

Content

- Dangers of potholes
- How potholes form
- How to repair potholes

Target group

- Children ages 10 to 12
- Level: A1+/A2

Language goals

The children will be able to

- Understand a short (technical) film
- Find precise information in a text
- Expand their passive and active vocabulary
- Understand technical terminology in context
- Understand and answer simple thematic questions
- Formulate their ideas/opinions using simple language
- Use and develop learning strategies (use images as a learning tool, take notes, make conjectures, reconstruct processes, correctly spell words)
- Convey information through pictures and pantomime
- Understand and follow instructions

Word bank

Straße (road), *Straßenschäden* (road damage), *Schlaglöcher* (potholes), *Fußgänger* (pedestrian), *stolpern* (to trip), *Radfahrer* (bicyclist), *stürzen* (to fall), *Autofahrer* (car driver), *eine Reifenpanne haben* (to have a flat tire), *vorsichtig fahren* (to drive carefully), *langsam fahren* (to drive slowly), *Winter* (winter), *Riss* (crack), *Wasser* (water), *hineinfließen* (to flow into), *zu Eis gefrieren* (to freeze), *ausdehnen* (to expand), *schmelzen* (to melt), *Autos* (cars), *Asphalt* (asphalt), *einbrechen* (to collapse)

Materials

- Laptop and projector
- Audio speakers
- Blackboard and chalk/whiteboard and markers
- Magnets/blu-tack
- Colored pencils
- Students' portfolios

Materials for printing and/or copying

- *Road damage* (Straßenschäden) picture
- *Potholes* (Schlaglöcher) picture
- *Word search* (Wörtersuche) worksheet
- *Word search* (Wörtersuche) answer key
- *How do potholes form?* (Wie entstehen Schlaglöcher?) worksheet
- *Repairing the asphalt* (Den Asphalt reparieren) paper strips
- *Potholes* (Schlaglöcher) word bank
- My word bank sheet *Potholes* (Schlaglöcher)
- *Now I know* (Ich kann schon) questionnaire

Duration

2x45 minutes

Before the lecture/film		
Step	Content	Materials
1	<p>Instructor shows the children the <i>road damage</i> (Straßenschäden) picture and asks them what they think the sign means and what dangers it refers to. The children make guesses. The instructor draws their attention to the problem of potholes on streets by showing them the <i>Potholes</i> (Schlaglöcher) picture, and writing "potholes" on the board.</p> <p>Note: The occasion for this lesson can be a long winter that has caused damage to the streets around the school.</p>	<p><i>Road damage</i> (Straßenschäden) picture; <i>Potholes</i> (Schlaglöcher) picture; Laptop and projector; Blackboard and chalk/ whiteboard and markers</p>
2	<p>Instructor discusses with the children for whom potholes could present a danger: <i>pedestrians</i>, <i>bicyclists</i>, and <i>car drivers</i>. He or she writes the words on the board and during the discussion adds other terms to the board: <i>to trip</i>, <i>to fall</i>, <i>to have a flat tire</i>, <i>to drive carefully</i>, <i>to drive slowly</i>.</p>	<p><i>Road damage</i> picture; <i>Potholes</i> picture; Laptop and projector; Blackboard and chalk/whiteboard and markers</p>
During the lecture/film		
Step	Content	Materials
3	<p>Instructor asks the children if they know how potholes form. He or she suggests that they watch the film (Minute: 1:23-6:48) to find out the answer. The instructor hands out the <i>Word search</i> (Wörtersuche) worksheet and asks them to circle the words that they hear during the film.</p>	<p>Laptop and projector; Audio speakers <i>Word search</i> (Wörtersuche) worksheet</p>
4	<p>Instructor projects the answers and asks the children to briefly summarize what they understood using the circled words, explaining the words if needed.</p>	<p><i>Word search</i> (Wörtersuche) answer key</p>
5	<p>Instructor then hands out the <i>How do potholes form?</i> (Wie entstehen Schlaglöcher?) worksheet. Instructor and the children read and discuss the individual sentences. The instructor then asks the children to think of how they might convey how potholes form using pictures. They are instructed to make a simple picture for each step. The children can work individually or with their neighbors, as they prefer.</p> <p>Note: One possibility for conveying through pictures how potholes form can be found here: https://goo.gl/JU5tsH</p>	<p><i>How do potholes form?</i> (Wie entstehen Schlaglöcher?) worksheet; Colored pencils</p>
6	<p>The finished drawings are hung on the board and discussed. The children then have the opportunity to change their drawings or add to them.</p>	<p>Magnets/blu-tack; <i>How do potholes form?</i> worksheet; Colored pencils</p>

7	Instructor suggests that they watch how potholes are repaired and shows the children the next film sequence (Minute: 6:48-7:49).	Laptop and projector; Audio speakers
After the lecture/film		
Step	Content	Materials
8	Instructor hands out strips of paper with pictures and expressions from the film. The children match the repair steps to how this is done in the film. Instructor helps if needed.	<i>Repairing the asphalt</i> (Den Asphalt reparieren) paper strips
9	Instructor invites the children to play a game: They create a <i>pothole</i> team and pantomime the individual repair steps.	
10	Instructor projects the <i>Potholes</i> (Schlaglöcher) word bank; and hands out the <i>Potholes</i> (Schlaglöcher) word bank sheet to the children. The children are instructed to copy down the words that they just learned.	<i>Potholes</i> (Schlaglöcher) word bank; My word bank sheet <i>Potholes</i> (Schlaglöcher)
11	Instructor and children end the unit with a reflection round, in which they discuss what they have learned. Each child then fills out the <i>Now I know</i> (Ich kann schon) questionnaire to find out whether they have achieved the learning objectives. Instructor also gives feedback on student performance.	<i>Now I know</i> (Ich kann schon) questionnaire
12	The children hold onto the following in their portfolios: <ul style="list-style-type: none"> - <i>How do potholes form?</i> (Wie entstehen Schlaglöcher?) worksheet; - My word bank sheet <i>Potholes</i> (Schlaglöcher) - <i>Now I know</i> (Ich kann schon) questionnaire 	Portfolios

Further ideas for subject matter or CLIL teaching (natural sciences, physics):

- Experiments with water on the topic of water expansion
- Watch the work of road construction workers and speak with them
- Develop funny ideas of how potholes can be
 - decorated
 - put to "good" use

One example of how potholes can be put to "good" use is the art project: <https://goo.gl/N1Mymp>
 (Please note that this resource is in German)

Suggestion for the children at the end of the learning scenario

At the very end, the children gather around a computer or the instructor projects a computer desktop onto a screen. They look at the home page of the German Digital Kinderuniversität together. The instructor explains to the children that they now have completed the *Potholes* (Schlaglöcher) lecture in the *Technology* faculty together and draws their attention to the fact that there are many more interesting lectures in this faculty and in the *Humankind* and *Nature* faculties.

The instructor and the children click together on the At Home link and discover how the website works. As an example, the instructor logs in and goes to the lecture that they just worked through.

The instructor shows the children that the lecture begins with an introduction by Professor Einstein and Ms. Schlau and that their work is supported by Jowo and Christoph, the field researcher. Professor Einstein and Ms. Schlau also wrap up all the lectures and thereby frame the work on each theme.

The instructor explains to the children that they can re-watch the film at home and can even set the subtitles to German or English. That way, they can “catch” key words while watching and use these to collect points and solve three exercises and a bonus exercise on the film. The children can also get help from their parents or grandparents, from registering to solving the exercises. The whole family can have fun learning and everyone gradually becomes a professor at the Kinderuni.