

Content

- Blood donation
- The composition of blood
- Blood groups

Target group

- Children ages 10 to 12
- Level: A2/B1

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 story lines, correctly spell words)
- Prepare and hold a short presentation for the group
- Understand and follow instructions
- Understand game instructions and take part actively in a game

Word bank

Blut (blood), *das Blut ist rot* (the blood is red), *flüssig und salzhaltig* (liquid and saline), *in unserem Körper fließt Blut* (blood flows in our bodies), *den Puls fühlen* (feel one's pulse), *schwere Verletzung* (serious injury), *bluten* (to bleed), *Blut verlieren* (to lose blood), *schwere Krankheit* (serious illness), *schwere Operation* (complicated operation), *Blut brauchen* (to need blood), *Blut bekommen* (to receive blood), *Blut spenden* (to donate blood), *Blutspende* (blood donation), *Fragebogen* (questionnaire), *Untersuchung* (examination), *Blutabnahme* (to take blood), *Imbiss* (snack), *Ruhepause* (rest), *das Blut untersuchen* (to examine the blood), *das Blut behandeln* (to treat the blood), *Blutgruppe* (blood group), *Röhrchen* (tube), *Beutel* (bag), *rote Blutkörper* (red blood cells), *Plasma* (plasma), *Blutplättchen* (platelets), *Sauerstofftransport* (oxygen transport), *Nährstofftransport* (nutrient transport), *Wunden schließen* (to close wounds), *verbluten* (to lose a dangerous amount of blood), *verhindern* (to prevent)

Materials

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

Materials for printing and/or copying

- Word card template *Our blood* (Unser Blut)
- *Blood groups* (Blutgruppen) cards
- *Blood donation* (Blutspende) worksheet
- *Blood donation* (Blutspende) answer key
- *Our blood* (Unser Blut) worksheet
- Table overview *Our blood* (Unser Blut) (Template for instructor)
- Word bank *Blood donation* (Blutspende)
- My word bank sheet *Blood donation* (Blutspende)
- *Now I know* (Ich kann schon) questionnaire

Materials for download

- Pictures

Blood: <https://goo.gl/Rfohwd>

feeling the pulse: <https://goo.gl/zSqan2>

severe injury: <https://goo.gl/dCZAA9>

serious illness: <https://goo.gl/Toh1nz>

serious operation: <https://goo.gl/1jU6Ui>

donating blood: <https://goo.gl/T5yzwh>

Table on the blood groups

<http://www.biologie-schule.de/blutgruppen.php>

Blood circulation game: <https://goo.gl/JVy6ue>

Duration

3x45 minutes

Before the lecture/film		
Step	Content	Materials
1	<p>Instructor starts a discussion with the children about the blood in our bodies by asking: who has already seen blood, for example their own blood?</p> <p>During the discussion the instructor introduces the words <i>blood</i>, <i>to bleed</i>, <i>injury</i> and attaches the word cards to the board.</p> <p>Note: Possible further topics include: a child in the group had an injury, blood donation drives in the children's community, World Blood Donor Day on June 14.</p>	<p><i>Our blood (Unser Blut)</i> word card templates; Magnets/blu-tack</p>
2	<p>Instructor and children discover that blood is <i>red</i>, <i>liquid</i> and <i>saline</i> and flows in the <i>circulatory system</i> in the body. These words are also attached to the board.</p>	<p><i>Our blood (Unser Blut)</i> word card templates; Magnets/blu-tack</p>
3	<p>Instructor shows the children how they can feel their blood pressure through their pulse.</p>	

