the floor or desktops.
3. Tell students that in addition to the classes taught by you, the paper plates include classes taught by their other teachers, including lunch and recess. Tell students to pick up a start time paper plate and find the matching plate with the explanation of what they do during that time.
4. Show the students an example. Say "If you pick up the paper plate that says 'play kickball,' next you will find the paper plate that has the time you begin gym class."
5. Every time students make a match, they should skip to the answer key checkpoints you created to check their work and high-five their partner. They should then return the paper plates to the floor or desktops and proceed to find a new match.
6. Tell students to continue finding new matches until you call "time" to end the activity. Allocate enough time for each bend-the-line partner to cycle through all the matches at least one time.
7. After each partner pair has found every match, tell students to skip back to their workspace and sketch the current analog and digital time. Ask students what operation they would use to determine the amount of time that has elapsed.
8. In their notebook, tell students to write what they think is the definition of elapsed time. Tell them to keep their notebooks out and open.

Activity 2

1. Tell students you are going to ask them to do their tasks as quickly and as accurately as possible. They should use the clock in your classroom as a reference.
2. Tell them that when you say the start time, they should write it in their notebooks and complete the following three tasks:
    - Untie and tie their shoes or slide their shoes on and off
    - Skip to the hallway and put on and take off one item (e.g., backpack or jacket)
    - Speed walk back to your workspace and write the definition of "time" in your notebook
3. Tell students to take five slow breaths after they've written down their completion time for all three tasks. Then tell students to determine the operation to find the amount of time it took to complete the three timed tasks and write that amount in their notebooks.



Activity 3

1. Tell students to grab their notebooks and form two circles, one inside the other. Have them stand across from and face their bend-the-line partner. The late risers should form the inside circle and the early risers should form the outside circle.
2. Tell students that you are going to turn on music. The inner circle of early risers should start walking the circle in a clockwise direction, and the outer circle of late risers should walk in a counterclockwise direction. Tell them they should stop walking when the music stops.
3. Start and stop the music so students will be aligned with a new partner. After you stop the music, tell students to share their definition of "duration of time," and add to their understanding by listening to their partner.
4. Start and stop the music again so students will be aligned with a new partner. After you stop the music, tell students to share their definition of "elapsed time" and add to their understanding by listening to their partner.
5. Start and stop the music again so students will be aligned with another new partner. After you stop the music, tell the students to share their definition of "time," and add to their understanding by listening to their partner.
6. Start and stop the music again so students will be aligned with another new partner. After you stop the music, tell the students to share their updated definition of duration of time, elapsed time, and time (one at time) and add anything they learned from their partners.
7. Have students skip back to their workspaces. Project the definitions for "duration of time," "elapsed time," and "time" and discuss anything students might want to add to the definitions. Then, have students write the definitions in their notebooks.