

### **Objective**

• The children know how to use laser technology for navigating cars.

### German language goals

- The children know adverbs for direction (*links/rechts/geradeaus*).
- The children can give and follow directions in German (*Fahr geradeaus/Fahr nach rechts/Fahr nach links/ Stopp!/Wende!*)
- The children know German verbs to describe what a driver can do while driving with an autopilot (*essen, lesen, trinken ...*)
- The children can expand their active and passive German vocabulary (*das Auto, der Autopilot,* Adjectives such as *interessant, komisch, lustig, neu, modern, fantastisch, spannend ...*).

\* Although the language of instruction is English, the lesson plan sequences highlighted in orange are taught in German.

### **Materials**

- Toy cars
- Laptop and projector
- Audio speakers
- Magnets
- Whiteboard markers/chalk
- Laser scanner (Laserscanner) photo
- *Directions (Richtungsanweisungen)* word cards
- Blindfolds
- Autopilot (Autopilot) worksheet
- "My word bank sheet: Autopilot (Autopilot)"
- Portfolios



| Time  | Social<br>Form | Learning Objec-<br>tive   | Content   | Materials |
|-------|----------------|---|---|-----------|
| 5 min | Group work     | The children can<br>name body parts in<br>German. The chil-<br>dren can use the<br>structures: <i>Das ist</i><br><i>mein/meine Das</i><br><i>sind meine</i> | The instructor welcomes the children to to-<br>day's lecture and invites them to form a cir-<br>cle.<br>The instructor points to a body part, and the<br>children name the body part in German using<br>the structures: <i>Das ist mein/meine Das sind<br/>meine</i> . The instructor models the activity<br>two more times, then divides the children into<br>groups of four. One group member points to a<br>body part, and the other group members<br>name the body part in German using the<br>structures: <i>Das ist mein/meine Das sind<br/>meine</i> .The instructor supports the children<br>with the vocabulary and pronunciation. |           |



| Time Soo<br>For |                 | Learning Objec-<br>tive  | Content  | Materials                                    |
|-----------------|-----------------|--|--|--|
| clas            | ssroom<br>logue | The children know<br>what an autopilot is.<br>The children know<br>the words <i>das Auto</i><br>and <i>der Autopilot</i> ,<br>and can pronounce<br>them correctly. | After three minutes, the instructor invites the children to return to their seats. The instructor shows a toy car and asks: <i>What is this?</i> The children respond. The instructor introduces the German word <i>das Auto</i> and writes it on the board. The children repeat to practice their pronunciation. The instructor continues: <i>What body parts do I need to steer a car?</i> The children reply. The instructor asks: <i>Do I always need my hands while steering a car?</i> The children share their ideas and may or may not mention an autopilot. In either case, the instructor writes the word <i>autopilot</i> and the German word <i>der Autopilot</i> on the board, pointing out the similarity in how the two words are written and the difference in pronunciation. The children think about what the word might mean. After a round of guessing, the instructor writes <i>automat + pilot</i> under the word on the board and explains: <i>An autopilot is a computer that automatically steers vehicles without the driver having to do any-thing.</i> The instructor asks if the children recognize this from any other context, for example flying, computer games, or driving cars. | Whiteboard mark-<br>ers/chalk<br>One toy car |



| Time  | Social<br>Form                       | Learning Objec-<br>tive  | Content  | Materials                              |
|-------|--------------------------------------|--|--|--|
| 5 min | Interactive<br>classroom<br>dialogue | The children know<br>the German adjec-<br>tives <i>interessant</i> ,<br><i>komisch</i> , <i>lustig</i> ,<br><i>neu</i> , <i>modern</i> , <i>fan-<br/>tastisch</i> , <i>spannend</i><br>and can pronounce<br>them correctly.<br>The children can ex-<br>press their opinion<br>with basic German<br>words.<br>They know that a la-<br>ser scanner and a<br>computer are<br>needed to steer a<br>car with an autopi-<br>lot. | The instructor says: <i>Let's watch a video and</i><br><i>see what happens when an autopilot instead</i><br><i>of a driver steers a car</i> (minute 1:32 to 2:55).<br>After watching the first sequence of the video<br>the instructor asks: <i>What do you think about</i><br><i>this?</i><br>The children collect adjectives: <i>interesting</i> ,<br><i>strange, funny, new, modern, fantastic, excit-</i><br><i>ing</i> , etc. The instructor writes the words on<br>the board and introduces the German words<br><i>interessant, komisch, lustig, neu, modern,</i><br><i>fantastisch, spannend</i> . The children repeat the<br>words.<br>The instructor asks: <i>Did you understand how</i><br><i>this system works?</i> The children explain what<br>they understood and come to a conclusion<br>(with the instructor's help, if necessary): with<br>a laser. The instructor says: <i>That's correct. So</i><br><i>all you need is a car, a computer, and a laser</i><br><i>scanner on the roof of the car.</i> | Laptop and projector<br>Audio speakers |



