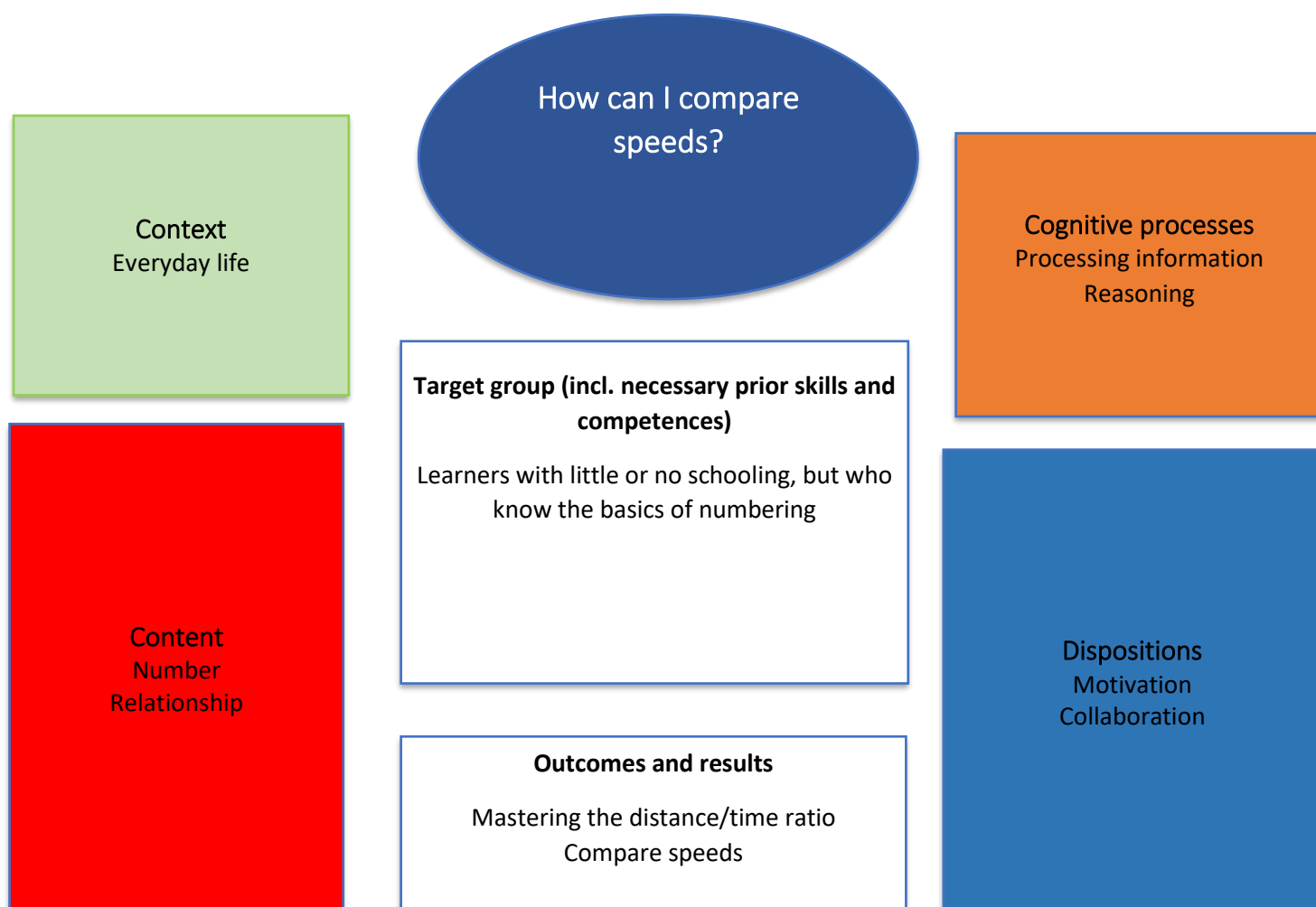


Which is the fastest?

You are planning a trip into the city, and you have two options: taking the bus or riding your bike. The distance is 10 kilometres. The bus travels at an average speed of 30 km/h, but it has multiple stops along the way, which adds time. On a bike, you can go at about 15 km/h, but without any stops. Which do you think will get you there faster?

How do you compare speeds? What unit of measurement should you use, and what does it correspond to?

Overview “Which is the fastest?”