<p>4</p>	<p>Instructor summarizes what they discussed with the help of the cards on the board: <i>Blood flows in our bodies. The blood is red, liquid and saline. Blood travels through our bodies by means of the blood circulatory system.</i></p> <p>While speaking, the instructor shows the children the picture of the blood drops and the shot and invites them to play an interactive blood circulation game. The children gather around the computer and put the puzzle pieces in order.</p>	<p>Laptop and projector Pictures: Blood: https://goo.gl/Rfohwd Blood circulation game: https://goo.gl/JVy6ue</p>
<p>5</p>	<p>Instructor continues: <i>We can feel the pressure of our blood in our pulse.</i> Instructor shows a picture of this and hangs the corresponding word card on the board: <i>to feel one's pulse.</i></p> <p><i>Normally we can't see our blood - the instructor continues. But if we injure ourselves, our blood sometimes flows out of our bodies, i.e., we bleed. If one is seriously injured, one can lose so much blood that one needs blood from other people.</i> Instructor reinforces this once again with pictures and hangs the word card <i>serious injury</i> on the board.</p> <p>Finally, the instructor says: <i>It is also possible that those with a serious illness or who are having complicated operations need blood that is donated by others.</i> Instructor once again shows pictures and the hangs the three last word cards on the board: <i>serious illness, operation, donate blood.</i></p>	<p>feel one's pulse: https://goo.gl/zSqan2</p> <p>serious injury: https://goo.gl/dCZAA9</p> <p>serious illness: https://goo.gl/Toh1nz</p> <p>complicated operation: https://goo.gl/1jU6Ui</p> <p>donating blood: https://goo.gl/T5yzwh</p>
<p>6</p>	<p>Instructor goes through the words on the board again, repeats them out loud and asks the children to repeat the following sentences all together: <i>Blood is red, liquid and saline. Blood flows in our bodies. We feel our blood pressure through our pulse. In the case of serious injury one can lose blood. In the case of serious illness or operations one can need blood. One then receives blood that others have donated.</i></p>	<p>Word card template <i>Our blood</i> (Unser Blut);</p>

During the lecture/film		
Step	Content	Materials
7	<p>Instructor says: <i>So there are people who need blood and people who donate blood. Now we are going to see how one can donate blood.</i></p> <p>Instructor shows the beginning of the film (Minute 1:23-1:44) and discusses with the children afterward what they heard and saw. Questions can include: <i>What does Lydia have? (a serious illness)</i> <i>What is the problem that she faces? (her body cannot form blood correctly)</i> <i>How often does she get blood? (every 4 weeks/once a month)</i></p>	Laptop and projector; Audio speakers
8	<p>Instructor then shows the next sequence (Minute 1:45-5:12) and asks the children to place the steps in the correct order on the <i>Blood donation</i> (Blutspende) worksheet during the film or afterward.</p>	Laptop and projector; Audio speakers; <i>Blood donation</i> (Blutspende) worksheet
9	<p>The answers are tested in pairs. Pairs of two children compare their answers and correct them with the help of the answer key, which the instructor hangs in multiple locations throughout the classroom. If the children have questions, these are discussed in the group.</p>	<i>Blood donation</i> (Blutspende) answer key
10	<p>Instructor asks two additional questions about the film: <i>Did anyone notice</i> <i>- how long it takes to donate blood?</i> <i>- how many liters of blood Christoph donated?</i> The children answer the questions if they can. In this case, watching the sequence again serves to check their answers. Otherwise they should look for the answer while watching a second time.</p>	Laptop and projector; Audio speakers;
11	<p>Instructor asks the children what they think happens with the donated blood. The children share their guesses. Possible answers include: <i>The blood is brought to the hospital/to the blood station/to the refrigerator, etc.</i> Instructor says: <i>Yes, the blood is stored, but first it must be examined and treated. A part of the blood is put in tubes and another part is put in bags.</i> Instructor adds the new words to what is on the board: <i>blood donation, to examine the blood, tube, to treat the blood, bag</i></p>	Word card template <i>Our blood</i> (Unser Blut); Magnets/blu-tack

