

## Content

- Rubber trees and rubber milk
- Production of balloons

## Target group

- Children ages 8 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 pictures as a learning tool, take notes, make conjectures, reconstruct processes, correctly spell words)
- Match pictures and sentences
- Prepare and hold a short presentation for the group
- Understand and follow instructions
- Understand game instructions and actively take part in a game

## Word bank

*Luftballon* (balloon), *Herstellung* (production), *herstellen* (to produce), *Gummibaum* (rubber tree), *Gummi* (rubber), *Gummimilch* (rubber milk), *Dschungel* (jungle), *Messer* (knife), *ritzen* (to cut), *Kerbe* (notch), *Rinde* (bark), *Radiergummi* (eraser), *Rohgummimischung* (raw rubber compound), *Maschine* (machine), *Form* (mold), *Salzwasser* (saltwater), *in Salzwasser tauchen* (to dip in saltwater), *Bürste* (brush), *Rollrand* (rolled edge), *Ofen* (oven), *elastisch* (elastic), *Luft* (air), *Druckluft* (compressed air), *mit Druckluft aufblasen* (to inflate with compressed air), *von der Form runterziehen* (to pull from the mold), *abschneiden* (to cut off), *Stecknadel* (needle), *einstecken* (to stick in), *Spitze* (top), *dick* (thick)

## Materials

- Laptop and projector
- Audio speakers
- Blackboard and chalk/whiteboard and markers
- Highlighter
- Balloons
- Scissors
- Markers
- Needle
- String
- Students' portfolios

## Materials for printing and/or copying

- *Rubber milk* (Gummimilch) worksheet
- *Rubber milk* (Gummimilch) answer key
- *Balloon production* (Luftballonherstellung) photos
- *Balloon production* (Luftballonherstellung) sentence strips
- *Balloon production* (Luftballonherstellung) worksheet

- *Balloon production* (Luftballonherstellung) answer key
- *Balloons* (Luftballon) word bank
- My word bank sheet *Balloons* (Luftballon)
- *Now I know* (Ich kann schon) questionnaire

### Materials for download

- Picture: Balloons <https://goo.gl/e6nyx1>
- Picture: Rubber tree <https://goo.gl/s4GDbm>

### Duration

2x45 minutes

Before the lecture/film		
Step	Content	Materials
1	<p>Instructor shows the children two pictures from the Internet, one with balloons and another with a rubber tree and asks the children what they think connects the two. The children share their guesses and the instructor helps if needed by saying: <i>So one picture is of balloons that are made of rubber. And the other shows a rubber tree.</i> He or she writes the words "balloons" and "rubber tree" on the board.,</p> <p>Note: A possible occasion for this lesson can be a school or class party, at which balloons are used as a decoration. In this case, the instructor can also bring balloons from the party to class.</p>	<p>"Balloons" picture <a href="https://goo.gl/e6nyx1">https://goo.gl/e6nyx1</a>;            "Rubber tree" picture <a href="https://goo.gl/s4GDbm">https://goo.gl/s4GDbm</a>;            Laptop and projector;            Blackboard and chalk/whiteboard and markers</p>
2	<p>Instructor says/asks: <i>So one uses rubber from the rubber trees to produce balloons. But where is the rubber in the rubber tree? What do you think?</i></p> <p>Note: If the children have already learned the parts of a tree, the instructor can lead the discussion so that the children repeat the part of the tree: <i>in the roots, in the trunk, in the branches, in the leaves, in the fruits? Or where else?</i> If the children know where rubber is in the tree, they can explain this to the group.</p>	
During the lecture/film		
Step	Content	Materials
3	<p>Instructor suggests that they watch the first film sequence (Minute: 1:27-3:07) to find the answer.</p>	<p>Laptop and projector;            Audio speakers</p>

