

## Content

- Gummy bear production

## 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
- Solve simple math problems
- Formulate their ideas/opinions using simple language
- Use and develop learning strategies (use pictures as a learning tool, take notes, make and test conjectures, reconstruct processes, correctly spell words)
- Create a joint poster
- Prepare and hold a short presentation for the group
- Understand and follow instructions

## Word bank

*Gummibärchen* (gummy bears), *Zutaten* (ingredients), *Zucker* (sugar), *Traubenzucker* (glucose), *Glukosesirup* (glucose syrup), *Gelatine* (gelatin), *Farbe* (color), *Geschmack* (flavor), *Ananas* (pineapple), *Orange* (orange), *Zitrone* (lemon), *Apfel* (apple), *Himbeere* (raspberry), *Erdbeere* (strawberry), *Gummiform* (gummy shape), *Stempel* (stamp), *Masse* (mass), *lagern* (to store), *Flüssigkeit* (liquid), *in eine Flüssigkeit drehen* (to tumble through a liquid), *kleben* (to glue), *Tüte* (bag), *in Tüten füllen* (to fill into bags)

## Materials

- a bag (or multiple bags) of Haribo gummy bears
- Rubber glove/tongs
- Blackboard and chalk/whiteboard and markers
- Laptop and projector
- Audio speakers
- Magnets/blu-tack
- Colored pencils
- Scissors
- Glue
- Brown paper
- Students' portfolios

## Materials for printing and/or copying

- *Gummy bear ingredients* (Gummibärchen-Zutaten) worksheet
- *Gummy bear ingredients* (Gummibärchen-Zutaten) answer key
- *Color and flavor* (Farbe und Geschmack) worksheet
- *Color and flavor* (Farbe und Geschmack) answer key
- *Production steps* (Produktionsschritte) worksheet
- *Production steps* (Produktionsschritte) answer key
- *Gummy bears* (Gummibärchen) project sheet
- My word bank sheet *Gummy bears* (Gummibärchen)
- *Now I know* (Ich kann schon) questionnaire

**Duration**

3x45 minutes

<b>Before the lecture/film</b>		
<b>Step</b>	<b>Content</b>	<b>Materials</b>
<b>1</b>	<p>Instructor brings a bag of gummy bears to class and asks who likes gummy bears. He or she lets the children guess how many gummy bears are in the bag. Instructor then opens the bag and counts the gummy bears together with the children and sorts them based on color. Instructor writes the result on the board.</p> <p>Note: Instructor wears a rubber glove or uses tongs to count the gummy bears.</p>	A bag of Haribo gummy bears; Rubber glove/tongs
<b>2</b>	<p>Instructor asks the children to calculate in their heads how many gummy bears each child gets if the gummy bears are given out evenly. Instructor hands out the gummy bears and asks the children to determine while they're eating them which type of fruit each color tastes like. The children's guesses are written on the board.</p> <p>Note: For larger groups, the instructor should buy multiple bags of gummy bears. Be careful! Not all children are allowed to have sweets!</p>	A bag of Haribo gummy bears; Rubber glove/tongs; Blackboard and chalk/whiteboard and markers
<b>3</b>	Instructor asks what the children think are the ingredients in gummy bears.	
<b>During the lecture/film</b>		
<b>Step</b>	<b>Content</b>	<b>Materials</b>
<b>4</b>	Instructor suggests that they watch the first film sequence on the production of gummy bears (Minute: 1:03-2:17). He or she hands out the <i>Gummy bear ingredients</i> (Gummibärchen-Zutaten) worksheet and discusses the exercise with the children, which they are instructed to answer during the film or afterwards.	Laptop and projector; Audio speakers; <i>Gummy bear ingredients</i> (Gummibärchen-Zutaten) worksheet
<b>5</b>	The children compare their answers in pairs and the class goes over the full list of ingredients as a group.	<i>Gummy bear ingredients</i> (Gummibärchen-Zutaten) answer key

