

MATHEMATICS



The time

SEQUENCE 1

Age group	6-9 y.o.
Prior knowledge	None
Material needed	Analogue clock box
Subjects	Maths - converting a digital clock to an analogue clock. Art - making a clock, worksheet with examples of a digital clock.
Skills involved	Converting a digital clock to an analogue clock. Dividing a circle into equal parts. Calculating with units of time.
Time to carry out the sequence	2 hours

Step 1: Introduction. What time is it?

Start the lesson with the song about Time.

Lead a discussion on the meaning of time and explain different expressions used in relation to time.

Ask what the expressions mean:

- to kill time
- to serve the time
- to take time off



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- to pass the time

Like "To kill time.", "To spend time doing something while one is waiting.", "We killed time watching the sailboats on the river.".

Step 2: How to measure time?

Ask pupils about their knowledge of units of time that define the passage of time (century, millennium, year, seasons, days of the week, yesterday, today, tomorrow, soon, before, now, minute, second, hour...).

After the discussion, ask students to classify the definitions.

After the discussion, draw a mind map of units of time. Discuss with the children what can be measured by the units of time on the mind map.

- In minutes, we measure the time spent in lessons (45 –60 minutes).
- In seconds, we measure time in some sports (running, swimming, etc).
- In years, we measure how old we are.

Step 3: Storytelling

Pupils listen to the story. After listening, lead a discussion about what they have learned.

Step 4: Discover the content of the box

The students familiarise themselves with the contents of the box.

They predict what they will be doing after.

Step 5: Create your own clock

Ask your pupils to craft an analogue clock from a paper plate. Guide them if they need some help.



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Step 6: Solve tasks

Ask pupils to take a worksheet from the box and complete the tasks written on the sheet.

The pupils read the time from the page and move the hands of the clock they have made into the correct position. For example, the paper says 3:30, and the pupil reads the time and says: "It's half past three". They then read the next time, count how many hours and minutes it is to the next time and move the clock hands to the next position.

Step 7: Play the game "What time is it, Mr Wolf?"

End the activity by playing the movement game.



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SEQUENCE 2

Age group	9-12 y.o.
Prior knowledge	Roman numerals, use of compass
Material needed	2 sheets of cardboard, scissors, compass, coloured pencils, ruler, paper towels, pictures of different clocks and time-measuring instruments (hourglass, sundial, stopwatch, wall clock...).
Subjects	Maths - converting a digital clock to an analogue clock. Art - making a clock, worksheet with digital clock readings. History - timekeeping devices in history.
Skills involved	Calculating with units of time
Time to carry out the sequence	2 hours

Step 1: Introduction What is time?

Lead a discussion on the theme: What is time?

Talk about how we are totally dependent on time: we need it to act, to achieve goals, to complete tasks. We keep a constant account of the time we spend, and we plan time. We waste time, we gain time, we share time, we give time, we take time, and we lose time. We waste time, but we don't actually lose any. We win time, but we don't get the prize.

We divide, but into what parts, we do not know; we give without giving; we take without grasping; we lose, but in such a way that even the most exhaustive search



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would not allow us to find what we have lost because how can we really have lost time if it is still here?

Step 2: Topic development - How to measure time?

Ask the children about units of time used to define the passage of time (century, millennium, year, seasons, days of the week, yesterday, today, tomorrow, soon, before, now, minute, second, hour...).

Ask pupils how they measure time and what mechanism they have for that. What kind of clock do they have? Explain how time has been measured throughout history. Tell them about different tools for measuring time that have been used throughout history.

Show them examples (water clock, sand clock, sundial, etc.). This is a good place to show pictures from the Internet. If there is no internet connection in your classroom, print some of the pictures before the lesson.

Step 3: Storytelling

Let students read the story by themselves. Give them time to understand the concept.

Lead a discussion about what they have read. Ask them why Christiaan Huygens is such an important person that he is still remembered.

Step 4: Discover the content of the box

The pupils familiarise themselves with the contents of the box.

They predict what they will start doing.



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Step 5: Create your own clock

The pupils create their own clocks with Roman numbers. It is a good idea to check that they remember how to write Roman numbers. Write the Arabic numbers on the board and ask students to write the correct Roman number next to the Arabic number.

Step 6: Solve tasks

The pupils complete the tasks from the worksheet. They write their answers on the paper.

Step 7: Play the game

Movement game, the relay race "Body Clock".

It is good to end the lesson by playing the game. See the instructions on the Notice.



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