LEARNING RESOURCES®

Classroom Clock Kit

Teaching Guide

The ***Classroom Clock Kit*** (LER 2102) includes one ***Big Time***™ demonstration clock (LER 2094), 24 four-inch mini-clocks, and this teaching guide. Get the whole class excited about telling time by giving each child an individual clock for hands-on learning!

Learning to tell time using analog clocks is more challenging than learning to read digital clocks. However, children's understanding of the cyclical nature of time can be strengthened using the analog format.

BEGIN WITH THE BASICS

Allow children to experiment with their clocks before beginning formal instruction. This experimental time allows your students to create questions that will make explanations more meaningful. After this experimentation, you'll want to begin your instruction with the following basic points.

Hour Hand

Ask children to find the short, red hand on the analog clock. Tell them this is the hour hand; it always points to the hour. Count the numbers around the clock, pointing to each number. Be sure the minute hand points straight up to indicate an exact hour. Count around the clock face reading the hours from 1 to12.

Minute Hand

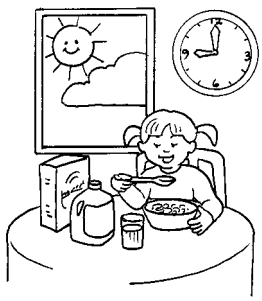
Next, ask children to find the long blue hand. Tell them this is the minute hand; it always points to the minutes. Show children the blue tick marks. Tell them the space between each tick mark equals one minute. Count by ones around the clock face to reinforce this idea.

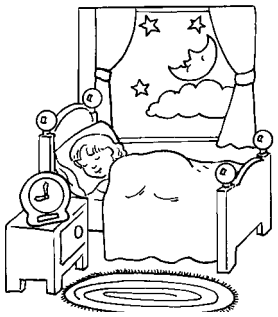
Cycle of Time

Help children understand the cyclical nature of time. Let children know that some clocks have second hands. After the second hand completes a revolution, one minute has passed. After the minute hand completes a revolution, one hour has passed. Using the demonstration clock, begin at 12:00. Move the minute hand a full revolution to complete one hour. Point out the location of each hand before and after the revolution. Children should be able to recognize that the hour hand moves in conjunction with the minute hand.

Equivalent Intervals

Explain that 60 minutes equal one hour and that 30 minutes equal one-half hour. Quarter hours should not be introduced until children have a firm grasp on hour and half-hour intervals.





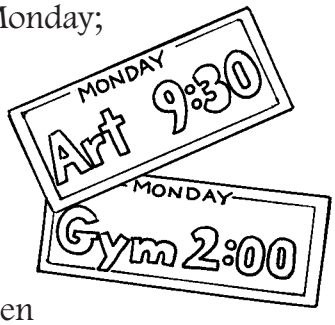
A.M. and P.M.

There are 12 hours on the face of the ***Big Time***™ ***Learning Clock***®, but there are 24 hours in each day. The day is divided into two, 12-hour intervals. Each time period has a Latin abbreviation. The 12 hours from midnight until noon are called the ***a.m.***, or ***ante meridiem,*** *hours.* The 12 hours from noon until midnight are called the ***p.m.,*** or ***post meridiem,*** *hours.* Ask students what they think happens when the time goes from 11:59 p.m. to 12:00 a.m. The date changes.

CROSS-CURRICULAR IDEAS

- Help children list daily activities. Then, using the demonstration clock, go through the day, pausing at the correct time for each activity. After children become more comfortable with their clocks, ask them to do this activity independently.

- If you don't already have magnetic daily activity strips (Art: 9:30 Monday; Gym: 2:00 Monday, etc.), make some out of paper. Mix up one day's strips on the chalkboard, then ask for children's help to arrange them in chronlogical order. Children may use their student clocks to play along at their desks. Create miniature daily activity strips for student desktops.



- Encourage children to observe time in their environment. ***"How do we know the correct time?"*** Many factors help us to determine the correct time. Looking at a watch, a clock, or the sun; feeling hungry; or getting sleepy all help indicate the time of day. ***"At 4:00 I have a basketweaving class. I go right after school. School's almost over, so it's almost 4:00."*** Use problem-solving skills and deductive reasoning to help children understand time. Children observe everything; show them how to use it to their advantage!

