Introduction

The Edmark Time Telling Program is the result of many years of research with special education children and has been highly successful with students of limited ability. It has been tested and found effective with developmentally disabled students aged 8 to 24 years, with IQs as low as 35.

Student prerequisities

Before attempting the program, students should be able to:

- Count aloud from 1 to 60
- Read numbers from 1 to 60
- Write numbers from 1 to 60
- Count by fives up to 55

Since reading skills are not required, students with language comprehension other than English can be taught with this program.

Teacher prerequisities

No special skills are required of the teacher. Teachers, aides, parents, and other students have all taught time telling successfully with this program. The program sequence has been designed and tested to develop the necessary skills for time telling. Specific places in the lesson pages are distinctively marked with numbered teaching cues that correspond with teacher instructions (see pages 9-14). These instructions include scripted comments for communicating important instruction details.

Each student may progress through the program at his or her own rate. Because the teacher must be aware of where a student is at within a lesson, the program is easiest to use with small groups of students. For this context, "small" means a class size that the teacher can adequately supervise. It is impossible to emphasize too strongly the importance of a positive and encouraging attitude on the part of the teacher.

Rules for writing and reading time expressions

This program teaches a student to read both a standard clock face and a digital clock face. Hour-and-minute time expressions are expected to be written with the hour and minute numbers in the form "3:15". When verbally stating the time, students should use the form "three-fifteen" – it is easier to use a "counting up" approach when determining a particular time rather than using concepts such as "before," "after," "half hour" or "quarter hour." For example, stating the time 7:30 as "seven-thirty" is preferable to "half-past-seven" or "thirty-minutes-before-eight." It is important to be consistent with these expressions throughout the lessons. Parents and families should be asked to help reinforce these time telling fundamentals.

Movement of the hour hand

The drawings of the hour clock hand in the first seven lessons of the program purposely do not show movement toward the next hour number. Experienced time tellers know that the hour hand moves in synchronization with the minute hand and gets closer to the upcoming hour, but a student who does not yet know how to read a clock face is unlikely to be aware of this phenomena. Before taking on that aspect of time telling, the student should master the concepts of saying the hour while counting up to the minute with a high degree of consistency. After the student can identify the hour and count up to the minute, the concept of the moving hour hand can be introduced. It is important to help the student focus on the hour number that the hour hand has passed, not the one that is coming up. Using a practice clock or clock simulator with lessons 8 and 9 is recommended to show what happens as the hands move toward the next hour.

What the program does not cover

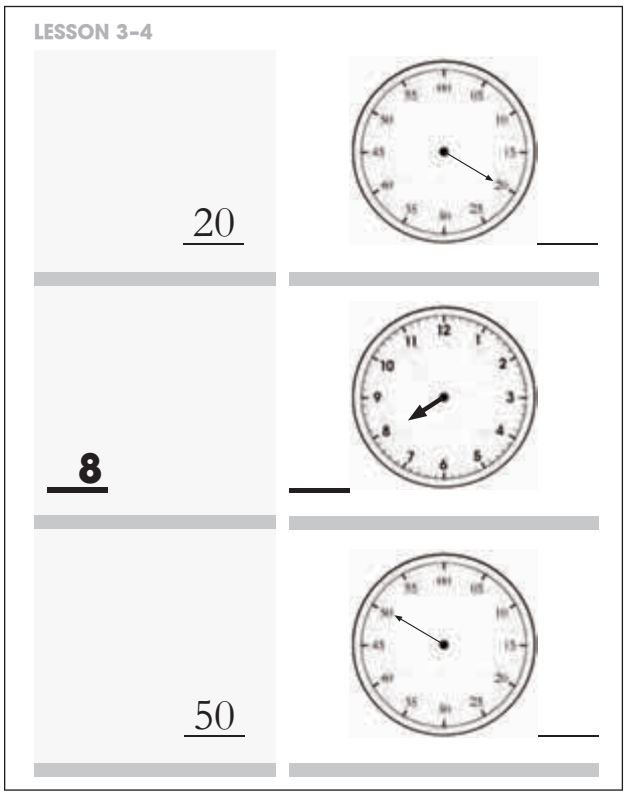
The program does not attempt to explain the "A.M" and "P.M" time designations for dividing the 24-hour day. This should, however, be considered before taking on additional exercises such as reading bus schedules or other timetables.

