Teaching Notes: Power to the People

Site: Teach About U.S.

Course: _Virtual Town Hall 2022/23

Book: Teaching Notes: Power to the People

Printed by: Taieb Oussaifi

Date: Tuesday, 25 July 2023, 11:00 AM

Table of contents

Introduction

Background

E-Classroom overview

Course sections

Activity types

Blocks

What is renewable energy? (preparatory STEM modules)

Day 1

Day 2

Day 3

Day 4

Day 5

Tips, Resources, and Tools

School competition

Acknowledgements

Power to the People

An interdisciplinary project week on community energy planning to bridge the Science and English language classrooms

The project week POWER TO THE PEOPLE is an interdisciplinary curriculum connecting the Science and English language curricula and is the latest addition to Going Green. Students are asked to investigate the energy infrastructure in a fictional town, understand the science behind renewable energies, and develop a concept for their community's future energy supply. The subsequent chapters will discuss the individual parts in greater detail.

Every participating course is provided with a private e-classroom with ready-made materials and interactive. It is password protected so that everything uploaded or posted in this course is only visible to enrolled participants (except for some blog posts, see below). The following subchapters are meant as a brief and systematic overview of your course in terms of course sections, activity types, and side blocks.



This book is only visible to teachers. Use these teaching tips for planning the implementation of the project week in your course. Activity links are connected to the Project Week Demo Course.



To navigate this resource, click on the arrows at the page bottom to go forward or backward, or use the table of contents in the side block in the right margin (or at the page bottom when using mobile devices) to access the desired section directly.

Background

In order to combat the global phenomenon of climate change and the warming of our planet's atmosphere, different goals of national and international scope are being developed to reduce the greenhouse gas emissions that largely cause this effect. Common strategies include the transition toward renewable energy sources and the implementation of energy efficient technologies. But while climate goals like the Paris Climate Agreement are negotiated internationally, it is the responsibility of localities - communities and cities - to put these decisions into action. Their geographic concentration, their complex structures and use of energy for housing, commerce, industry, traffic, and leisure, make communities and cities a major producer of greenhouse gases. At the same time, however, this offers a large potential for reducing these emissions.

Project week

This is where the project week curriculum for Power to the People starts. Modelled after community energy planning guidelines by the U.S. department of energy and the German Deutsche Energie Agentur dena, it introduces students to the context of the fictional town of Leinwig whose mayor is reaching out to your students to develop a plan for the town's transition to renewable energy sources. This includes the steps of exploring this fictional scenario, comparing it to real-life case studies and best practices in the U.S. and Germany, and developing an action plan that is economically, ecologically, and technologically viable. As a project outcome, students present their solution in a 3-minute video and pitch their approach to an expert commission. A student competition with awards for outstanding project week outcomes will conclude the project.

With this approach, we intend to break up the borders between school subjects. The project week addresses contents and competences of both English language and Science instruction. We thus suggest that English language and Science teachers team up to carry out the project together. In preparation to the project week, preparatory science modules can be covered in science classes focusing on the concept of renewable energy sources, their availability and tradeoffs, as well as the science behind the different technologies.

Here is the project week curriculum at a glance:

Preparation	Day 1	Day 2	Day 3	Day 4	Day 5
RENEWABLE ENERGY	SCENARIO	GOALS & OPTIONS	DEVELOPMENT	PLANNING OUTCOMES	PRODCUTS & EVALUATION
What is renewable energy? Concept & definition	TED talk: community energy planning	Developing an energy vision: Mission statement	Establishing a work plan & launching expert group phase	Expert group presentations on work packages	Pitching students' CEP to the 'commission'
Renewable energy technologies Renewable energy tradeoffs: Bath-	Letter(s) from the mayor(s)	Critically reviewing best practice case studies	Mid-day report on work progress	Planning the project outcomes (pitch & video)	Reflection and evaluation of the project week
tub experiment Climate change impacts: Researcher workshops	Reviewing community energy dossiers	Adapting best practices to the scenario: planning work packages	Critical assessment: SWOT analysis	Optional: Producing a pitch video for competition	Optional: Continue project work focusing on the students' own community

