



AUSTRALIAN CURRICULUM: GERMAN CLIL UNIT PLANNER

SEQUENCE: F-10

YEAR LEVEL/BAND: 9-10

UNIT: JUNIOR UNIVERSITÄT

LECTURE: LED

This Unit Planner developed by, and kindly shared by former [AFMLTA](#) President, Kylie Farmer, has been adopted by the Goethe-Institut in Australia.

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Please note

These resources are designed to be implemented optimally with a focus on the content knowledge as well as language. CLIL is flexible; however, to enable the learning of new content and/or skills through the Target Language some code switching between the students' first language and the target language might be required. Assessment may be in the form of observation, conversation or a product.

Focus Questions: What are the advantages and the components of LEDs? How much more energy efficient are LEDs compared to regular light bulbs?

Concepts: LEDs, currents, circuits, electricity

Communication	Content
<p>Communicating - Socialising (ACLGEC172) shared activities - persuading, arguing, planning, negotiating</p> <p>Communicating - Informing (ACLGEC175) convey ideas, information and views - presenting, representing, reporting</p> <p>Communicating - Translating (ACLGEC179) create bilingual texts aspects of language and culture</p> <p>Understanding - Systems of Language (ACLGEU182) features of spoken and written language - pronunciation , stress, contractions</p>	<p>Learning Areas</p> <ul style="list-style-type: none">● Mathematics: Learn more about the mathematics of light (ACMMG217) https://www.bbvaopenmind.com/en/science/mathematics/the-mathematics-of-light-aristotle/● Science: Find out more about LEDs, currents, circuits and electricity. (ACSSU177)● Civics and Citizenship: Is there a light bulb collection in your local area? Why/ Why not? (ACHCS085)● Economics and Business: Find out more about economic applications for LED lights https://www.intechopen.com/online-first/74673 Is it worth changing all bulbs to LED? Conduct a cost/benefit audit. (ACHES046)● The Arts: How is LED lighting used to effectively illuminate artworks? Find out more about some famous LED light artworks e.g. Villareal's Cylinder. (ACAVAM129)● Technologies: What are the components of LEDs and how do they work together? (ACTDEK040) <p>General Capabilities</p> <ul style="list-style-type: none">● Literacy: What are the language features of a collage? How can you use language to persuade others?● ICT: How could LEDs be used as a peripheral device?● Critical and Creative Thinking: How could you creatively convince others to be more sustainable with their light globe disposal and replacement?● Personal and Social Capability: How could you change your behaviour to be more sustainable?● Ethical Understanding: How do you and your family dispose of your old light globes?● Intercultural Understanding: How does culture and geography influence lighting choice? <p>Cross-Curriculum Priorities</p> <ul style="list-style-type: none">● Aboriginal and Torres Strait Islander Histories and Cultures (OI.3) Find out about how Aboriginal and Torres Strait Islander Peoples have a long and ongoing understanding of the properties of light and how light behaves when it contacts or passes through different materials. They use this principle in body painting.● Sustainability (OI.9) How much more energy efficient are LEDs compared to regular light bulbs?
<h2 data-bbox="555 751 741 794">Cognition</h2>	
<p>Communicating - Reflecting (ACLGEC180) make choices- assumptions, questions, modifying behaviour, responsibility</p> <p>Understanding - Systems of Language (ACLGEU184) Describe the interrelationship between text types, structuring, language choice</p>	
<h2 data-bbox="577 999 719 1042">Culture</h2>	
<p>Communicating - Informing (ACLGEC174) context and culture affect information - perspectives, researching, synthesising, evaluating, representing</p>	

Aspects of the 9-10 Band Achievement Standard being addressed through this Lecture: Suggested aspects of the Achievement Standard for the proposed Assessment Tasks are noted numerically on the following page next to each task. A full listing of all aspects of the Achievement Standard is to be found on the final page, noting that the numbering system is not from ACARA, but rather developed for the purpose of presenting this series of Unit Planners.

