Let's care about… screen time

It's a topic that affects us all, occupies an important place in our daily lives and is a constant source of conflict in some families: screen time.

Screens are all around us - from smartphones to laptops to TVs. But have you ever wondered how much time we actually spend in front of these screens? And more importantly, how can we use mathematical concepts to understand and potentially influence this phenomenon?

We will not only look at the pure numbers, but also think about how our screen time influences our daily decisions and how we can potentially use this time more effectively.

Overview "Let's care about… screen time"

How to become aware of the personal screen time by using mathematical concepts

Context
Everyday life
Health and care
Recreation

Cognitive processes
Analysing situations
Processing information
Mathematising
Critical thinking

Target group (incl. necessary prior skills and competences)

Adults and likely especially young adults with basic numeracy competences who use media and social media for different purposes without being aware of the real amount of time spent on screens.

Content
Quantity and number

Dispositions
Affection
Beliefs
Flexibility

Outcomes and results

Learners become aware of their personal screen time and reflect this critically.

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Main information

Content	Quantity and number Statistics Percentages
Target group	Adults and likely especially young adults with basic numeracy competences who use media and social media for different purposes without being aware of the real amount of time spent on screens.
Learning intention	What is the intention of adults to face this problem? – Numeracy for personal and private purposes
Duration	Approx. 2 lessons
Material and resources	Computer, internet, beamer Video (see appendix 1) Flipchart or whiteboard Optional: smartphones (see appendix 2) Optional: Model of pie chart (see appendix 3)
Group size	Range from 5 to 15 learners
Problem statement	In today's world, screens are everywhere, from phones to computers to TVs. We want to know how much time we spend looking at these screens and figure out how math can help us understand and maybe change this. We'll not just look at the numbers but also think about how our screen time affects our daily choices and how we can make better use of it.
Working questions	• Are students aware of their personal daily screen time? • Are students capable of reflecting their screen time behavior critically and, if necessary, change it? • How to visualize and mathematize the daily screen time?
Learning outcomes and results	The students reflect critically on their individual screen time and daily routines. The students analyze and visualize their daily screen time. The students think of ways to reduce their screen time, being aware of possible negative consequences of a high daily screen time.

Working plan

Time (lessons)	Description of content/activities	Material	Methodical and didactic information[1]
15 min	**Activation** To put the learners in the (mathematical) situation, they watch the YouTube video "Look up" in which the time we spend on screens and social media is critically reflected. Even if the students have problems with following the speaker's monologue, they will catch the message by watching the clip. The teacher carries out an open discussion with the learners to provide a first reflection on their personal screen time: • What is the message of the video? • Do you feel addressed by this video? • Do you feel you're having a lot of screen time daily? • Are there situations where you put away your phone consciously? • …	Computer, beamer Video "Look up" – See appendix 1	Critical thinking and self-reflection
30 min	**Activity**: Hypothize and check Ask the students to hypnotize about their daily screen time: How many hours do they think they spend on screens per day? Give them time to reflect all kinds of media consumption within their daily life routines. It can be helpful to collect typical screen time activities on a whiteboard beforehand. In a second step, the students are asked to check and verify their hypothesis. Together with the learners, discover different (mathematical)	Whiteboard or flipchart	Critical thinking and self-reflection Hands on learning

[1] for description and explanation of kinds of tasks, HITs and other background information please consult the teachers'/user's guide

	solutions to do so, e.g. marking regular screen time on a 24-hours plan or using the data on individual use provided by some smartphones. The teacher can also ask the students to collect the data of one day as a homework.	Smartphones – see appendix 2 for an example	
40 min	**Activity:** Visualization Have the students organize the collected data on daily screen time and represent it in simple pie charts. Make sure that all learners know that the whole pie chart stands for one day of 24 hours and 1/24 marks one hour of the day. The students are asked to deeper reflect their pie charts and what the data could reveal about their habits: • How much time do you spend daily on various screen activities? • What kind of activities are most time-consuming (social media, games, learning, watching TV…) • Can you say the percentage of your total screen time in relation to a day of 24 hours? • What would be your screen time in a week? • Think of other daily routine activities (eating, sleeping, doing sports): What is the relation of these activities compared to your daily screen time?	Optional: model of pie chart – see appendix 3	Hands on learning Metacognitive strategies questioning
15 min	**Transfer** Ask the students to think of possible ways to reduce the daily screen time, if necessary. Make them think of possible relationships between screen time and other factors such as sleep, academic performance, or physical activity. The most “daring” learners may engage in an experiment called “24 hours without screens” – and later report on their experiences.		Questioning Critical thinking and self-reflection

Suggestions for the teacher/user

The example presented here should be considered as exemplary and inspirational material presenting a guideline with a high range of possibilities of adapting those suggestions to a specific group of learners or an individual learner with his or her very personal requirements.