| Time  | Social<br>Form                       | Learning Objec-<br>tive   | Content   | Materials                              |
|-------|--------------------------------------|---|---|--|
| 5 min | Interactive<br>classroom<br>dialogue | The children know<br>how to use laser<br>technology for navi-<br>gating cars. | The instructor shows the next part of the video (minute 2:55-3:56) and the children test out their conclusion.<br>The instructor says: <i>We just saw two experiments. Can we recreate the first experiment?</i><br>One child pretends to be a pedestrian on the street, and another pretends to be the car, imitating a laser scanner on their head with their hands. The instructor uses movement and pantomime to give instructions on how the car should drive and how the pedestrian should act. Car: start moving, go faster and faster, drive very fast, then stop. Pedestrian: stand calmly, show fear (as the car gets closer and closer), wipe sweat from your forehead (when the car stops).<br>Now the instructor divides the children into two groups. One group plays the car with the laser scanner on their head, and the other group plays the pedestrian. | Laptop and projector<br>Audio speakers |



| Time  | Social<br>Form                       | Learning Objec-<br>tive  | Content   | Materials  |
|-------|--------------------------------------|--|---|--|
| 5 min | Interactive<br>classroom<br>dialogue | The children know<br>how to use laser<br>technology to navi-<br>gate cars. | The instructor puts a photo of a laser scanner<br>on the board and writes "laser scanner" un-<br>derneath. The instructor draws red laser<br>beams coming from the laser scanner and<br>writes "laser beams" underneath, then invites<br>the children to watch the third part of the<br>video (minute 3:56-6:30) to learn how laser<br>beams work.<br>After watching the third part of the video, the<br>instructor and the children discuss the an-<br>swer. | Laptop and projector<br>Audio speakers<br><i>Laser scanner (La-<br/>serscanner)</i> photo<br>Magnets |



| Time  | Social<br>Form                       | Learning Objec-<br>tive  | Content   | Materials   |
|-------|--------------------------------------|--|---|---|
| 5 min | Interactive<br>classroom<br>dialogue | The children know<br>adverbs of direction<br>( <i>links/rechts/</i><br><i>geradeaus</i> ).<br>The children can un-<br>derstand and follow<br>directions in Ger-<br>man<br>( <i>Fahr geradeaus/</i><br><i>Fahr nach rechts/</i><br><i>Fahr nach rechts/</i><br><i>Fahr nach links/</i><br><i>Stopp!/Wende!</i> ). | The instructor hands out toy cars to the chil-<br>dren and explains: <i>Let's learn how to give</i><br><i>driving directions in German</i> . The instructor<br>says: <i>Fahr geradeaus</i> and puts the sentence<br>on the board. The instructor moves the car<br>straight ahead to emphasize the meaning of<br>the sentence. The instructor repeats the sen-<br>tence and encourages the children to do the<br>same while moving their cars straight ahead.<br>The instructor says: <i>Stop</i> and puts the word<br>on the board. The instructor stops the car,<br>then repeats the sentence and encourages the<br>children to do the same while stopping their<br>cars.<br>The instructor follows the same pattern for<br>the sentences <i>Fahr nach links./Fahr nach</i><br><i>rechts./Wende!</i><br>The instructor then continues giving directions<br>until the children can follow them confidently. | Toy cars<br>Magnets<br><i>Directions (Richtung-<br/>sanweisungen)</i> word<br>cards |



| Time      | Social<br>Form     | Learning Objec-<br>tive  | Content  | Materials                                 |
|-----------|--------------------|--|--|---|
| 10<br>min | Partner<br>work    | The children can<br>give and follow di-<br>rections in German<br>( <i>Fahr</i><br>geradeaus/Fahr<br>nach rechts/Fahr<br>nach links/Stopp!/<br>Wende!). | The instructor divides the children into pairs,<br>then says: Let's imagine we are cars. One<br>partner is the autopilot and is navigating the<br>car in German. The other partner is the car<br>and is following the directions. To make it<br>more difficult, the partner driving the car will<br>wear a blindfold so they have to listen very<br>carefully to the directions. Who wants to<br>demonstrate the task with me? The instructor<br>demonstrates the task with one volunteer.<br>The children complete the task, and the in-<br>structor supports them, if necessary. After a<br>few minutes the children switch roles.<br><u>Note:</u> Children do not have to wear a blindfold<br>if they feel uncomfortable doing so. They can<br>complete the task without a blindfold. | Blindfolds                                |
| 5 min     | Individual<br>work | The children can<br>give basic directions<br>in German.  | The instructor asks the children to return to<br>their seats, points to a toy car, and says:<br><i>Let's write down these directions in the com-</i><br><i>puter of our car, so the car will be able to</i><br><i>navigate us in German.</i> The instructor hands<br>out the <i>Autopilot</i> worksheet and invites the<br>children to write down the sentences from the<br>board and add drawings to them. The children<br>complete the task, and the instructor helps<br>them, if necessary.   | <i>Autopilot (Autopilot)</i><br>worksheet |