- Read a book to the class. Instruct children to set their clocks along with activities in the story. If the actual time is not shown in the book, prompt children with questions. ***"The boy goes to soccer practice after school, but hasn't had dinner yet. Set your clocks to a possible time."***

- Challenge students to compose fun songs relating to time. As students sing their songs, classmates may set student clocks to times mentioned in the music. Was the time in order?

- Talk about the different meals in a day. Name each meal and set clocks to an appropriate mealtime. Graph the types of foods students eat at each meal.

- We wear different clothes for different activities. What do you wear to sleep? Set your clock to the times that you change clothes during the day (school clothes, play clothes, karate practice, bedtime, etc.).

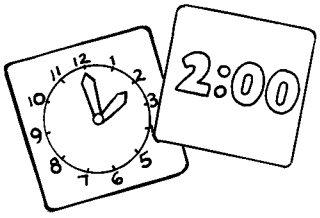
- Look through magazines and catalogs, cutting out pictures of elementary-age activities. Hold up the pictures and ask children to set their student clocks to the time that they would do that activity. If 11:30 is the answer, reinforce the meaning of the numbers by asking, ***"What does the 11 mean? What does the 30 mean?"***

- Use journals or story starters to reinforce the importance of understanding time. A few story starters: "My favorite time of the day is...because..." "I like Saturdays at 9:00 a.m. because..." "Animals at the zoo wake up at..."

GAMES

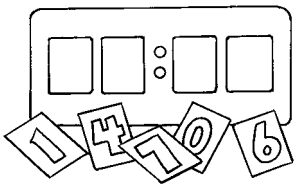
- Predict time. Begin with everyone standing. Instruct children to sit down when they believe a minute has passed. Children will be amazed how long a minute can seem.

- Create analog and digital playing cards. Match the time on the two cards.



- Set a time limit and challenge students to find items in a classroom scavenger hunt. Before beginning the hunt, tell students the time limit of the game. Ask them to set their student clocks to the time the game will be over. They'll know the game is over by matching the time on the student clocks to the wall clock.

- Create a Time Bingo game to play with the entire class. Laminate the gameboards for future use or for use in learning stations.



- Make cardboard analog clocks with windows for the digits. Create 0-9 number cards to place behind the cardboard windows. Match this digital time on analog clock faces.

- Introduce children to role playing. Place role-playing instructions in a hat for children to select. For example, ***"Act out waking up in the morning."*** As the student acts, classmates set the clocks to the time they believe is being role played. After children set their student clocks, they wait for a thumbs up or thumbs down "try again" from the teacher.

- Ask children to set their own time limits when playing games.

AT-HOME FUN

- Search through the newspaper for time references (TV listings, movie schedules, 12-hour sales at the Toy Store, etc.). Cut out the times and glue them to paper, then bring them to school for sharing. Ask students to do the same.

- Estimate the time it takes to get home after school. Just before the class leaves for the day, note the time on the clock. When children arrive home, ask them to write the time on a piece of paper. Encourage parents to help their child calculate the time it took to get home.

- Suggest that parents demonstrate how a clock works by showing children the inside mechanisms at work.

TIME TOOLS

- Build a classroom timer. You'll need a large clear jar, one paper cup, sand, and a watch with a second hand. Poke a small hole in the bottom of the cup. Secure the cup to the clear jar. Pour sand into the cup. As the sand falls, use your second hand to measure the desired amount of time for your timer. Use the timer when you'd like the entire class to clean the room, or form a line. It's amazing how quickly kids can work when they believe they're playing a game!

- Build a sundial out of classroom materials. On a sheet of paper, place a pencil in a lump of clay. Set the sundial in a sunny location and tape it in place. Check the sundial every hour and draw a line where the shadow is cast.

TEACHER HELPERS

- Create interactive bulletin boards for students to use with their student clocks. Attach a large analog clock face to the wall. Include pockets large enough to hold index cards next to each hour. Have students list the times of different activities on index cards and place the cards in the appropriate pockets (art, gym, etc.). Include a miscellaneous pocket for activities that are timed (running races, fact tests, dinner in the oven, microwave popcorn, etc.).