

Numeracy in practice teaching and learning examples



Stay Safe: Alcohol and Driving Don't Mix!

Don't drink and drive!

"Don't drink and drive!"

These words are not just a simple slogan, but a vital message that has the potential to save lives and prevent serious accidents.

The combination of drinking alcohol and driving a vehicle is not only prohibited by law, but also extremely dangerous. By understanding and heeding this, we as individuals can help make our roads safer. Let's take this opportunity to promote responsibility and raise awareness of the serious dangers that come with the mix of drinking and driving. Let's take a step together towards safer roads and a more responsible society!

Overview "Don't drink and drive!"

How to understand and interpret statistics that address the topic "Don't

drink and drive!"

Context
Everyday life
Citizenship
Health and care

Cognitive processes
Processing information
Mathematising
Critical thinking

Content Quantity and number Pattern, relationship, and change

Data and change

Adults and young adults with basic numeracy competences with interest in statistics addressing a socially very important topic in many European countries.

Target group (incl. necessary prior skills and competences)

Outcomes and results

Learners analyse and are able to deal with information presented by statistics.

Dispositions
Affection
Beliefs
Math anxiety



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Main information				
Content	Whole numbers, decimal numbers and percentages Interpretation of statistics and comparison of data Meaning of the average Critical mathematical thinking			
Target group	Adults and young adults with basic numeracy competences with interest in statistics addressing a socially very important topic in many European countries.			
Learning intention	 What is the intention of adults to face this problem? Numeracy for personal and private purposes Numeracy to understand society 			
Duration	Approx. 2 lessons			
Material and resources	Pictures, awareness raising spots or leaflets, newspaper headlines or articles (appendix 1)			
	Statistics addressing the topic (appendix 2)			
Group size	Range from 6 to 12 learners			
Problem statement	Statistics are often perceived as abstract entities whose information is only accessible to highly educated people. The guided discussion on and interpretation of simple statistics on a socially very important topic is intended to allay the learners' fears and pave the way for dealing with statistics in everyday life.			
Working questions	 Are the learners aware of the risks and dangers of drinking and driving? How to interpret statistics step by step: title, the axis, finding the highest and the lowest value, rough assessment or interpretation of the development of the values, What does the average value tell us? How can we find out the average? 			
Learning outcomes and results	The students interpret statistics on a socially important topic and develop strategies to deal with similar statistics addressing different topics.			





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Time (lessons)	Description of content/activities	Material	Methodical and didactic information ¹
20 min	Activation Use awareness raising material, spots, newspaper headlines or whole newspaper articles addressing the topic "Don't drink and drive" to place learners in the situation. Lead the learners through a short discussion on the dangers and risks of drinking and driving. Emphasize the importance of making safe choices on the road. Ask the learners to add personal experiences if they want to.	Pictures, awareness raising spots or leaflets, newspaper headlines or articles — see appendix 1 for examples	The material chosen for activation can vary depending on depending on the time available and the content of the course (see "suggestions for the teacher".
45 min	Activity: Statistics Present statistical data on traffic accidents in connection with alcohol consumption. Tell the learners that statistics can help to understand the urgency of the issue. Help the learners to interpret the statistics by posing questions and encourage them to pose questions themselves, for example: • What does the title of the statistic tell us? What is this statistic about? • What do the axis of the statistic tell us? Why is this important? • Did the number of alcohol-related accidents increase or decrease the last years? • Which year had the most accidents? Which year had the fewest accidents? • Is there an average value given by the statistic? If not, how could we find it out?	Statistics – see appendix 2 for examples If you have learners with different countries and cultures of origin, it may be interesting to compare data from these countries, if available.	Hands on learning Critical thinking Metacognitive strategies Mathematical talk

¹ for description and explanation of kinds of tasks, HITS and other background information please consult the teacher's/user's guide





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	 Which day of the week the most accidents occur? Which day the fewest? What could be possible explanations for this? 	
25 min	Transfer The structure of this example allows students not only to apply mathematical concepts, but also to think critically about the meaning of data in a real-world context. There are various ways to increase the added value of this teaching unit: • Have an open discussion about the findings from the statistics, pictures and articles used in this teaching unit. Emphasize the responsibility of each individual on the road. • Encourage students to think about how math can help them understand real-world problems and find solutions. • Include similar statistics addressing different topics within one of the following teaching units to help the learners become familiar and comfortable with this kind of data representation.	Metacognitive strategies Differentiated teaching



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 "Don't drink and drive!" could be adapted these ways:

- Level of difficulty: The phase of activation can very much depend on the linguistic (reading) skills of the learners. Therefore, the teacher may propose only pictures, titles or slogans but also whole newspaper articles in order to raise the issue and activate the learners.
- Duration: Like mentioned above, the duration can vary depending on how the phase of
 activation is designed. In courses that also include working on linguistic skills, the time
 spent on an article and an accompanying discussion can easily dominate.
- Learning setting: Before addressing this topic with your learners make sure that your group is prepared to this. Be aware of the fact that there could be someone with relevant previous experience concerning this topic in both directions, perpetrator and victim. Furthermore, alcohol can be a difficult subject in itself, and one that affects some learners personally.