In concrete terms, the example "Let's care about… screen time" can be an interesting way to raise students' awareness of the application of math concepts in the context of their daily activities. Depending on the learners' interests and daily life routines the example could be adapted these ways:

- Further or additional material: There can also be used various statistics commenting on screen time routines within a society or a particular (age) group of society within this learning unit.

  For learners with lower linguistic skills, it can be useful to first explore the vocabulary related to "screens", including various devices.

- Dispositions taken into account: The teacher must be aware of the fact that the smartphone represents an essential, even vital, object for everyday life for many learners, especially for younger learners. It is therefore important to be sensitive and not to stigmatize high media consumption. Learners need to feel comfortable in this instructional unit in order to genuinely and critically analyze their screen time.

Our educational activities aim at numeracy skills being not only memorized, but first of all being practiced and functionally used by the learners in daily life or/and vocational situations. It is therefore recommended to implement the idea of HITS[2] (higher impacts of teaching skills) as far and often as possible: ...

- ... work with concrete and authentic material that learners will recognize from everyday life situations. For this learning unit, it is crucial to have the learners reflect on their very individual screen time behavior instead of only analyzing "anonymous" statistics, as they need to find themselves within the topic.
- ... ask the learners questions and let them raise questions themselves. It can be crucial to discuss numeracy themes, contexts and numbers.
- ... think of possible ways of transfer: A fruitful transfer of this learning unit is in any case a critical reflection of the individual behavior and daily routine of the learner.

[2] For general information and explanation on HITS please see teachers'/user's guide

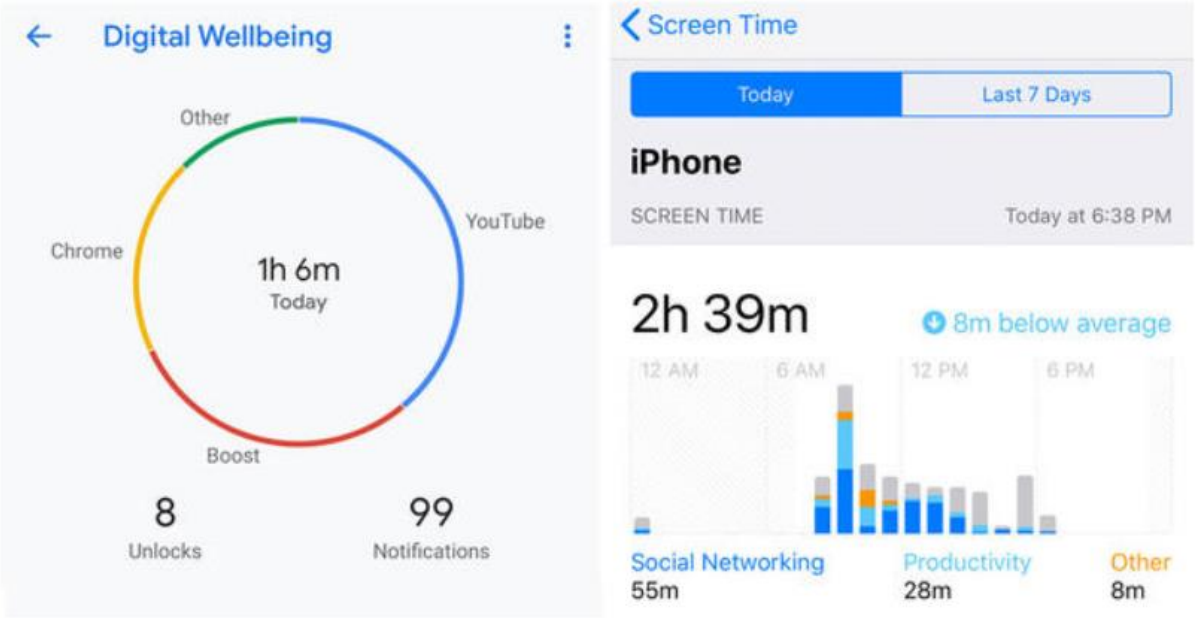
Appendix 1

Video “Look up!” on YouTube for activation

Link: look up gary youtube - Google Suche [29.12.2023]

