



LESSON PLAN

Theme 9: 3D Printing (3D-Druck) Session 1 (of 3)

Tips and Tricks for your Club Session

Lesson resources for 3D Printing are here:

<https://kinderuni.goethe.de/mod/videoscore/view.php?id=5949>

- Watch the relevant video before the lesson:
<https://kinderuni.goethe.de/mod/videoscore/view.php?id=5949>
- Practise the key vocabulary before the session:
<https://kinderuni.goethe.de/mod/page/view.php?id=4490>

Objective

The learners are taught about digital footprints and 3D printing. They know adjectives to describe a car in German.

German Words/Phrases Learning Goals

- | | |
|---------------------------|-------------------|
| • der 3D-Druck | 3D printing |
| • der digitale Fußabdruck | digital footprint |
| • das Auto | the car |
| • fahren | to drive |
| • bremsen | to brake |
| • sehen | to see |
| • langsam | slow |
| • schnell | quick |
| • schön | pretty |
| • neu | new |
| • alt | old |
| • groß | big |
| • klein | small |
| • Das Auto ist XXX. | The car is XXX. |

Materials

- Interactive whiteboard with internet access and audio
- Toy cars
- Plain paper and colours, one for each learner
- Writing implements
- At the 3D Printing Workshop worksheet
- Whiteboard markers/chalk
- Car (Auto) image card
- "My word bank sheet: 3D Printer (3D Druck)"

Time	Social Form	Learning Objective	Content	Materials	Phrases and Gestures
2 mins	Whole group	The learners are able to greet each other in German.	<p>Leaders and learners greet each other with German greeting words learnt previously.</p> <p>They move around the room, greeting as many people as possible. Leaders should be addressed as "Herr XXX" or "Frau XXX" to practise using those terms.</p>		<p>Hallo. - Hello.</p> <p>Guten Morgen. - Good morning.</p> <p>Guten Tag. - Good day.</p> <p>Learners could shake hands when greeting each other.</p>



Time	Social Form	Learning Objective	Content	Materials	Phrases and Gestures
5 mins	Whole group	The learners can recall a range of verbs in German.	<p>Warm up by playing the car game from the start of the previous session.</p> <p>Distribute the toy cars and give the children directions (Fahr geradeaus/rechts). Do an example for the learners, as a reminder.</p> <p>The learners follow the directions. They continue this activity with a partner: One partner gives directions, the other follows the directions. After one minute they switch roles.</p>	<ul style="list-style-type: none"> Toy cars 	<p>Wir spielen ein Spiel. - Let's play a game.</p> <p>Ein Beispiel. - One example.</p>
8 mins	Whole group, then individual and paired work	The learners can make a pictorial representation of their digital footprint.	<p>The leader tells the learners that they are continuing to look at cars, but online.</p> <p>First, they are going to work alone to create their digital footprint.</p> <p>Discuss: What is a digital footprint? Answer: This is the information trail left behind online when a person uses the internet or digital devices.</p> <p>The leader tells the learners to draw around their foot (shoe on or off) on a piece of A4 paper and list all the electronic devices they use at home and in school within the outline of their foot.</p>	<ul style="list-style-type: none"> Plain paper and colours, one for each learner Writing implements 	<p>Zuhören bitte. - Listen carefully.</p> <p>Wir diskutieren. - Let's discuss.</p> <p>Was ist der digitale Fußabdruck? - What is the digital footprint?</p> <p>Wir arbeiten allein. - Let's work alone.</p> <p>Hier ist ein Blatt Papier. - Here is a piece of paper.</p> <p>Wir zeichnen den Umriss des Fußes. - Let's draw around the outline of our foot.</p> <p>Dann machen wir eine Liste der elektronischen Geräte. - Then let's make a list of the electronic devices we use.</p>



Time	Social Form	Learning Objective	Content	Materials	Phrases and Gestures
			<p>Do an example for the learners, before they begin.</p> <p>After 5 minutes the leader asks the learners to pair up with another child. The children present their digital footprints. After one minute they choose a new partner and once again present their digital footprints to each other.</p>		Ein Beispiel. - One example.
8 mins	Whole group	The learners understand how 3D printing works.	<p>The leader continues the discussion about technology and images.</p> <p>Discuss: Do you understand the difference between a 2D and a 3D image? Answer: Two-dimensional objects have length and width, but no thickness or height. Do you know how a computer makes a 3D item? Answer: Let's watch the video to find out!</p> <p>Watch the video on 3D printing here in full: https://kinderuni.goethe.de/mod/videoscore/view.php?id=5949</p> <p>During the video the learners work on the <i>At the 3D Printing Workshop worksheet</i>. They match the names of the devices</p>	<ul style="list-style-type: none"> Interactive whiteboard with internet access and audio At the 3D Printing Workshop worksheet 	<p>Zuhören bitte. - Listen carefully.</p> <p>Wir diskutieren. - Let's discuss.</p> <p>Wie sagt man "slow" und "quick" auf Deutsch? - How do we say "slow" and "quick" in German?</p> <p>Wie sagt man "red", "blue" und "yellow"? - How do we say "red", "blue" and "yellow"?</p>



Time	Social Form	Learning Objective	Content	Materials	Phrases and Gestures
			<p>used to recreate a modified version of the model car to their picture.</p> <p>After watching the video, the leader asks: How does a 3D printer work? What is the difference between a normal printer and a 3D printer?</p> <p>With the help of the worksheet, the learners first share their ideas with their partner and then discuss in class: In its cartridges, the 3D printer has a special plastic instead of ink. The model car is built layer by layer over the course of 15 hours with the plastic.</p>		
5 mins	Whole group	The children know German adjectives (schnell, langsam, groß, neu, schön, alt, rot, grün ...).	<p>The leader asks the learners how the model of the car is built up. Answer: Slowly in thin layers.</p> <p>Ask: How do we say slow and quick in German? Answer: Slow (langsam). Quick (schnell). Ask: Do you remember other adjectives learnt previously (e.g. colours)?</p> <p>The leader puts the picture of his/her favourite car on the board and asks the children to describe the car with adjectives. The leader collects the adjectives on the board and introduces the</p>	<ul style="list-style-type: none"> • Interactive whiteboard with internet access and audio • Whiteboard markers/chalk • Car (Auto) image card 	<p>Wir lernen mehr Adjektive auf Deutsch. - Let's learn the verbs in German.</p> <p>Zuhören bitte. - Listen carefully.</p> <p>Wiederholen bitte. - Repeat please.</p>



Time	Social Form	Learning Objective	Content	Materials	Phrases and Gestures
			corresponding German adjectives. The learners repeat. Afterwards the leader describes the car using the structure: Das Auto ist ... and writes the structure on the board. Tell the learners that they will continue to describe cars in the next session.		
2 mins	Whole group	The learners can say goodbye in German.	<p>The leader recaps what the learners have achieved in the session and congratulates them on their work.</p> <p>The leader encourages the learners to repeat the German words from the lesson. Each learner then fills out "My word bank sheet: 3D Printer (3D Druck)" and writes down the German words and chunks they learned in today's lesson.</p> <p>The learners leave the session saying goodbye in German.</p>	<ul style="list-style-type: none"> "My word bank sheet: 3D Printer (3D Druck)" 	<p>Toll gemacht. - Well done!</p> <p>The learners take part in the club's goodbye ritual.</p> <p>Tschüss. - Goodbye.</p> <p>Learners can also say goodbye to Frau Schlau and Herr Einstein.</p>