

Lesson 7.7

Elapsed Time Continued

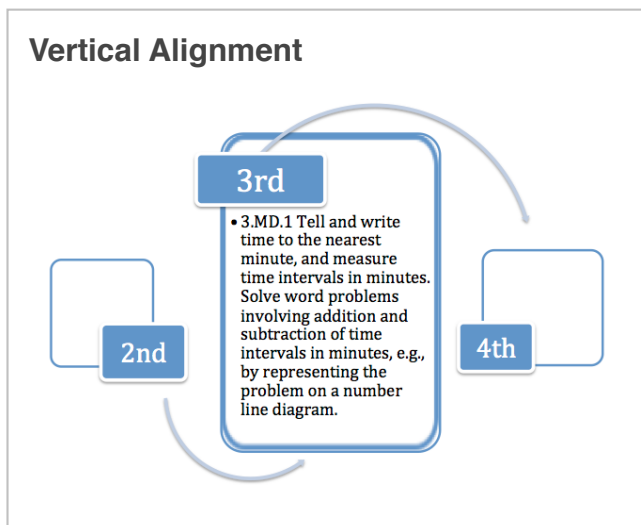


A digital departure board for Terminal A2. The board is titled "Terminal A2 Departures" and shows a list of flights with columns for Time, Flight, Destination, Via, Check In, Gate, and Status. The time shown is 24:00 (10:00 AM). The flights listed include destinations like New York, London, Paris, Stockholm, Helsinki, Frankfurt, Lisbon, Amsterdam, Tokyo, Hong Kong, Los Angeles, Singapore, Bangkok, Brussels, and Munich.

Time	Flight	Destination	Via	Check In	Gate	Status
10:35	RE 1355	NEW YORK JFK	COPENHAGEN	9:12	34	ON TIME
10:45	AG 6154	LONDON HEATH		10:18	18	ON TIME
11:05	CX 4971	PARIS CDG		10:18	18	ON TIME
11:15	BI 1138	STOCKHOLM		10:19	18	ON TIME
11:30	FI 2097	HELSINKI		10:27	27	ON TIME
11:45	KL 4563	FRANKFURT		10:34	34	ON TIME
11:55	DF 7286	LISBON		10:15	7	ON TIME
12:10	IC 9014	AMSTERDAM		10:18	18	ON TIME
12:25	EK 4626	TOKYO	SHANGHAI	10:31	15	ON TIME
12:40	HD 1740	HONG KONG	ISTANBUL	10:18	18	ON TIME
12:40	UA 1740	HONG KONG	ISTANBUL	10:18	18	ON TIME
12:55	ST 9544	LOS ANGELES		10:21	4	ON TIME
13:10	KG 3389	SINGAPORE	BANGKOK	10:25	27	ON TIME
13:10	KB 3389	SINGAPORE	BANGKOK	10:25	27	ON TIME
13:25	LR 5762	BRUSSELS		10:19	19	ON TIME
13:40	UL 6239	MUNICH		12:14	1	ON TIME



PLAN



Math Objective

Students will be able to solve elapsed time situations using a schedule for real-life scenarios.

Language Objective

Students will be able to explain a representation of elapsed time using models.

Mathematical Practice

Model with mathematics.

Students will model understanding of elapsed time when solving problems involving the passage of time by using t-charts or open number lines.

Notes

1. This lesson revolves around the use of an airport departure schedule. Students should not need prior experience at an airport to complete this task. Providing a common experience of airports using a book or short video clip is recommended.
2. Due to the task-like nature of this lesson, no independent activity is included.

Materials

- ✓ Safari Montage clip
“Bored—Nothing to Do!” Chapter 4: Airports, or short narrative about airports to build interest and a common experience
- ✓ Situations 1–6, one set for class use
- ✓ Wing cards (1 per student, printed on heavy paper)

TEACH

Lesson Instructions

1. Watch the Safari Montage clip from “Bored—Nothing to Do!” Chapter 4: Airports. (This *Reading Rainbow* clip gives students a common experience of what a flight crew needs to do in order to get a plane out of the gate.)
2. Discuss the departure board pictured below. Allow students to make observations about the information available on the departure board and how it may be useful to passengers and crew members.

