TRANSCRIPT · EPISODE 239

Why Does the Moon Look Bigger Near the Horizon? | Curious English

English learning resource · EN

Full episode script · English

82 lines

Study task: Listen again and notice the expressions you studied.

You are walking home in the evening, and the moon is rising above the buildings.

It looks enormous, much bigger than usual.

Is the moon really bigger tonight?

Welcome to Curious English.

I'm Julia.

And I'm Martin.

Today's question is: why does the moon look bigger near the horizon?

Before we answer, let's make a prediction.

Is the moon really bigger when it is low in the sky, or does it only look bigger?

I'll say it only looks bigger.

I think so too, but let's check.

Here is the short answer: it is an illusion.

The real size of the moon does not change simply because it is low in the sky.

If you take photos with the same camera zoom, the moon has the same width, whether it is low or high.

So why do we see it differently?

That is the interesting part.

NASA describes it as a trick of perception, and the exact cause is still not settled.

Scientists have several ideas, but nobody has proved one of them.

What are the ideas?

One idea is about how the brain judges size and distance.

Near the horizon, we see trees, buildings, and mountains, and the brain may use them to decide how far away the moon is.

Could the trees and buildings make the moon seem bigger?

That is one possible explanation, and it is similar to a famous drawing called the Ponzo illusion.

But there is a problem.

Astronauts in orbit also see the illusion, and they do not have trees or buildings around them.

So that idea cannot explain everything.

Exactly, and that is why scientists say the cause is still unsettled.

What about the atmosphere?

Does it work like a big lens?

No.

Near the horizon, the air can make the moon look a little squashed from top to bottom.

That can change its vertical shape slightly, but it does not explain the dramatic difference we think we see.

Good.

Can we test the illusion ourselves?

Yes, and it is very simple.

Hold your arm out, and put your index finger next to the moon.

Compare the moon with your fingernail.

And what do we see?

The moon and your fingernail will look roughly similar in size, although fingers and distances vary.

You can also look at the moon through a paper tube, and it will look much smaller.

So the moon did not change.

Only our perception changed.

That is a good reminder: our eyes can fool us.

Now let's learn four useful words from this topic.

First, horizon.

The horizon is the line where the sky meets the land or the sea.

For example, "The sun disappeared below the horizon."

Second, appear.

Here, appear means to look a certain way to the eyes.

For example, "The moon appears bigger near the horizon."

It can also mean to come into view, as in, "A star appeared in the sky."

Third, illusion.

An illusion is something that looks real, but is not what it seems.

For example, "The moon looks bigger, but it is only an illusion."

Fourth, compare.

To compare means to look at two things and see how they are similar or different.

We say compare one thing with another thing.

For example, "Compare the moon with your fingernail."

Time for a challenge.

I will say a sentence with a gap.

Choose horizon, appear, illusion, or compare.

Number one: "The ship was very small, far away on the ..."

The answer is horizon, the line where the sky meets the sea.

Number two: "The water in the desert was only an ..."

The answer is illusion.

It looked real, but it was not.

Number three: "Please ... these two phones, and tell me which one is better."

The answer is compare.

You look at two things and see the differences.

Number four: "From here, the mountains ... much closer than they are."

The answer is appear.

They look closer, but they are not.

Let's go back to our prediction.

The moon only looks bigger, so we were right.

Remember the main points.

The moon does not change size, our brain may judge size and distance differently near the horizon, and scientists have not agreed on the exact cause.

Next time you see a huge moon, try the fingernail test.

And the best part is that scientists are still discussing the exact reason.

You can read this episode in the transcript on our website, yourenglishtoolbox.com.

Read the words while you listen, and the link is in the description.

Thanks for listening.

See you next time.