12	<p>Instructor says: <i>Let's first see what happens with the tubes. What does one examine them for?</i> The children watch the third film sequence (Minute: 5:12-8:16).</p>	<p>Laptop and projector; Audio speakers</p>
13	<p>After the film, the instructor reformulates the question: <i>The blood is examined in tubes. Why?</i> Answer: <i>hidden diseases, blood groups</i></p>	
14	<p>Instructor explains to the children that there are different blood groups: A, B, AB, O. <i>This is important if one is receiving blood, because not all mixtures are compatible.</i> Instructor shows the children a table breakdown of how the different blood groups are compatible and discusses it with the children.</p>	<p>Laptop and projector; Audio speakers; Table on the blood groups: http://www.biologie-schule.de/blutgruppen.php</p>
15	<p>In order to better understand this, the instructor suggests a game. He or she divides the children into four groups. Each child is given a card: A, B, AB or O. The instructor also has a card, A, for example. The instructor stands in the middle and asks: <i>I would like to give blood. Who can receive my blood?</i> The children look at the table and decide whether A can donate blood to them or not. Then the instructor says: <i>I need blood! Who can donate blood to me?</i> Now the blood groups that are compatible with blood group A gather around the instructor. One after the other the children take the role of the instructor and call out: <i>I would like to donate blood! or I need blood!</i></p>	<p><i>Blood groups (Blutgruppen)</i> cards</p>
16	<p>Instructor asks the children to return to their seats, hands out the <i>Our blood (Unser Blut)</i> worksheet, and discusses the exercise with the children, which they should solve during the last film sequence or afterward. Instructor starts the last film sequence (Minute 5:12-12:20) and says: <i>Let's see what components our blood has.</i></p>	<p><i>Our blood (Unser Blut)</i> worksheet; Laptop and projector; Audio speakers</p>
17	<p>The answer to the exercise is discussed as a group. The instructor writes the words on the board.</p>	<p>Table overview <i>Our blood (Unser Blut)</i> (Template for instructor)</p>
18	<p>At the end the instructor asks: <i>Did someone pay close enough attention that they can say how long the red blood cells can be stored? And the plasma and the platelets?</i> With the help of the instructor the children gather the answers: <i>Red blood cells: 2 years</i> <i>Plasma: 5-6 weeks</i> <i>Platelets: 5 days</i> Instructor writes the information on the board in table form (see template for instructor): <i>Title: Our Blood</i> <i>What? - Red blood cells, plasma, platelets</i> <i>Can be stored for how long? - 2 years, etc.</i></p>	<p>Blackboard and chalk/whiteboard and markers Table overview <i>Our blood (Unser Blut)</i> (Template for instructor)</p>

19	<p>The instructor then starts another column in the table and writes: <i>What function?</i> If the children understood and remembered this, they can call out the answer. Otherwise the instructor explains: <i>red blood cells - transport oxygen</i> <i>plasma - transport nutrients</i> <i>platelets - close wounds, prevent dangerous blood loss</i> Instructor also writes this information on the board.</p> <p>Note: Because the film is complicated, in terms of both language and content, the children are welcome to watch it again in full if they are interested.</p> <p>At the end the instructor formulates sentences with the new words and expressions, which the children repeat.</p> <p>Instructor finally determines: <i>Human blood is very valuable. It cannot be produced. It can only be donated.</i></p>	Blackboard and chalk/whiteboard and markers
20	The children copy the table from the board on their <i>Our blood</i> (Unser Blut) worksheet.	<i>Our blood</i> (Unser Blut) worksheet;

After the lecture/film

Step	Content	Materials
21	Instructor organizes a visit from the (school) doctor or a nurse and leads a discussion on the topic of <i>blood donation</i> in order to answer any questions that are still open, i.e., <i>Can children donate blood? How often can one donate blood? etc.</i>	
22	Instructor projects the <i>Blood donation</i> (Blutspende) word bank on the board. The children select 10 words that they would like to learn and copy these onto their word bank sheet <i>Blood donation</i> (Blutspende).	Laptop and projector; <i>Blood donation</i> (Blutspende) word bank; My word bank sheet <i>Blood donation</i> (Blutspende)
23	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
24	<p>The children hold onto the following in their portfolios:</p> <ul style="list-style-type: none"> - My word bank sheet <i>Blood donation</i> (Blutspende) - <i>Blood donation</i> (Blutspende) worksheet - <i>Our blood</i> (Unser Blut) worksheet - <i>Now I know</i> (Ich kann schon) questionnaire 	Portfolios

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

- Visit to a blood donation center, interview with a representative
- Visit to a lab, interview with a lab assistant
- Interview with a doctor about human blood (its function, its composition, examining blood, etc.), creation of informational posters

Suggestion for 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 *Blood Donation (Blutspende)* lecture in the *Humankind* faculty together and draws their attention to the fact that there are many lectures in the *Humankind* 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. 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.