

## Content

- Types of fireworks
- How to create fireworks
- The "Cologne Lights" fireworks

## 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 verbal tools
- Use and develop learning strategies (make conjectures, reconstruct a storyline using pictures, words and sentences, correctly spell words)
- Understand and follow instructions
- Understand and follow instructions for a project by doing

## Word bank

*Feuerwerk* (firework), *Lichtbild* (firework picture), *das Bild ausdrucken* (to print out the picture), *die Figur ausschneiden* (to cut out the figure), *die Figur aussägen* (to saw out the figure), *Löcher ins Holz bohren* (to drill holes in the wood), *Schwarzpulver* (black powder), *Lichterlanze* (light spear), *mit dem Klebeband verbinden* (to connect with tape), *Brücke* (bridge), *Geburtstag* (birthday), *Messer* (knife), *Stift* (pen), *Säge* (saw), *die Rakete zünden* (ignite the rocket)

## Materials

- Laptop and projector
- Audio speakers
- Blackboard and blu-tack/whiteboard and magnets
- Sheets of white paper
- Colored pencils
- Paints
- Cardboard
- Paper plates
- Paper towels
- Scissors
- Map of Germany
- Students' portfolios

## Materials for printing and/or copying

- *Pictures/Words/Sentences/Question cards* cutout templates
- *What fits?* (Was passt?) worksheet and answer key
- *Fireworks* (Lichtbilder) worksheet and answer key
- *Fireworks* (Lichtbilder) word bank
- My word bank sheet *Fireworks* (Lichtbilder) (Template)
- *Now I know* (Ich kann schon) questionnaire

## Materials for download

Pictures: *Feuerwerk* (Fireworks), *Bodenfeuerwerk* (Ground-based fireworks), *Höhenfeuerwerk* (aerial fireworks)

## Duration

3x45 minutes

Before the lecture/film		
Step	Content	Materials
1	<p>Instructor welcomes the children and projects a picture of fireworks: <a href="http://i.computer-bild.de/imgs/4/0/7/4/1/4/3/Feuerwerk-1024x576-f2f6d-8680fae9b29.jpg">http://i.computer-bild.de/imgs/4/0/7/4/1/4/3/Feuerwerk-1024x576-f2f6d-8680fae9b29.jpg</a></p> <p>Instructor asks the children: <i>What is this? Have you already seen something like this in real life? Or on TV?</i> The children share their experiences.</p>	Laptop and projector; <i>Fireworks</i> picture
2	<p>Instructor shows a second picture, this time of ground-based fireworks: <a href="http://www.zahn-feuerwerk.de/seiteninhalt/bodenfeuerwerk/vulkaneffekte.png">http://www.zahn-feuerwerk.de/seiteninhalt/bodenfeuerwerk/vulkaneffekte.png</a></p> <p>Instructor explains the difference: <i>There are fireworks that you can see in the sky and there are fireworks that you can see on the ground. There are therefore aerial fireworks and ground-based fireworks. Now I'm going to show you a third picture: <a href="http://www.absolut-feuerwerk.de/wp-content/uploads/Pyromonster-Lichterbild-800x600.jpg">http://www.absolut-feuerwerk.de/wp-content/uploads/Pyromonster-Lichterbild-800x600.jpg</a></i></p> <p>Instructor continues: <i>This is also a ground-based firework, but a special ground-based firework. It's a firework picture, and is called a "Lichtbild" in German. Lots of lights create an image.</i></p>	Laptop and projector; <i>Ground-based fireworks</i> and <i>Aerial firework</i> picture
3	<p>Instructor writes the three words "<i>Ground-based firework</i>," "<i>Aerial firework</i>" and "<i>Firework picture</i>" each on a large piece of paper and asks the children to draw pictures associated with the words with colored pencils.</p> <p>The finished pictures are hung on the wall/board. The piece of paper with the "<i>Firework picture</i>" is in the center.            Instructor asks: <i>Can you imagine how you make a firework like this?</i> The children share their ideas.</p> <p>Instructor suggests that the class watch the film on this and says: <i>Now let's watch a film in which we see how this firework is made.</i></p>	Large sheets of white paper; Colored pencils; Blackboard and blu-tack/ whiteboard and magnets
During the lecture/film		
Step	Content	Materials
4	<p>Instructor and children watch the first part of the film (Minute 1:20-5:15). Before starting the film, instructor hands out pictures from the film and asks the children to put these in the order in which they appear in the film, either while watching or afterwards.</p>	<i>Images (Bilder)</i> cutout template