Departure	Destination	Flight #	Status	Gate
10:27 am	Houston	4410	On Time	B5
11:09 am	Chicago	6466	On Time	B7
11:48 am	San Francisco	5539	Delayed	A13
12:50 pm	Chicago	3463	On Time	D4
12:58 pm	Houston	485	On Time	A11
1:21 pm	Denver	6468	On Time	C2
2:07 pm	Denver	6507	Cancelled	B2
4:00 pm	Chicago	6227	On Time	D12
4:55 pm	San Francisco	6441	On Time	D14
5:05 pm	Denver	6507	On Time	C3
5:41 pm	Los Angeles	6433	On Time	B7
6:24 pm	San Francisco	5199	On Time	A2

3. Tell the class, “Airlines run on a very tight schedule, and every minute counts. Today you will be managing a ticket counter at the airport. Your job is to help passengers with their flights and help them get where they need to be. For every person you successfully help, you can earn a star for your pilot wings. After filling in all of your stars, you will have one more situation to solve. After you’ve solved it, you may color in the rest of your wings.”

4. Divide the class into 5–6 groups. Distribute a situation sheet to each group. Invite students to read the problem together and then attempt to solve it on their own. Students should identify the information given and the information needed before attempting to solve the situation. Invite students to record the known, unknown, and solution model in their journals.
5. After students have been given sufficient time to work on their own, challenge them to discuss their models and solutions as well as justify their thinking.
6. Once all group members have successfully solved the problem, they may color in one star on their “wings” before moving on to the next group/location.

Alternative: If this model seems difficult for the class, an alternative would be to present one situation to the class at a time.

CHECK

Differentiation

Students who need a challenge, or who finish early, should find additional strategies to solve the problems. Additionally, they may write their own situations related to the provided departure schedule.

For students who are struggling, allow them to use the complete time number line. It may also help to assign colors to each element needed (start time: green; change in time: yellow; stop/end time: red).

Writing Prompt

How can knowing how to solve elapsed time help when reading a schedule?

Student Pages

7.7 In-Class Activity Name _____ Date _____

Wings

3rd Grade **Avantage** Elapsed Time Continued

Problem 1

Destination	Depart	Arrive
Atlanta	8:00 AM	9:00 AM
Chicago	9:00 AM	10:00 AM
Denver	10:00 AM	11:00 AM
Los Angeles	11:00 AM	12:00 PM
London	12:00 PM	1:00 PM
Madrid	1:00 PM	2:00 PM
Paris	2:00 PM	3:00 PM
San Francisco	3:00 PM	4:00 PM
Seattle	4:00 PM	5:00 PM
Washington, DC	5:00 PM	6:00 PM

1. Mr. Wallace wants to see the city of London. He will leave for London at 12:00 PM. How long will he have to wait until the next flight?

Problem 2

Destination	Depart	Arrive
Atlanta	8:00 AM	9:00 AM
Chicago	9:00 AM	10:00 AM
Denver	10:00 AM	11:00 AM
Los Angeles	11:00 AM	12:00 PM
London	12:00 PM	1:00 PM
Madrid	1:00 PM	2:00 PM
Paris	2:00 PM	3:00 PM
San Francisco	3:00 PM	4:00 PM
Seattle	4:00 PM	5:00 PM
Washington, DC	5:00 PM	6:00 PM

2. Passengers are waiting to leave when their flight to Paris is cancelled. How long after their original flight time do they need to wait for the next flight?

Problem 3

Destination	Depart	Arrive
Atlanta	8:00 AM	9:00 AM
Chicago	9:00 AM	10:00 AM
Denver	10:00 AM	11:00 AM
Los Angeles	11:00 AM	12:00 PM
London	12:00 PM	1:00 PM
Madrid	1:00 PM	2:00 PM
Paris	2:00 PM	3:00 PM
San Francisco	3:00 PM	4:00 PM
Seattle	4:00 PM	5:00 PM
Washington, DC	5:00 PM	6:00 PM

3. Cameron's flight to Denver was cancelled. How long after her original flight time did she need to wait for her next flight?