How to use the Edmark Time Telling Program

The nine time telling lessons should be used sequentially starting with Lesson 1. The order of the pages within a lesson is important. Lesson pages are sequentially labeled as 1–1, 1–2, 1–3, etc. at the top of the lesson pages.

Getting started

- Select an appropriate number of students for the lessons. Size of the group depends on how independently the students can work on the lessons.
- Print (PDF files) or photocopy complete sets of lesson pages for each student.
- Print or photocopy several practice sheets and have them available for use as needed during the lessons.
- Print or photocopy lesson score sheets for each student.
- Determine which method of handling lesson pages will be used for students (see page 6). When working with a group, it is recommended that all students in the group use the same method.
- Have students use lead pencils without erasers. Student errors and correction efforts should be preserved.
- Have the numbered teaching instruction pages (see pages 9-14) available for reference while students are working on the lessons.
- Have a practice clock or the clock simulator available for demostrations as needed – appropriate for lessons 7–9 only.
- Repeat lessons as needed. Do not start a new lesson until a student scores three errors or less. It is recommended that a student finish one complete lesson each day.



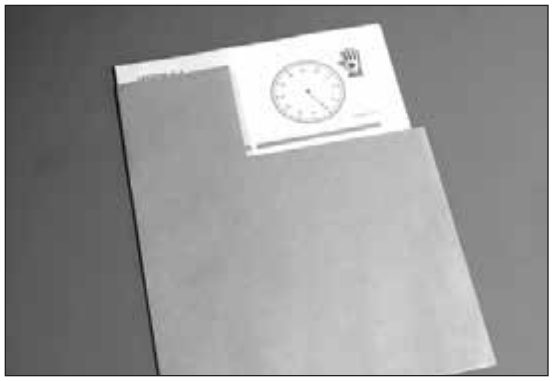
The lesson pages

Each lesson page presents a top-to-bottom sequence of activity frames that each requires a solution in the form of written numbers, drawn clock-hand-arrows, or written numerical clock time expressions.

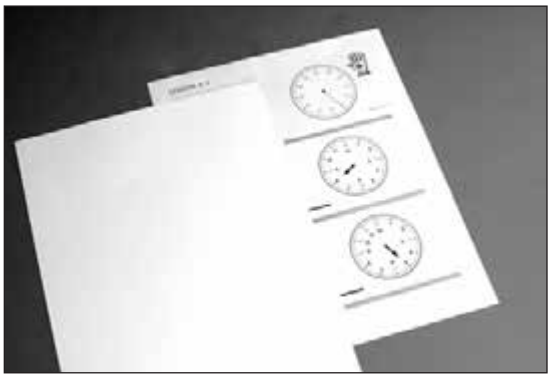
The lesson page is divided into two vertical columns. The student's active work area is on the right-hand side, while the left column displays the answers. It is expected that the answer column will be covered until the activity frames on the right side are completed. The answer key portion of the page is narrower and lightly shaded to visually set it off from the lesson work area.

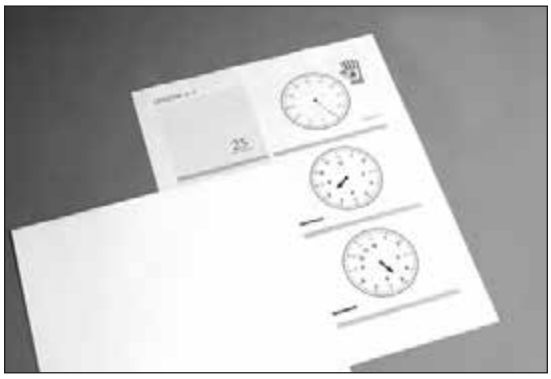
Student use of the lesson pages

Working through a lesson page one frame at a time, the student is expected to attempt a solution before looking at the answer frame on the left side of the lesson page. How the lessons pages are presented to a student depends on the capabilities of the student. Below are three recommended methods.