5	<p>Instructor hands out words associated with the pictures to the children. They should match the words and pictures. Instructor helps with short and simple explanations.</p>	<p>Words (Wörter) cutout template</p>
6	<p>Next, instructor asks the children to match sentences to the pictures. Instructor holds the strips of paper with sentences on them like a fan and says: <i>Pull out a piece of paper and read the sentence out loud. Think about what picture the sentence matches with.</i></p>	<p>Sentences (Sätze) cutout template</p>
7	<p>Instructor says: <i>Now we're going to watch the film again and will check if our answer is correct.</i> (Minute 1:20-5:15)</p>	<p>Words (Wörter) cutout template</p>
8	<p>Instructor hands out question cards to the children. The children with the same question are instructed to find each other. Three groups form: <i>When? Where? and Why?</i> Each group is given a <i>What fits? (Was passt?)</i> worksheet. They should work on the exercise while watching the second part of the film or just afterwards.</p> <p>The class goes over the answers together, with the help of answer key, which the instructor projects.</p> <p>On the question "Where?" the children find Cologne on a map. Instructor says: <i>After Berlin, Hamburg and Munich, Cologne is the 4th largest city in Germany. More than a million people live there.</i> The children also search for Berlin, Hamburg and Munich on the map.</p> <p>Note: While going over the exercise the instructor shows the children the Seite mit der Maus and explains: <i>The "Sendung mit der Maus" is a very popular German children's TV show, which has been running for more than 40 years:</i> <a href="http://www.wdrmaus.de">http://www.wdrmaus.de</a> <i>The Mouse's best friends are Elephant and Duck. There is even an extra website for Elephant:</i> <a href="http://www.wdrmaus.de/elefantenseite/">http://www.wdrmaus.de/elefantenseite/</a></p>	<p>Question cards (Fragekarten) cutout template  <i>What fits? (Was passt?)</i> worksheet  <i>What fits? (Was passt?)</i> answer key          Laptop and projector;          Audio speakers;          Map of Germany</p>
9	<p>Instructor hands the children a worksheet with the most important information from the film. They are instructed to connect the sentence bubbles in the order in which they occur in the film.</p> <p>Instructor says: <i>Here is some information from the film. Find the correct order.</i></p> <p>The children work individually first, then they compare their answers in pairs. They check their answers using the answer key, which the instructor hangs/places in multiple locations throughout the room.</p>	<p>Fireworks (Lichtbilder) worksheet          Fireworks (Lichtbilder) answer key</p>

After the lecture/film		
Step	Content	Materials
10	<p>Instructor hands out the word bank sheet <i>Fireworks</i> (Lichtbilder) to the children, which this time is used for the first time as the template for a craft project the group will do. This requires paints, a cardboard roll per student, and scissors. Instructions for the project: <a href="http://www.tollabea.de/silvester-mit-kindern-bas-telt-euch-ein-feuerwerk/">http://www.tollabea.de/silvester-mit-kindern-bas-telt-euch-ein-feuerwerk/</a></p> <p>When the children's artwork has dried, instructor projects the word bank <i>Fireworks</i> (Lichtbilder) and the children write the new words and expressions on the colorful template.</p>	Paints; Cardboard roll; Paper plates; Paper towels; Scissors; Laptop and projector; Word bank box <i>Fireworks</i> (Lichtbilder) My word bank sheet <i>Fireworks</i> (Lichtbilder) (Template)
11	<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</i> (Ich kann schon) questionnaire to find out whether they have achieved the learning objectives. Instructor also gives feedback on student performance.</p>	<i>Now I know</i> (Ich kann schon) questionnaire
12	<p>The children hold onto the following in their portfolios:</p> <ul style="list-style-type: none"> <li>- <i>Fireworks</i> (Lichtbilder) worksheet</li> <li>- My word bank sheet <i>Fireworks</i> (Lichtbilder)</li> <li>- <i>Now I know</i> (Ich kann schon) questionnaire</li> </ul>	Portfolios
13	<p>Instructor invites the children to watch a video. Instructor says: <i>Let's lean back and enjoy the "Cologne Lights" fireworks from the summer of 2016 -- but this time without the Mouse.</i>  <a href="http://www.ardmediathek.de/tv/WDR/Köln-Lichter-2016-Das-Feuerwerk/WDR-Fernsehen/Video?bcas-tid=18198186&amp;documentId=36611416">http://www.ardmediathek.de/tv/WDR/Köln-Lichter-2016-Das-Feuerwerk/WDR-Fernsehen/Video?bcas-tid=18198186&amp;documentId=36611416</a></p>	Laptop and projector; Audio speakers

### Further ideas for subject matter or CLIL teaching (geography, history, chemistry):

- Project: Fireworks around the world
  - a compilation of the prettiest New Year's Eve fireworks and a map of the world (possible sources include: <https://www.attractionticketsdirect.de/latest-news/die-10-spektaku-laersten-feuerwerke-der-welt> | <https://www.welt.de/vermishtes/article160746321/Die-schoensten-Feuerwerke-der-Silvesternacht-2016.html> | <https://www.skyscanner.de/nachrichten/silvester-europa-die-top-10-staedte-fuer-einen-guten-rutsch>)
- Project: Invite a firework technician to the class, collect questions and hold a discussion on the topic "Fireworks"
- Black powder project (together with the chemistry and history teachers)
  - History of black powder and what one uses today for fireworks

### 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 *Fireworks* (Lichtbilder) 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. 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.