| Time  | Social<br>Form                       | Learning Objec-<br>tive  | Content  | Materials                                      |
|-------|--------------------------------------|--|--|--|
| 5 min | Interactive<br>classroom<br>dialogue | The children know<br>German verbs to<br>describe what a<br>driver can do while<br>driving with an au-<br>topilot ( <i>essen,</i><br><i>lesen, trinken</i> ). | The instructor asks the children to return to<br>their seats and asks them to close their eyes<br>for a moment to imagine the following: You're<br>sitting in your car. Of course it has a laser<br>scanner, so you don't need to steer. What do<br>you do instead? The children collect ideas: I<br>sleep, I study, I eat,<br>The instructor translates the words into Ger-<br>man and writes them on the board. The chil-<br>dren repeat them. The instructor invites the<br>children to watch the last part of the video<br>(minute 6:30-7:03). After watching the last<br>part, the children compare what the driver is<br>doing in the film with their ideas. They add<br>more verbs to their list on the board, if neces-<br>sary. | Whiteboard mark-<br>ers/chalk                  |
| 5 min | Interactive<br>classroom<br>dialogue | The children can re-<br>flect on what they<br>learned in today's<br>lesson and repeat<br>the German words<br>they learned today.                             | The instructor and the children end the unit<br>with a reflection round in which they discuss<br>what they learned. The instructor encourages<br>the children to repeat the German words from<br>the lesson. Each child then fills out "My word<br>bank sheet: <i>Autopilot (Autopilot)"</i> for this lec-<br>ture and writes down the German words and<br>chunks they learned in today's lesson.  | "My word bank sheet:<br>Autopilot (Autopilot)" |



| Time  | Social<br>Form                       | Learning Objec-<br>tive  | Content  | Materials                |
|-------|--------------------------------------|--|--|--------------------------|
| 3 min | Interactive<br>classroom<br>dialogue | The children know<br>how they can con-<br>tinue working on the<br>topic. | The instructor encourages the children to<br>complete the online tasks for this lecture at<br>home. The instructor previews the topic of the<br>next lesson and ends the lesson. The children<br>file today's materials in their portfolios. | Portfolios<br>Worksheets |



# Fahr' geradeaus!

Based on a concept by Dr. Olga Sacharowa Developed by Bernadett Veress Technical proofreading by Dr. Edit Morvai Adapted by Stefanie Singh



### Stopp!

Based on a concept by Dr. Olga Sacharowa Developed by Bernadett Veress Technical proofreading by Dr. Edit Morvai Adapted by Stefanie Singh



### Fahr' nach links!

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## Fahr' nach rechts!

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### Wende!

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German Digital Kinderuniversity Faculty *Technology (Technik)* Lecture 3D Printer (3D Druck) Image Card Car (Auto)





German Digital Kinderuniversity Faculty *Technology* (*Technik*) **Lecture Autopilot** (Autopilot)

Worksheet Autopilot (Autopilot)



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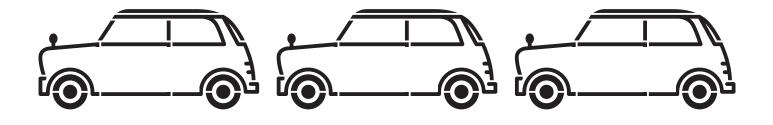
Photo Laser Scanner (Laserscanner)

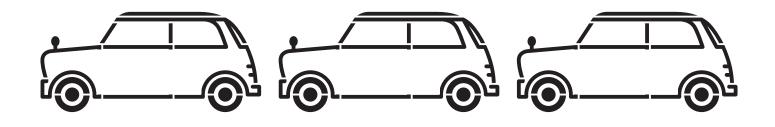


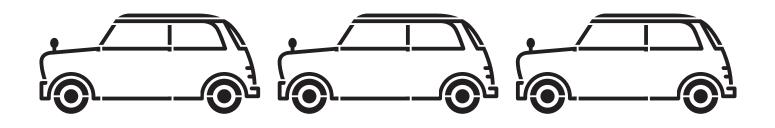
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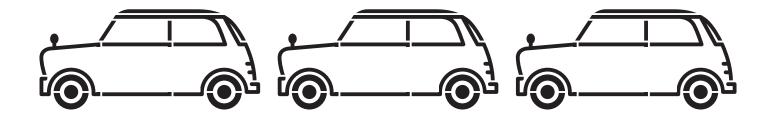


My word bank sheet Autopilot (Autopilot)









Based on a concept by Natalia Koslowa, Srbuhi Lulukyan, Liana Safaryan Developed by Bernadett Veress Technical proofreading by Dr. Edit Morvai Adapted by Stefanie Singh