Sendung mit der Maus – Regenbogen - englische UT-Texte

Start 10 00 00 00

Beautiful, a rainbow. But what
causes it, and why is it round?

Christoph is going to make his
own rainbow, using a hose.

You can only see a rainbow
if your back is to the sun.

If you're lucky,
you may even see *two*.

For a rainbow you need sunlight,
and rain. Or rather: raindrops.

Let's say this flask of
water is a big raindrop.

No colours to be seen yet...

If Christoph stands at an
angle to the sun-

the light is reflected back.
That's that bright spot.

And you can see colours:
red, green and blue.

The sunlight passes through
the drop of water.

You can see that better here.

Some light is reflected back.

To show what happens when
sunlight is diverted-

in a particular direction,
we'll use a glass prism.

If the light hits the prism
at a specific angle-

it is diverted, and the white
light is split-

into different colours:
red, green and blue.

The same with our drop of water.

You see colours only if the light
is *refracted* and splits up.

But when does this happen?
Only at a particular angle.

When Christoph sees colours,
he raises his hand.

Higher... Up a bit more...
OK.

Down again,
in the shape of an arc.

You'll see that better if we

speed it up. Now down again.

For a round rainbow,
you need lots of water-drops.

And Christoph must stay still.

At a particular angle to the sun,
the light is reflected back.

Red above, blue below, depending
on how the light is refracted.

And that's why rainbows are round.

OK Christoph, the lawn
is wet enough!