Curricular principles

- ▶ IDEA: The mayor of the fictional town of Leinwig needs your help! Her town is struggling with the transition toward a renewable energy portfolio and asks you to develop a community energy plan. You have one week to come up with a scientifically-backed and context-sensitive plan and pitch it to an expert commission.
- CONTENT FOCUS: renewable energy sources and the energy transition in a transatlantic perspective, especially at the community level
- SCHOOL SUBJECTS: English as a foreign language, STEM school subjects, social studies; we encourage Science and EFL teachers to partner up for the project
- **COUNTRIES:** groups from Germany and the U.S. (and of course other countries as well) can participate
- **DURATION:** 5 school days (c. 6 lessons each day) for the project week curriculum; four STEM-based preparatory study modules on renewable energy are available; curriculum can be adapted to shorter time budgets
- **TARGET PARTICIPANTS:** advanced secondary students (10th grade and older)
- ▶ MATERIALS & TOOLS: all materials are available in an online Moodle course and as copy-ready PDF files; internet access and computers or other digital devices are recommended
- **OSTS:** All materials on Teach About US are available at no cost upon registration
- **OUTCOMES:** Students pitch their community energy plan to an expert commission at their school. They present their concept in a 3-minute video and submit it to a student competition.
- **▶ TIME FRAME:** The project week curriculum can be implemented flexibly (no specific date or week). The submission deadline for the video contributions will be announced soon.

To view the curriculum, visit the project week demo course.

Get to know your course's personal e-classroom. It is password protected and everything uploaded or posted in this course is only visible to enrolled participants (except for some blog posts, see below). The following subchapters specifically introduce you to your course's

- Sections
- Activity types
- Blocks

These are the individual sections of your e-classroom:

Title section



In the title section, you will find general resources and forums that could be useful for the entire duration of the project:



© Course Forum

The **COURSE FORUM** is a regular discussion forum that can be edited by all participants. It can be used for any questions arising out of the project that are not related to a particular task, resource, or tool, or for discussions focusing on one of the tasks.



Energy Lingo

The glossary **ENERGY LINGO** serves as your course's central glossary for vocabulary definitions. Students can add entries to this glossary consisting of text, but also web-links, images, and videos. Students should also provide sources of the cited information and example sentences and they can comment on each other's entries, thereby adding or correcting information. Several activities throughout the project refer to this glossary, so that it can easily become a record of classroom work and a resource for exam preparation.



The database **LEARNER TEXTS** serves as a repository for learner texts and files worth sharing that arise out of the different tasks in this course. To upload a file or insert a text, learner need to open the database, click on 'Add entry' and fill out the form. Uploaded learner texts can be browsed and accessed by all course participants. They can also add comments and provide peer feedback.



The **PROJECT JOURNAL** is a notebook that can be used to document the project work in a systematic or rather informal way. All students can edit this journal and add contents. For example, you could nominate students to document the findings from the several tasks in this course and thus document their way to their sustainability action plan.

You can either use this module in Moodle or take advantage of the conveniences of Google Docs (at least one person has to have a Google account for this). Here are short tutorials for both options:

- SWAY: Using the Project Journal
- SWAY: Setting up your Project Journal with Google Docs

What is renewable energy? (science focus)



This introductory module contains four sections that serve as a science-based introduction to the project week. It is designed to be implemented in science classes prior to the actual project week. Every section can be completed in a double lesson. The sections are:

1. What is renewable energy?

- Teaching Notes: Power to the People
 - 3. Renewable energy tradeoffs: Carbon dioxide emissions
 - 4. Climate change impacts

2. Renewable energy technologies

To learn more about this section and its activities, read the chapter on What is renewable energy? (preparatory STEM modules).