Main information

Content	Identify numbers in everyday life Relationships and ratio Classifying and ordering
Target group	Learners with little or no schooling, but who know the basics of numbering, distance units and time calculation
Learning intention	<ul style="list-style-type: none"> – Numeracy for personal and private purposes – Numeracy for professional issues – Numeracy to understand society
Duration	1 lesson
Material and resources	Labels (see appendix) An Internet connection may be useful
Group size	10 to 12 learners
Problem statement	This session is an introduction to the concept of speed, and to manipulating relationships between units (in this case, distance and time). It provides the basis for the session entitled “Is a car really faster than a bike?”
Working questions	<ul style="list-style-type: none"> - What is speed? - How is it measured? - How do you compare speeds?
Learning outcomes and results	The students are able to: <ul style="list-style-type: none"> - Master the distance/time ratio - Compare speeds
Reference to National Qualification Frame	Optional (country’s decision)



Working plan

Time (lessons)	Description of content/activities	Material	Methodical and didactic information ¹
	<p>The teacher projects a document with some pictures (appendix 1).</p> <p>Ask the learners what do these images have in common? What do they evoke for them?</p> <p>So, today we'll work about the concept of speed.</p>	See appendix 1	Questioning
	<p>You are going to rank different elements according to their speed, from slowest to fastest.</p> <p>To do this, you are first going to do your own ranking, then compare it with your neighbour's: you'll need to agree.</p> <p>Then we'll compare all the results and we'll look for agreement. If necessary, we will carry out an Internet search.</p>	See appendix 2	Collaborative learning Digital skills
	<p>To be able to compare speeds with certainty, we need to use a common unit of measurement, the km/h. But do you know exactly what it means?</p> <p>The teacher explains the concept of speed: it's a relationship between the distance you cover and the time it takes you to cover it.</p> <p>The unit of measurement is the kilometre per hour: if you walk at 4 km/h, that means you cover a distance of 4 km in one hour.</p>	Exercises to manipulate the concept of speed (see appendix 3)	Explicit teaching Worked examples

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



	<p>So, if you know the speed of an element, you can calculate how far it will travel in a given time, or how long it will take to cover a given distance.</p> <p>In reverse, if you know how far it travels in a given time, you can calculate its speed.</p> <p>The trainer performs the first exercise on the board, to make sure that all the learners have understood the principle, and then everyone continues with the other exercises.</p> <p>The correction is done collectively, with exchanges between participants and input from the trainer if necessary.</p>		
	<p>Transfer</p> <p>Follow with the session entitled "Is a car really faster than a bike?"</p>		



Appendix 1



source: www.pixabay.com



source: www.pixabay.com



source: www.pixabay.com



Source: Olympia: Was ist der Weltrekord über 100 Meter? | DAZN News DE [11.12.23]



Source: https://commons.wikimedia.org/wiki/File:SNCF_TGV_POS_4402.jpg [11.12.23] Source: [Animal locomotion - Wikipedia](#) [11.12.23]



Appendix 2

Note:

If the participants are illiterate, use the labels.

If the participants already have a first degree of autonomy in writing, you can use the table.



Which is the fastest?






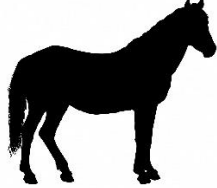


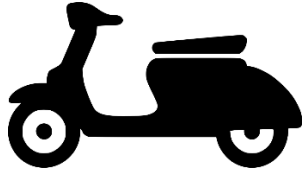
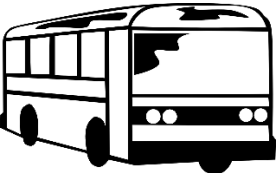





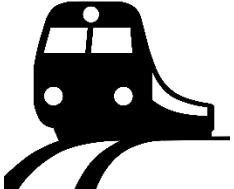


	My ranking	Pair ranking	Group ranking
A walking human			
An ant			
A crocodile			
A train			
A dog			
A scooter			
A plane			
A running human			
A horse			
A bike			
A car			
A rhinoceros			
A bus			
A truck			
A snake			
A sailing boat			
A snail			
A motorbike			





Which is the fastest ?

pictures: www.pixabay.com

Appendix 3

Example

I'm walking at 4 km/h, so I'll cover 4 kilometres in 1 hour.

How many kilometres can I cover?	How long does it take me to cover?
- in 2 hours:	- 1 kilometre:
- in 1 hour and a half:	- 10 kilometres:
- in 1 quarter of an hour:	- 500 metres:

. The car is travelling at 120 km/h.

How long will it take to travel 180 km?

How many km will it cover in 2.5 hours?

. Same calculations if the car is travelling at 130 km/h

. I'm on my bike and I've covered 10 kilometres in half an hour.

What was my speed?

How long will it take me to cover 25 km?

. Usain Bolt ran 100 metres in 9.58 seconds.

What was his speed?

. A tortoise travelled 0.3 metres in one second.

What was its speed?



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