	Student Tasks	Language Assessment Tasks	Materials and Resources	
Implementation	<p>Facilitating Communication- of, for, through learning</p> <ul style="list-style-type: none"> Understand a non-fiction film about the advantages, structure and function of LEDs. Assign appropriate chapter headings to a factual text. Talk about the advantages and components of an LED. Label a technical sketch with information from a text. Name the areas of life in which LEDs appear with generic terms. Create a collage on the subject of 'Leuchtwunder LED'. <p>Analysing Key Content</p> <p>Understand the applied content of a technical video.</p> <ul style="list-style-type: none"> Understand that LEDs are increasingly replacing conventional light bulbs. Know that LEDs appear in almost all areas of life today. <p>Opportunities for Cognition</p> <ul style="list-style-type: none"> Understand the structure and function of an LED. Label a technical sketch about the structure of an LED. Visualise the advantages of LEDs. Understand the text type of a collage using persuasive language. Understand systems of language e.g. grammatical aspects: case system, adjectives, persuading others. Reflect on their learning. <p>Connecting with Culture</p> <p>Understand elements of culture relating to the lecture.</p> <ul style="list-style-type: none"> How does culture and geography influence lighting choice? 	<p>Formative: Schreiben/ Lesen A1/A2: AB 1.1 Impulsbild A2/B1: AB 1.1 Impulsbild</p>	<p>6, 7 6, 7, 11, 12</p>	<p>Materials:</p> <ul style="list-style-type: none"> Tablet mit Internetzugang für jedes Paar Stift Fotos/Magazine <p>Resources:</p> <ul style="list-style-type: none"> Students logged in to the Junioruni website to access the exercises or print a copy of the exercises to complete before/during and after watching the video as a class. Access to digital or hardcopy dictionaries is ideal for some activities <p>Additional Teacher Resources:</p> <p>Handbook, attachments and video script are available for pdf download from the teacher's version of the website.</p> <p>Materials for download:</p> <p>Was ist was: https://www.wasistwas.de/archiv-technik-details/pionier-der-leuchtdioden-technik.html</p>
		<p>Formative: Zuschauen/Lesen/ Zuordnen/Schreiben A1/A2: AB 1.2 Wie sie funktionieren A2/B1: AB 1.2 Licht abstrahlende Diode</p>	<p>6, 7, 11, 12 6, 7, 11, 12</p>	
		<p>Summative: Schreiben/Sprechen</p> <p>Meine Collage: Recherchiere im Internet in welchen Lebensbereichen die LED eingesetzt wird. Die Ergebnisse werden in der Gruppe präsentiert als eine Collage zum Thema: 'Leuchtwunder LED'. Das Ziel ist es, andere von den Vorteilen des Ersatzes herkömmlicher Glühbirnen durch LEDs zu überzeugen.</p>	<p>1, 2, 4, 5, 6, 7, 11, 12</p>	
		<p>Inquiry Based:</p> <p>Students select an area of interest around the concept of <i>LED</i> (see Content Focus above for further ideas) and present their findings to the class, year level, school community or wider audience.</p> <p>Hands-on Tasks:</p> <ul style="list-style-type: none"> Try the Kinderuni im Koffer experiment: die Leuchtstofflampe. Try out some experiments using LEDs, currents, circuits and electricity.: https://www.stevespanglerscience.com/lab/experiments/led-throwies/ Create a light up bracelet: https://www.tuduu.org/projekt/leuchtendes-armband/ 	<p>1, 3, 4, 5, 7, 9, 10, 12, 15, 16, 17, 18</p>	