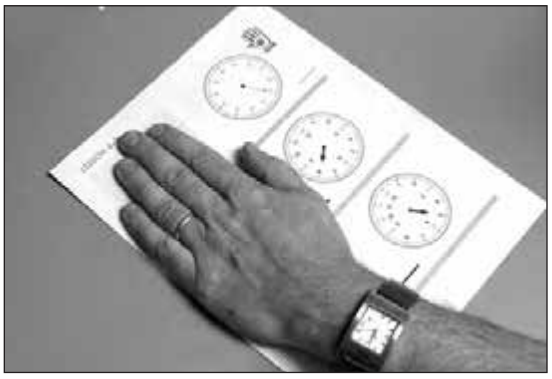


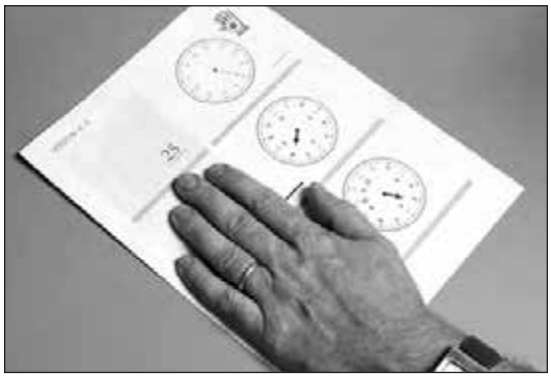
1. The included die-cut envelopes provide a way to keep a set of lesson pages together and to show only the current or completed lesson frames. Pulling the lesson page up one frame exposes the answer frame and presents the next lesson frame. When all frames of a lesson page are completed, remove the page to show the first frame of the next lesson page.





2. If handling lesson pages with the envelope method is difficult, it may be easier to provide the student with one lesson page at a time. The answer side of the page can be covered with a piece of paper — slide the paper down to uncover the next answer frame.