Teaching materials

6	<p>Instructor refers to the last sentence in the film ("<i>The color and the flavor are combined in these big vats and then added to the mixture.</i>") and says: <i>One also needs color and flavor in the gummy bears so they aren't boring.</i></p> <p>The instructor turns the children's attention to the board, where the children's guesses about color and flavor are listed, starts the film again (Minute 2:17-3:09), and asks the children to pay careful attention and test their guesses.</p> <p>Note: Because the film goes over this very quickly, the sequence can be shown an extra time for the children.</p>	<p>Blackboard/whiteboard;          Laptop and projector;          Audio speakers</p>
7	<p>Instructor hands out the <i>Color and flavor</i> (Farbe und Geschmack) to the children. The children work through the exercise individually.</p>	<p><i>Color and flavor</i> (Farbe und Geschmack) worksheet</p>
8	<p>They check their work, the instructor projects the answers on the wall and the group discusses the results.</p>	<p>Laptop and projector;  <i>Color and flavor</i> (Farbe und Geschmack) answer key</p>
9	<p>In a group discussion that follows, the instructor asks the children how they think the many small gummy bears are made from the large mass. The children formulate their ideas with the instructor's help, and the instructor writes the ideas on the board.</p>	<p>Blackboard and chalk/whiteboard and markers</p>
10	<p>Instructor shows the third film sequence (Minute: 3:09-6:57).</p>	<p>Laptop and projector;          Audio speakers</p>

**After the lecture/film**

Step	Content	Materials
11	<p>After the film the instructor and the children compare the ideas on the board with the steps that are shown in the film.</p>	
12	<p>Instructor hands out the <i>Production steps</i> (Produktionsschritte) worksheet and discusses the exercise with them.</p>	<p><i>Production steps</i> (Produktionsschritte) worksheet</p>
13	<p>The children compare their answers first in pairs, and then they compare them with the answer key which the instructor has hung in multiple locations throughout the classroom.</p>	<p><i>Production steps</i> (Produktionsschritte) answer key</p>

Teaching materials

14	<p>Instructor invites the children to work together on a poster. In the middle of a large piece of brown paper, he or she writes the well-known slogan “<i>Kids and grown-ups love it so, the happy world of HARIBO</i>” (In German: <i>Haribo macht Kinder froh und Erwachsene ebenso!</i>) and discusses with the children what it means.</p> <p>Then he or she hands out the <i>Gummy bears (Gummibärchen)</i> project sheet. The children are instructed to color in the gummy bears, cut them out and glue them onto the poster. If they have time and are interested they can further decorate the poster. The finished poster is hung up in the classroom.</p>	<p><i>Gummy bears (Gummibärchen)</i> project sheet;          Colored pencils;          Glue;          Scissors</p>
15	<p>Instructor hands out the word bank sheet <i>Gummy bears (Gummibärchen)</i>. The children take out their <i>Gummy bear ingredients (Gummibärchen-Zutaten)</i>, <i>Color and flavor (Farbe und Geschmack)</i>, and <i>Production steps (Produktionsschritte)</i> worksheets, read through them and choose 10 words that they find interesting or important and would like to learn. They write these on their word bank sheets.</p>	<p>My word bank sheet <i>Gummy bears (Gummibärchen)</i></p>
16	<p>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 (Ich kann schon)</i> questionnaire to find out whether they have achieved the learning objectives. Instructor also gives feedback on student performance.</p>	<p><i>Now I know (Ich kann schon)</i> questionnaire</p>
17	<p>The children hold onto the following in their portfolios:</p> <ul style="list-style-type: none"> <li>- <i>Gummy bear ingredients (Gummibärchen-Zutaten)</i> worksheet</li> <li>- <i>Color and flavor (Farbe und Geschmack)</i> worksheet</li> <li>- <i>Production steps (Produktionsschritte)</i> worksheet</li> <li>- <i>Now I know (Ich kann schon)</i> questionnaire</li> </ul>	<p>Portfolios</p>

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

- Make gummy bears – for example: <https://goo.gl/oqq6bS>
- Who likes gummy bears? - create a school poll and present the findings
- Collect interesting information on gummy bears - carry out individual research and create informational posters
- Visit to a candy factory

### 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 *Gummy Bears* (Gummibärchen) lecture in the *Humankind* faculty together and draws their attention to the fact that there are many more interesting lectures in this faculty and in the *Technology* 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. Schläu and that their work is supported by Jowo and Christoph, the field researcher. Professor Einstein and Ms. Schläu 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.