Lecture: LED Observational Assessment	Achievement Standard	How I see myself:			How my teacher sees me:		
		I know this in German.	I know this in English.	I still need to work on this.	You know this in German.	You know this in English.	You still need to work on this.
I can ...	1, 2, 5						
<ul style="list-style-type: none"> engage and sustain interactions with peers in class, group and paired activities 	6, 7, 8, 11						
<ul style="list-style-type: none"> understand a non-fiction film about the advantages, structure and function of LEDs. 	6, 7, 12						
<ul style="list-style-type: none"> assign appropriate chapter headings to a factual text. 	6, 7, 12						
<ul style="list-style-type: none"> talk about the advantages and components of an LED. 	1, 2, 6, 7						
<ul style="list-style-type: none"> name the areas of life in which LEDs appear with generic terms. 	6, 7						
<ul style="list-style-type: none"> create a collage on the subject of 'Leuchtwunder LED'. 	1, 2, 4, 5, 6, 7, 11, 12						
<ul style="list-style-type: none"> understand the structure and function of an LED. 	6, 7						
<ul style="list-style-type: none"> label a technical sketch about the structure of an LED. 	6, 7						
<ul style="list-style-type: none"> visualise the advantages of LEDs. 	6, 7, 12, 13						
<ul style="list-style-type: none"> understand the text type of a collage using persuasive language. 	16, 17						
<ul style="list-style-type: none"> understand systems of language e.g. grammatical aspects: case system, adjectives, persuading others. 	4, 11, 15						
<ul style="list-style-type: none"> reflect on my learning. 	13, 18						
<ul style="list-style-type: none"> understand elements of culture relating to the lecture. 	13, 14, 17, 18						
<ul style="list-style-type: none"> understand the applied content of a technical video. 	<u>(ACTDEK040), (ACSSU177)</u>						

Overall Assessment

Well Above Standard A	Above Standard B	At Standard C	Below Standard D	Well Below Standard E
The student can complete all of the challenges above in German with minimal English to help explain content, displaying excellent cognitive, communicative and creative skills.	The student can complete all of the challenges above in German with some English to help explain content, displaying above average cognitive, communicative and creative skills.	The student can complete most of the challenges above in English with some German words and phrases, displaying sound cognitive, communicative and creative skills.	The student can complete some of the challenges above in English with some German words and phrases, displaying sound cognitive, communicative and creative skills.	The student can complete little or none of the challenges above in English, displaying limited cognitive, communicative and creative skills.

Australian Curriculum: German 9-10 Band Achievement Standard (F-10 Sequence)

1. Students use written and spoken German to initiate and sustain interactions with teachers, peers and others in a range of settings and for a range of purposes.
2. Students use language spontaneously in the classroom environment to seek clarification and advice, assist others, initiate conversations and discussions, debate a course of action, share learning strategies and comment on the contribution of others.
3. Students describe plans and aspirations using future tense.
4. Students state facts and relate experiences, using past tense forms and regular and irregular verbs.
5. When speaking, students use appropriate pronunciation, intonation and stress in a range of sentence types, including variations such as contractions.
6. Students locate, synthesise and evaluate information on local and global issues from a range of perspectives and sources.
7. Students present ideas, information and views in a range of texts selected to suit audience, purpose and context.
8. Students analyse the main ideas and themes in imaginative texts and use evidence to support their views.
9. Students plan, draft and present imaginative texts using literary devices (imagery, similes, onomatopoeia) to engage a range of audiences.
10. When creating informative, persuasive and imaginative texts, students use a variety of conjunctions, relative clauses and other cohesive devices to build cohesion,
11. Students specify and describe people, places and objects by applying knowledge of the case system to articles, common demonstratives and possessives followed by adjectives.
12. Students interpret and/or translate excerpts from German texts, identifying and explaining culture-specific aspects, and create texts that reflect and explain aspects of culture and language for different German-speaking and Australian audiences.
13. Students identify and challenge their own assumptions and take responsibility for modifying language and behaviours in relation to different cultural perspectives.
14. Students identify ways that language influences people's actions, values and beliefs, and appreciate the scale and importance of linguistic diversity.
15. Students explain the roles of different German cases (nominative, accusative, dative and genitive) and tenses, and variations in spoken and written German in relation to pronunciation, spelling and punctuation.
16. Students explain the relationship between text type, audience and purpose.
17. Students identify the role culture plays in the creation and interpretation of texts, and explain how language and text features (layout, structure and formal/informal register) are used differently in a range of texts.
18. Students explain ways in which language and culture are interrelated and influence each other.