Once you are convinced that your group is prepared for this topic, try to integrate all your learners with their experiences, whether they drink alcohol or not at all, whether they have a driver's license or not.

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 HITS² (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.
- ... 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: This example may provide strategies that help the learners analyze and interpret different kinds of statistics that they encounter in their everyday lives.

² For general information and explanation on HITS please see the teacher's/user's guide





Appendix 1

Appendix 1: Raising the issue for discussion and activation.

Depending on the linguistic (reading) skills of the learners, the teacher may propose only pictures, titles or slogans but also whole newspaper articles in order to raise the issue and activate the learners. Some possible examples are shown below.

VERKEHRSSICHERHEIT

Gemischte Bilanz zum 25-jährigen Jubiläum der 0,5-Promille-Grenze

Tödliche Verkehrsunfälle durch betrunkene Lenkerinnen und Lenker gingen deutlich zurück. Doch Alko-Unfälle insgesamt haben zuletzt wieder zugenommen

5. Jänner 2023, 15:17, 226 Postings



Source: www.derstandard.at/story/2000142320277/gemischte-bilanz-zum-25-jaehrigen-jubilaeum-der-0-5-promille [28.12.2023]







Source : French Road Safety: Don't Drink & Drive • Ads of the World™ | Part of The Clio Network [28.12.2023]



TRAGÖDIE

Nach Alk-Unfall: Jetzt auch Kind gestorben

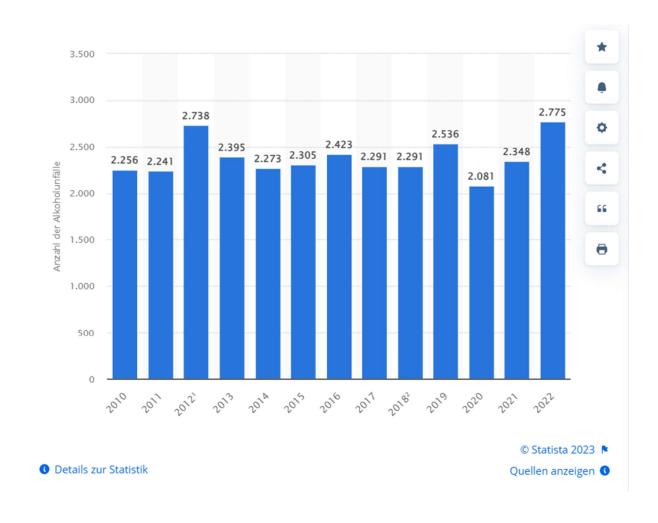
Source: Nach Alk-Unfall: Jetzt auch Kind gestorben - oe24.at [28.12.2023]





Appendix 2

Alcohol-related accidents in Austria



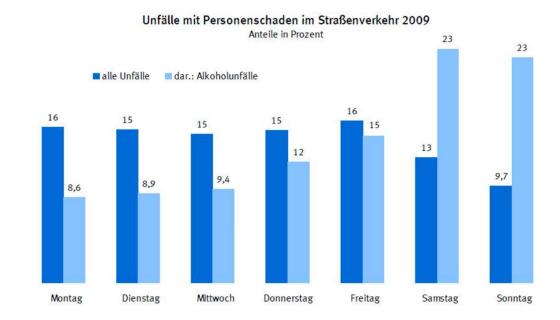
Source: Österreich - Alkoholunfälle im Straßenverkehr 2022 | Statista [28.12.2023]



ANALYSE*STRASSENVERKEHR*STUDIEN*VERKEHRSSICHERHEIT

Die Deutschen und der Alkohol am Steuer

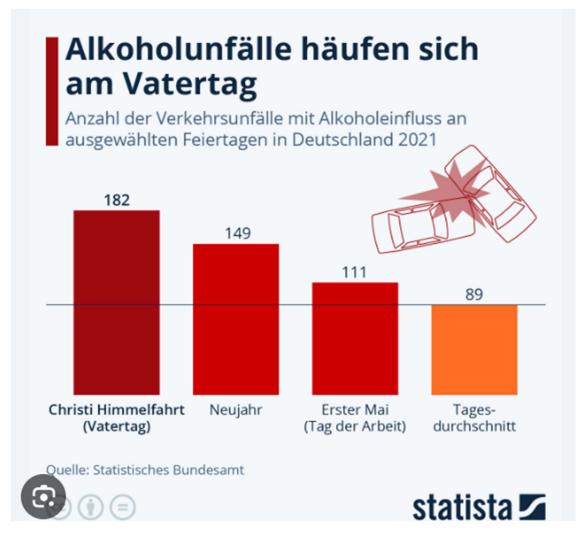
☑ 4. Oktober 2011 ② 20. März 2016 ♀ ein Kommentar 🆀 Martin Randelhoff 🗐 11 Minuten Lesedauer



Source: <u>Die Deutschen und der Alkohol am Steuer | Zukunft Mobilität (zukunft-mobilitaet.net)</u> [28.12.2023]







Source: Infografik: Am Vatertag passieren die meisten Alkoholunfälle | Statista [28.12.2023]