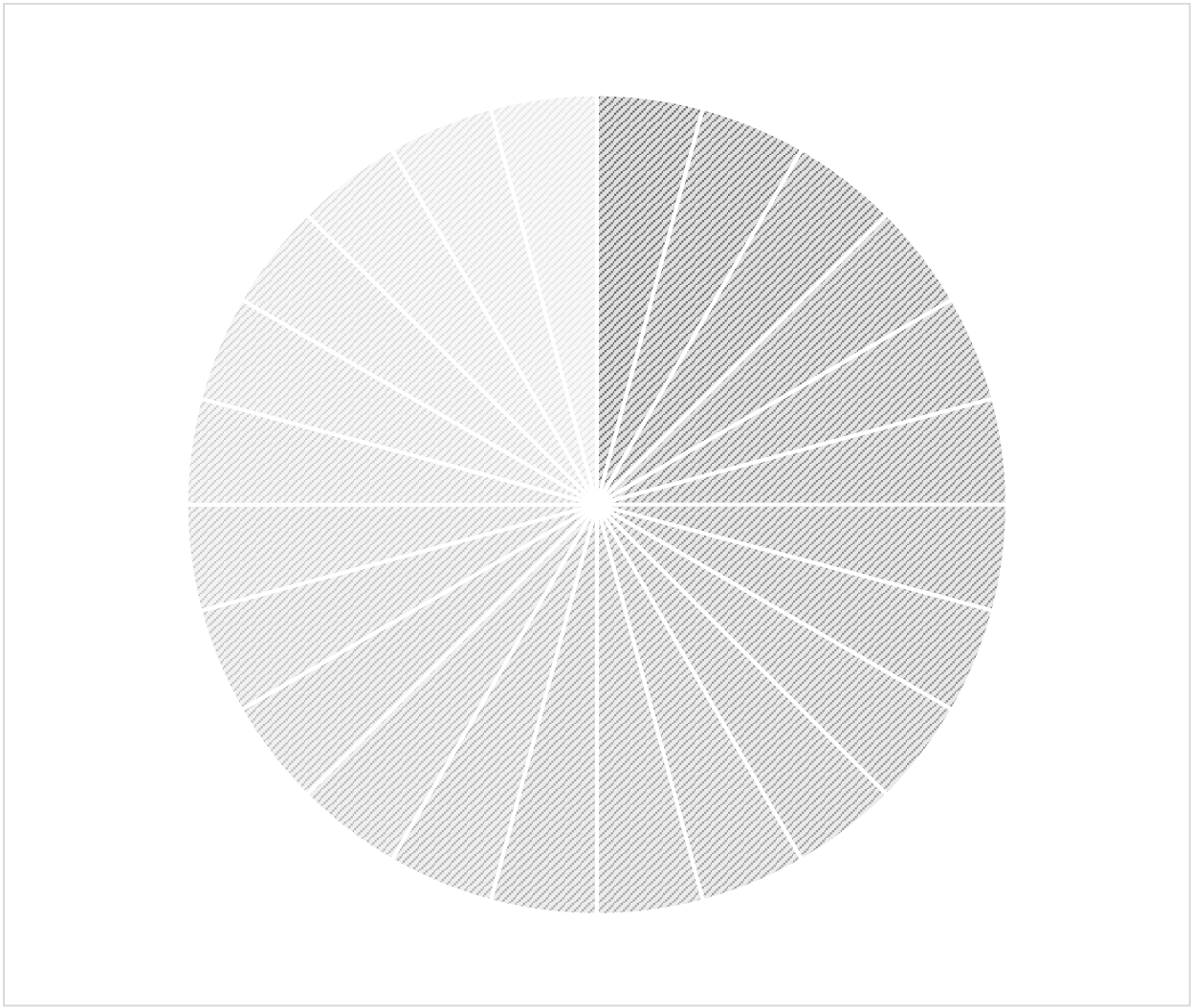
Appendix 2

Source: Can Apple's Screen Time Reports Actually Help Curb Your Phone Addiction? - WSJ [29.12.2023]



Source: Addicted to your smartphone? How to keep track of your screen time - CBS News [29.12.2023]

Appendix 3



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