4	Instructor and children summarize the information in the film: <i>One cuts a notch in the bark of a tree and "milks" the tree. What comes out is called rubber milk. There is a bunch of information that we learn about rubber milk in the film. I am going to hand out a worksheet with questions. Let's watch the film sequence again. Pay careful attention and answer the questions (Minute: 1:27-3:07).</i>	<i>Rubber milk (Gummimilch)</i> worksheet; Laptop and projector; Audio speakers
5	<i>Q•d˘ &amp;f  Á:  b&amp; Á@Á• , ^!•Á• á@Á^•  •Á^Á ãã &amp;••^áÁ• Á&amp;Á•É</i>	<i>Rubber milk (Gummimilch)</i> answer key; Laptop and projector
6	Instructor places the pictures from the film on the teacher's desk/floor and says: <i>These are pictures that shows us how balloons are produced. Look carefully at the pictures and think about what each portrays and which steps follow which.</i> The children think about the logical sequence.	<i>Balloon production (Luftballonherstellung)</i> photos
7	Instructor shows the children the next film sequence (Minute: 3:07-6:49). While watching, the children check their answers.	Laptop and projector; Audio speakers
8	Instructor then places sentences that go with the pictures out of order on the desk/floor. The children match the sentences to the pictures. The instructor helps if needed, and also explains the meaning of the new words and highlights them on the sentence slips.	<i>Balloon production (Luftballonherstellung)</i> sentence slips; Highlighter
9	Instructor and children check their answers and read the sentences out loud. Instructor asks the children to take note of the highlighted words.	<i>Balloon production (Luftballonherstellung)</i> answer key (for instructor)
10	Instructor hands out the <i>Balloon production</i> worksheet. The children work individually, but can consult their neighbors if necessary. When they are finished, they compare their answers to the sentence slips on the floor.	<i>Balloon production (Luftballonherstellung)</i> worksheet
11	Instructor asks the children what they think: <i>What happens if the rolled edge of the balloon is cut off? Can one still blow up the balloon?</i> The children think about the question and then try it out themselves: two children try to blow up balloons that have had the rolled edges cut off. The class discovers together: <i>without a rolled edge one cannot blow up the balloon. The air goes past the neck of the balloon.</i>	Two balloons to blow up; Scissors
12	Instructor says: <i>Christoph makes this same discovery. He also shows us a trick. Let's watch it...</i> (Minute: 6:49-8:05)	Laptop and projector; Audio speakers
<b>After the lecture/film</b>		
<b>Step</b>	<b>Content</b>	<b>Materials</b>
13	The instructor and the children copy Christoph's trick. The instructor stands in the middle of the class, blows up a balloon and puts a needle in the tip of the balloon where the rubber is especially thick.	Balloon; Needle

14	Instructor hands each child a balloon that they blow up to different sizes and hold closed with both hands between index finger and thumb. On command and in sequence or all at once the children slowly let the air out of their balloons and create a jovial balloon concert.	One balloon per child
15	At the end each child blows up their own balloon, knots it and draws a funny/sad/silly/scary face on it with a marker.	Markers
16	The finished balloon faces are attached to a string to decorate the classroom.	String
17	Instructor projects the <i>Balloons</i> (Luftballon) word bank. The children choose 8-10 words that they find important or interesting and write them into the balloons on their word bank sheet. If they would like to, they can color in the balloons.	<i>Balloons</i> (Luftballon) word bank; My word bank sheet <i>Balloons</i> (Luftballon); Laptop and projector
18	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
19	The children hold onto the following in their portfolios: <ul style="list-style-type: none"> <li>- <i>Rubber milk</i> (Gummimilch) worksheet</li> <li>- <i>Balloon production</i> (Luftballonherstellung) worksheet</li> <li>- My word bank sheet <i>Balloons</i> (Luftballon)</li> <li>- <i>Now I know</i> (Ich kann schon) questionnaire</li> </ul>	Portfolios

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

- Ka-Hu-Chu, the crying tree - Interesting facts about the rubber tree - Research project with a PowerPoint presentation, e.g., <https://de.wikipedia.org/wiki/Kautschukbaum>, [https://www.youtube.com/watch?v=QNAbvF8h\\_Y](https://www.youtube.com/watch?v=QNAbvF8h_Y)
- Goodyear - Inventor or brand? – Research project with a power or PowerPoint presentation
- Balloon experiments, e.g., <https://goo.gl/SZ2uee>
- Balloon games, e.g., <https://www.ballon24.at/tipps-ideen/kinder/luftballonspiele.html>
- Balloon art - Interview with a balloon artist

### 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 Kinderuniversity together. The instructor explains to the children that they now have completed the *Balloons* (Luftballon) 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.