We are the brightest

Theory: Visibility on the way to school.

This file provides background knowledge on the topic of visibility and facts about the subtopics of darkness in winter, our eyes, reflectors and the braking distances of cars.

More at:
thebrightest.ch

Visibly safe together –
a Generali initiative.

GENERALI

Fact 1

The days are shorter during winter.

Earth orbits the sun. It also rotates around its own axis. So, while the sun's always shining, it doesn't reach some parts of Earth. That's why we have daytime and nighttime.

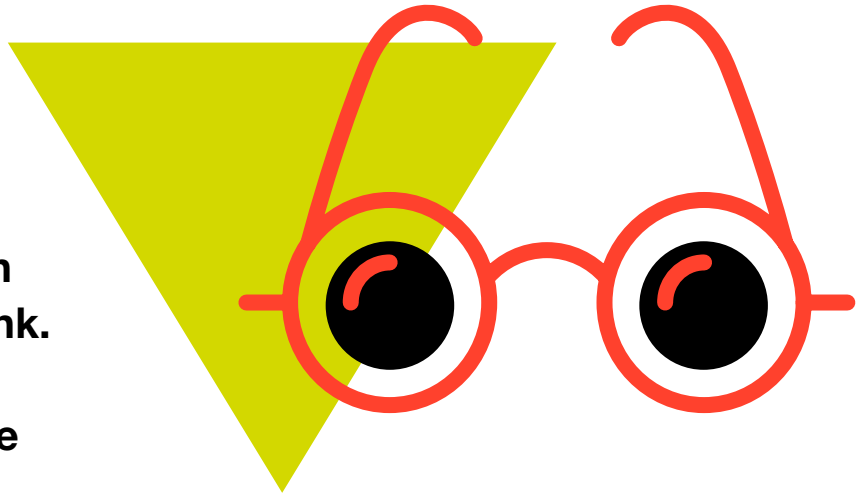
Earth is always slightly tilted towards the sun. During summer, the sun shines on our part of Earth for longer. And for a shorter time during winter. So it gets light later and dark earlier.

Fact 2

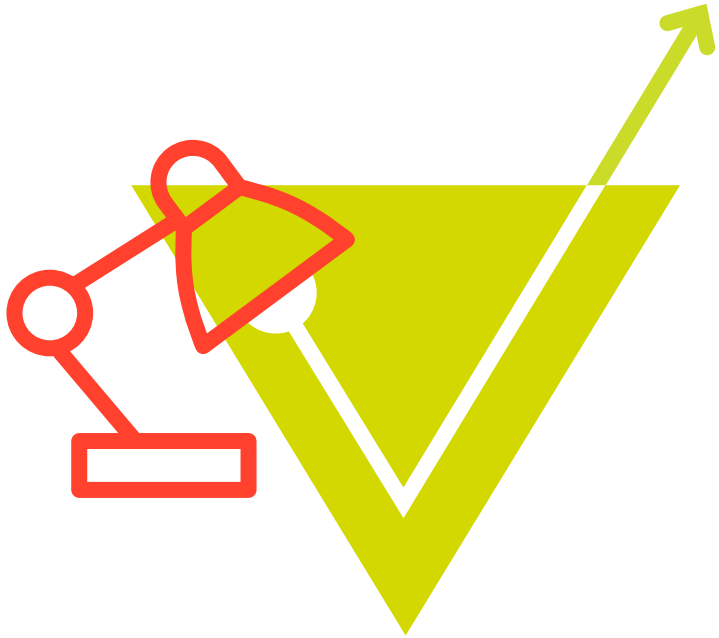
Seeing in the dark is more difficult.

Sight is very important for humans. It's the sense that allows us to recognise our surroundings and control our movements.

Our eyes automatically adjust to the ambient light. When it's bright, lots of light hits our eyes. Then our pupils shrink. But when it gets dark, our pupils get bigger. When we enter a very dark room from a bright one, our eyes take a long time to adjust. It can take up to 30 minutes for them to get used to the new low-light environment.



Fact 3
Reflectors shine back.



Lamps produce light; reflectors do not. They “only” reflect the light that falls on them. The Latin verb “reflectare” literally means “to bend back”. This effect means a bright reflection is produced when a car’s headlamps shine on the reflectors we’re wearing, for example.

Incidentally, reflectors are also found in nature. Animals like cats and dogs have reflective layers in their eyes. That’s why they can see much better in the dark than us humans. And why their eyes glow when we shine a light on them.

Fact 4

A car has a long braking distance.

In addition to weather conditions and the road surface, a car's braking distance also depends on the speed it is travelling at. A car's braking distance is about 9 metres when it's travelling at 30 km/h, and about 25 metres at 50 km/h.

Also, drivers sometimes have slower reaction times when they're distracted or tired. That's why visibility is so important. The sooner a motorist sees us, the sooner they can brake.