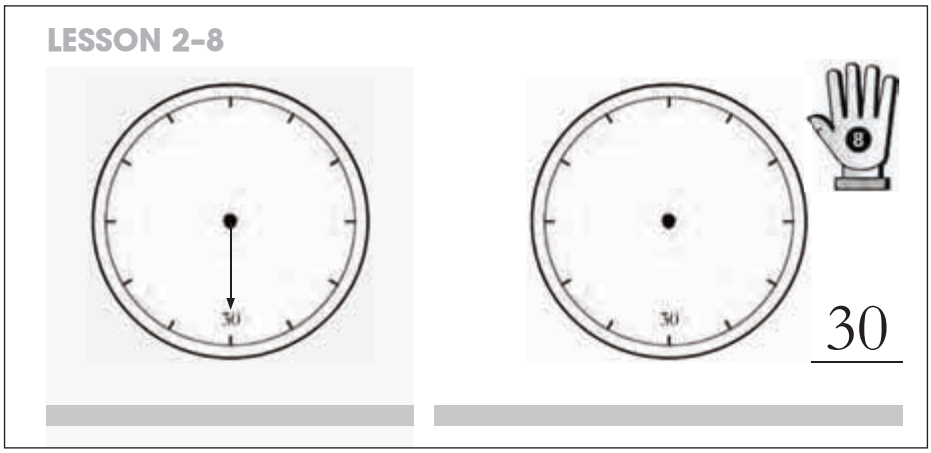




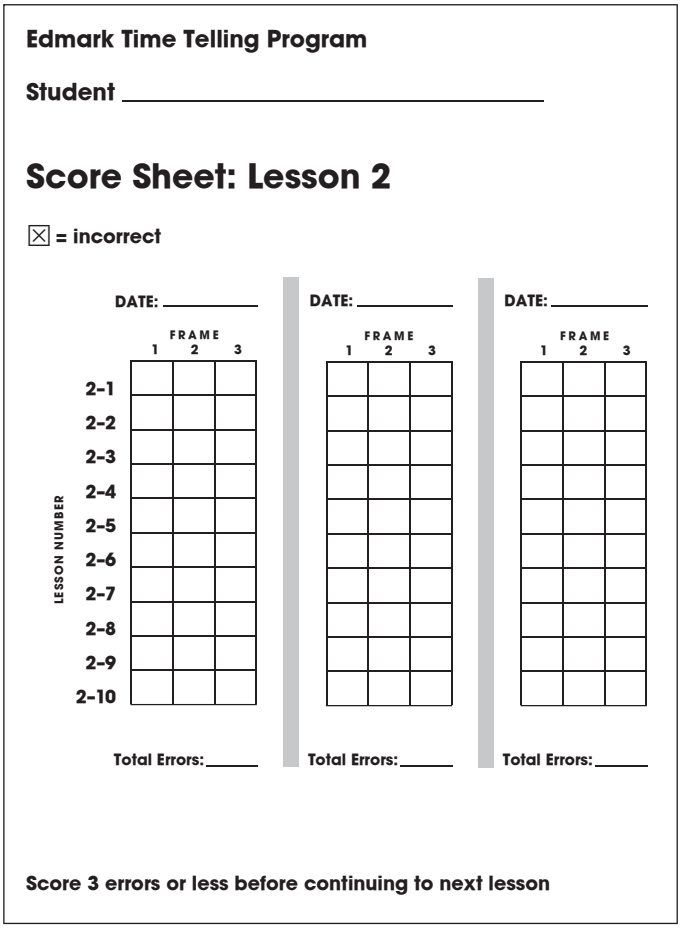
3. For students needing more direct assistance, the teacher can simply cover the answer frames with their hand while guiding the student through the lessons.

Lesson cues and teaching instructions

Numbered stop/hand symbols appear throughout the lesson pages. At these spots, a new time telling concept or worksheet mode must be introduced and explained to the student. Each of these lesson cue symbols corresponds to numbered teacher instructions (see pages 9-14).



Ideally, the student will understand that they should stop at these marked spots in a lesson and raise their hand or ask for help. Whether or not this happens, the teacher should be prepared to interact with students at these key transition points. Along with overview information about lesson objectives, the teacher cue instructions provide scripted comments that can be read to the student.



Edmark Time Telling Program

Student _____

Score Sheet: Lesson 2

☒ = incorrect

LESSON NUMBER	DATE: FRAME 1	2	3	DATE: FRAME 1	2	3	DATE: FRAME 1	2	3
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	Total Errors:			Total Errors:			Total Errors:		

Score 3 errors or less before continuing to next lesson

Scoring procedure

Score sheets are included for each lesson. Scoring is done by indicating frames that have errors. An error is any deviation from the correct answer, including a missing colon. Three errors are the recommended criteria for having a student repeat the lesson. A new lesson should not be attempted until the student achieves three errors or less.

Practice time telling with worksheets and clocks

After students have learned to read a standard clock face from the printed lessons, they should practice their time telling skills. Practice worksheets with blank analog clock faces and blank digital clock displays are provided (in the book and as PDF documents) for continued time telling practice. Also provided is the TimeWheel™ clock simulator for practicing analog and digital times. The clock simulator and the blank practice worksheets can be used in a number of different ways in preparation for using real clocks.

