

MS. SCHLAU: Welcome, dear students. Unfortunately, we have bad news.

PROFESSOR EINSTEIN: Can you imagine it – someone broke in again last night. Probably

industrial espionage. My top secret teaching materials have all

disappeared.

MS. SCHLAU: Professor Einstein is currently preparing a lecture about cutting-edge top

secret technology.

PROFESSOR EINSTEIN: That's right, it's about a state-of-the-art 3D print - whoops, I guess I just

blabbed. But of course you're all in on it and you won't tell anyone, I

hope.

MS. SCHLAU: In order to convict the burglar we set a trap for him last night.

PROFESSOR EINSTEIN: Oh yes, I had the idea – worthy of the Nobel-Prize, I think – to

transform JOWO into a security camera and we were actually able

to photograph the intruder last night. JOWO, show us that

scoundrel.

MS. SCHLAU: He just needs a little more time to edit the images. They were too dark. –

PROFESSOR EINSTEIN: No problem! Then let's just play the movie from field researcher, Christoph.

MS. SCHLAU: About the 3D printer?

PROFESSOR EINSTEIN: About the 3D printer? That's right. But...this lecture is to be held in the

utmost secrecy. Is that clear? Let's start the movie!

MS. SCHLAU: For some reason, Christoph doesn't like his little **model (MODELL)** car any

longer. The color is **red** (**ROT**) and it's also too small and somehow too boring. A spoiler - that would be pretty cool. Who can help us with that?

Christoph is on his way.

PROFESSOR EINSTEIN: - Where is he going?

MS. SCHLAU: To experts (EXPERTEN) who know about models. Mr. Pirotti takes a

look at the **car (AUTO)** and then passes it on to Mr. Zeibe - who then picks up a spray bottle and sprays the model car so that it's no longer shiny because that would've been bad for what's about to come. A beam

of light sweeps the car in order to make sure it no longer reflects.

PROFESSOR EINSTEIN: The shape of the car will be uploaded to a computer. This is called scanning.

Ms. Geles is quite thorough.



MS. SCHLAU: Only when there aren't any gaps left to be seen in the computer

image (COMPUTERBILD) is she finished. Now Mr. Pirotti can modify the car in his computer until Christoph is happy with it. For example,

with a spoiler like this one.

PROFESSOR EINSTEIN: Christoph is already much happier with the spoiler. But it still looks a little

strange.

MS. SCHLAU: It's because only one half of the car is constructed on the computer. The

other half (HÄLFTE) is identical. Thank you, Mr. Pirotti! The draft Mr.

Pirotti made is now being calculated.

PROFESSOR EINSTEIN: Then the car is being constructed in layers. Layer by layer, until you can

see the entire car. Mr. Thiel does this. He's now looking at it from every

side to see if the computer forgot anything. No, looks good!

MS. SCHLAU: So far, Christoph's car is only in the computer. But that will change

immediately with this special plastic. Now we can get started.

PROFESSOR EINSTEIN: Believe it or not, this box is a **printer (DRUCKER)**. Using this plastic it prints

Christoph's car coat by coat, layer by layer. Normally, such printers are used so that something conceived on a computer can be held in your hand. And also so that it can be tested. The process is **slow** (**LANGSAM**)

and takes a while, So let's just **speed up (SCHNELL)** the video.

MS. SCHLAU: It's going to take around 15 hours for Christoph's car to get printed. In

places where the plastic needs to be tougher, we'll add a hardener. In

other places we won't add hardener.

PROFESSOR EINSTEIN: Here you can see it. All the tires are just about completed. A different

color plastic is used for the windows and tires. And now the roof... All

done?

MS. SCHLAU: No, not guite. The plastic without hardener needs to be rinsed off first.

It was just supporting the car while it was being printed. This is done by Mr. Finkernagel in a cubicle with windshield wipers inside. This is

how he reveals the car.

PROFESSOR EINSTEIN: And here we are! All clean. Even the tiniest cracks. You could actually

leave it like this. But color is much nicer, isn't it? You could color the car **green** (GRÜN), for example. Now, that is quite a car, eh, Christoph? Really something to look at. Wonderful. Thank you, Mr.

Pirotti.

MS. SCHLAU: Yes, that of course fits Christoph much better!

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PROFESSOR EINSTEIN: Well, dear students, what do you say? That's brilliant, isn't it? With this,

one day I'll be able to print out my Nobel Prize medals myself. Ha!

MS. SCHLAU: Professor, Professor, I think JOWO is all set. The footage from last night is

ready.

PROFESSOR EINSTEIN: Soon, we'll have the thief. Now, everybody pay attention. And if you

know the scoundrel, please tell us, OK? What? What's that? That's me?! And what in the world am I doing in the children's university at

night?

MS. SCHLAU: Apparently you just captured yourself – as a sleepwalker.

PROFESSOR EINSTEIN: That is... I'm speechless. I had no idea that I continue my... research at night.

MS. SCHLAU: I wouldn't call that research, Professor, but rather cleaning up in your

sleep.