German Digital Kinderuniversity Faculty *Nature*

Lecture River Width



PROFESSOR EINSTEIN: Hello, students. I'd like to welcome you all to the big state vocabulary exam.

Have you learned all the words we introduced to you?

MS. SCHLAU: Hold on, Professor. We have to delay the exam.

PROFESSOR EINSTEIN: What?! Why?

MS. SCHLAU: JOWO accidentally discovered a cheat sheet earlier.

Apparently someone wants to cheat!

PROFESSOR EINSTEIN: Really?

MS. SCHLAU: JOWO, show us an example. The triangle ruler was prepared with a piece of

white paper. On the back are vocabulary words, but when you put the triangle

ruler on a sheet of white paper, you can't tell that it was modified.

PROFESSOR EINSTEIN: That is... That's brilliant. I think whoever makes such a great cheat sheet

should receive the best grade on the exam.

MS. SCHLAU: What? No! We're going to cancel the exam and schedule a replacement lecture.

PROFESSOR EINSTEIN: What? Well, whatever you think. But please not something boring.

MS. SCHLAU: Let's call field researcher Christoph.

PROFESSOR EINSTEIN: JOWO, please bring Christoph into the lecture hall.

MS. SCHLAU: Hello, Christoph...

CHRISTOPH: Oh, hello Ms. Schlau, hello Professor Einstein. What can I do for you?

PROFESSOR EINSTEIN: We need an interesting lecture, and quick! Would you happen to have an idea?

CHRISTOPH: Of course, we were just researching how you can measure the width of a river.

PROFESSOR EINSTEIN: Without a cheat sheet?

CHRISTOPH: Mhm, yes!

PROFESSOR EINSTEIN: Oh, that is wonderful. Then let's play the film.

MS. SCHLAU: Oh, what a beautiful little river (FLUSS) Christoph discovered while hiking. How

wide might it be? Ah, Christoph recalls an old scouting trick (TRICK) that can help

figure this out.

PROFESSOR EINSTEIN: How does it work again? Place your hand (HAND) on your forehead and aim the

lower edge of your hand at the other shore. Then, without moving your hand, turn toward the shore on your side until your hand meets the shore. There you will want to aim for a **point** (**PUNKT**). Hold your gaze on that point and go to it. Don't lose sight of it, Christoph, that dark tuft of grass in the back. There, the tall one. And then return – hey Christoph you're giving up at least one meter

between you and that grass.

MS. SCHLAU: Now count the number of steps until the starting point. One long step after

another, because each one is about one meter long. **Fourteen (VIERZEHN)**... **fifteen (FÜNFZEHN)**... **sixteen (SECHZEHN)**... 16 meters. That's what Christoph

determined by using his method.

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PROFESSOR EINSTEIN: But Ms. Schlau are you really sure that's correct?

MS. SCHLAU: I think Christoph has an idea for how to check that. He's tying a thread onto an

arrow and he also has the bow for it. Now he's going to shoot the arrow onto the other shore. That's pretty clever. He tied the thread on to the other end. Well, the arrow flew a bit too far, but it's close enough. And now he can measure the meters again with his method. From the end of one outstretched arm to the middle of the

chest is about one meter.

PROFESSOR EINSTEIN: He looks very elegant, haha.

MS. SCHLAU: So how many meters is it? Seventeen (SIEBZEHN)... Eighteen (ACHTZEHN)...

Well, it's close enough. Almost exactly as many.

PROFESSOR EINSTEIN: So how would you measure the width again? Using the lower part of the palm of your

hand, aim for the opposite shore, then turn to your own shore, focus on a point, and measure (MESSEN). A great trick, Christoph. Very impressive. Thank you, Christoph.

MS. SCHLAU: Oh, I think JOWO analyzed the cheat sheet and was able to identify the suspect's

handwriting. Soon we will all know who was planning to cheat. Professor, did you make these cheat sheets? Why does a Nobel Prize winner need a cheat sheet?

PROFESSOR EINSTEIN: Ummm... yes, well, indeed. I developed it according to the most modern

scientific methods... Ummm... in case I'd forget a technical term during a lecture...

hm hm... I have to go now. Bye!