- Set the clock at one o'clock while the student watches the clock face. Ask the student, "What time is it?"
- Proceed through all the exact hours, always having the student watch as you set the clock. Reinforce the student with appropriate praise each time he responds with the correct time.
- When the student can read the exact hours, set the clock at 4:05 or any five-minute increment, and ask "What time is it?" Continuing to practice until all five-minute settings can be recognized.
- When the student can read the five-minute settings, use the clock face practice sheet to draw the hands on the practice sheet for times using five-minute intervals. Draw hour hands up to a number for the hour hand, and through the number for the minute hand. Next, have the student write the time beside the clock face.
- After developing competency with five-minute intervals, set the clock at 4:07 as the student watches and ask what time it is. Start by pointing at the 4:05 minute mark and count by ones starting with the number 5 ("five, six, seven").
- Have the student select times other than exact hours or five-minute intervals and count from that number until he/she can read time to the nearest minute.
- After learning to determine time to the nearest minute on a standard clock face, provide the student with the practice sheet #2 that shows blank digital time displays. Have student write the answer in the blank digital clock face.

Have the student practice with the clock simulator five to ten minutes each day for at least five days after completing the Time Telling program. Frequently ask the student, "What time is it?" Encourage the student to look at wall clocks, desk clocks, and a wristwatch. For additional practice, have the student record starting and stopping times for activities.

Lesson Cues and Teaching Instructions

Start each lesson with the answer side covered (use the provided die-cut envelope or one of the alternate methods explained in the introduction). The numbered hand symbols appearing on the lesson pages indicate places where teacher-student interaction is needed. Suggestions for what to tell a student are indicated by the non-indented, ***bold-italic items*** below. While the scripted comments may be changed to better suit a teacher's personal style, the order should not be changed.

Point to the numbered hand picture on Lesson 1-1 and explain what these symbols mean.

When you see one of these pictures of a hand with a number, it means that you will need some help. Raise your hand to help me know that you are waiting for instructions.

Point at the number **6** in the first frame of Lesson 1-1 and say,

Let's look at this first item. This number 6 is darker and thicker than the thin number 15 next to it. Use your pencil and write the thick number on the thick line. Then write the thin number on the thin line.

Wait for the student to write the numbers **'6'** and **'15'** on the appropriate lines – do not help them, except to repeat the instructions.

Now, pull the lesson page up until you can see the answer on the left side of the page. Check your answer to see if you got it right.

Point to the answer and ask,

Is your answer the same?

If not, have the student cross out (do not erase) the wrong answer and write a new answer. Help them reach the correct answer if necessary and say,

Read your answer.

The student should say "six fifteen" for the written answer **'6 15.'**

Now, go ahead and do the next one.

If the student correctly completes the next frame, he or she should continue on independently. If not, continue the instruction sequence above until he or she has mastered the distinction between the thick (bold) and thin (regular) numbers. Check in often, asking the student to read the answers out loud.

Point to the **'05'** hour number and say,

This is called 'oh five' – what is it called?

…allow student to answer…

That's right, 'oh five.'

Point to the **'00'** minute number and say,

This zero-zero minute number means to say o'clock' instead of saying 'oh oh.'

…still pointing, ask,

What does this number mean?...That's right, o'clock'.

