

Gr.5

Thousands of Miles,
Thousands of Seats

Use at end of

Investigation 3

Vocabulary

Elapsed Time
Hours
Minutes

Materials

- Large demonstration analog clock
- Student analog clocks

NYS
Performance
Indicator

5.M.7
Calculate elapsed time in
hours and minutes

ACTIVITY

Calculating Elapsed Time: Minutes and Hours

Measuring Time

Time is measured in the same way that other attributes are measured: A unit of time is selected and used to “fill” the time to be measured. *Time* can be thought of as the duration of an event from its beginning to its end. An informal unit of time might be the duration of a pendulum swing, the steady drip of a water faucet, or the movement of the sun’s shadow between two fixed points (as on a sundial). To measure time, the units of time are started at the same time as the activity being measured (“timed”) and counted until the activity is finished. Thus the pendulum swings, for example, are “fitted into” the duration of time that it takes the child to print his or her name. By third grade, the concept of duration is generally understood. The related skills of reading a clock and computing elapsed time are another matter.

Clock Reading

Telling time has little to do conceptually with the measurement of time. The skills of clock reading are related to the skills of reading any meter that uses pointers on a numbered scale. Clock reading is a difficult skill to teach yet nearly everyone learns to tell time by middle school.

By third grade, clock reading is generally a review. Some students continue to experience difficulty with reading clocks to the minute, distinguishing between minutes before and minutes after the hour, and understanding the designations of A.M. and P.M.

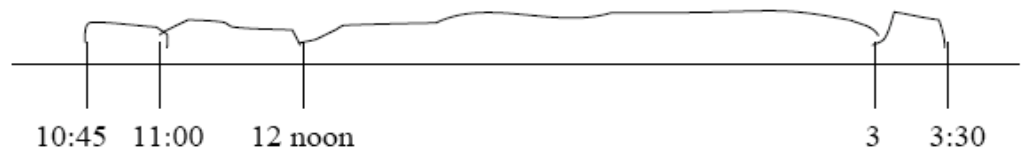
For students experiencing real difficulties with clock reading, a one-handed clock is a good suggestion. As shown in Figure 9.11, a one-handed clock—a clock with only an hour hand—can be read with reasonable accuracy. Practice this idea of reading approximate times using a one-handed clock before trying the following activity.

The lesson can be modeled using a timeline.

For example:

How long is it between lunch at 10:45 and when you get out of school at 3:30?

$$:15 + 1:00 + 3:00 + :30 = 4:45$$



If the game begins at 11:30 and lasts 2:45, when does it end?