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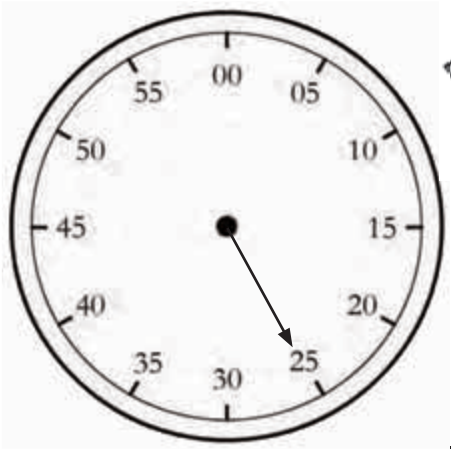
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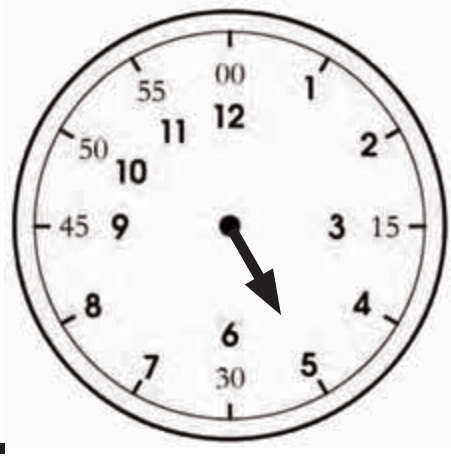
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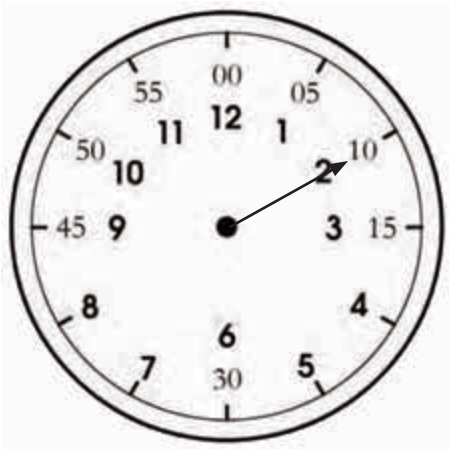
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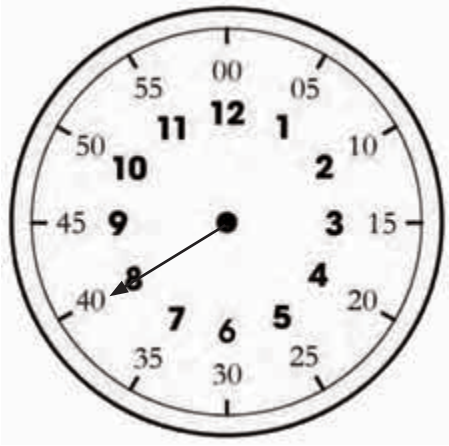
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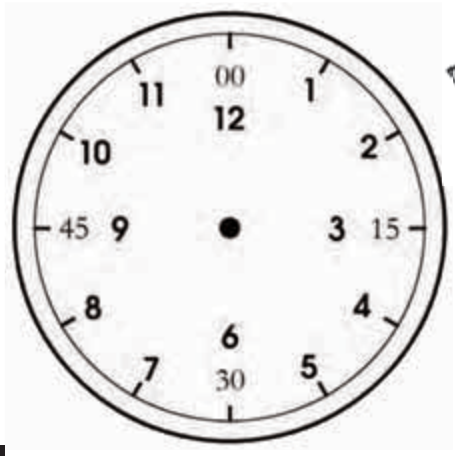
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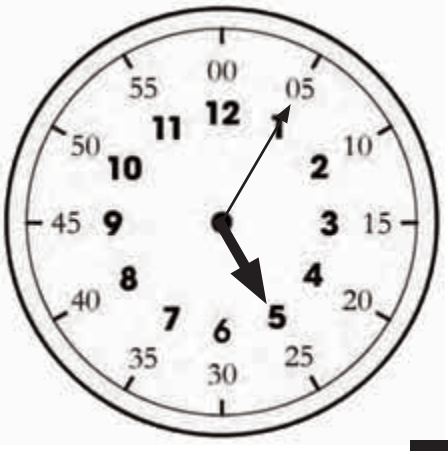
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Edmark Time Telling Program

Student _____

Score Sheet: Lesson 4

☒ = incorrect

DATE: _____

LESSON NUMBER	FRAME 1	FRAME 2	FRAME 3
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4–10			

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DATE: _____

FRAME 1	FRAME 2	FRAME 3

Total Errors: _____

DATE: _____

FRAME 1	FRAME 2	FRAME 3

Total Errors: _____

Score 3 errors or less before continuing to next lesson