Day 1



Day 1 is dedicated to introducing your students to the scenario of the project week / simulation. In other words, students will be provided with varied input materials. They should use these materials to deduce information about the general situation in Leinwig (descriptive level), define the underlying problem posed to them (analytic level), and map out the different fields of action that they will address in the coming days (application level).

To learn more about this section and its activities, read the chapter about Day 1.

Day 2



Day 2 of the project week serves to familiarize your students with different aspects of the potential solution to

the overall problem by introducing them to various best practice examples of community energy planning (CEP) in the U.S. and Germany.

To learn more about this section and its activities, read the chapter about Day 2.

Day 3



The primary focus of Day 3 is on developing the CEP in the expert groups. For this purpose, students organize their time and procedures more independently with the help of the Project plan template. The second focus is to critically evaluate their work units by performing a SWOT analysis.

To learn more about this section and its activities, read the chapter about Day 3.

Day 4



On Day 4, students will begin working towards the outcomes of the project week, i.e. they will finish up their work units and arrange them together to form a coherent CEP for Leinwig. This final outcome is going to be a pitch, i.e. an oral presentation to an expert commission (to be organized by you), along with written summaries from the individual expert groups. If your course opts to participate in the school competition, they will have to produce a short video describing their CEP.

To learn more about this section and its activities, read the chapter about Day 4.

Day 5



Day 5, the final day of the project week, focuses on the presentation of results, i.e. the oral pitch, the written summaries/portfolio, and the video. In this context, the students' achievements should be acknowledged. Enough time should be reserved for a critical reflection and evaluation of the project and a debriefing.

To learn more about this section and its activities, read the chapter about Day 5.

Tips, resources, and tools



In order to facilitate self-directed and autonomous learning, your students can find additional tips and 'how-to' resources in this section along with self-assessment grids. If necessary, you can add more materials and links to this section.

These are the activity types of this course (in alphabetical order):

Assignment/Task



All links starting with "TASK:..." belong to this category. An assignment or task usually provides task instructions for students. In this course, we have also added most relevant materials and resources as links below the task instructions. In the settings to this activity type, a submission type (online text, a file etc.) can be selected and, then, individually graded by the teacher. However, in this course we have mostly disabled

this feature as in most cases students are asked to contribute to a forum or database, or produce an offline outcome (e.g., a classroom presentation) in order to complete the assignment. Click here for more documentation on this activity type.

Choice



A choice activity is very simple – the teacher asks a question and specifies a choice of multiple responses. It can be useful as a quick poll to stimulate thinking about a topic; to allow the class to vote on a direction for the course; or to gather research consent. Click here for more documentation on this activity type.

Database



The database activity module allows the teacher and/or students to build, display and search a bank of record entries about any conceivable topic. The format and structure of these entries can be almost unlimited, including images, files, URLs, numbers and text amongst other things. Click here for more documentation on this activity type.

Forum



The forum module is an activity where students and teachers can exchange ideas by posting comments. These comments can include text, images, videos, links, and files. Forums can be used for course administration, social exchange, topic discussion, brainstorming, etc. Click here for more documentation on this activity type.

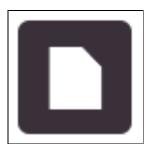
Glossary

The glossary activity module allows participants to create and maintain a list of definitions, like a dictionary, or



to collect and organize resources or information collaboratively. The entries can be searched or browsed. The auto-linking feature will highlight any word in the course which is annotated in the glossary. Click here for more documentation on this activity type.

Questionnaire



The questionnaire module allows you to construct and administer surveys using a variety of open and closed question types, for the purpose of gathering data from learners. Answers can be collected anonymously or with respondent names visible for all participants.

Quiz



The Quiz activity module allows the design of quizzes consisting of a large variety of Question types, including multiple choice, true-false, and short answer questions. Click here for more documentation on this activity type.

Resource/page



Web-page resources are simple pages with text and other media for the display of information. The teaching notes are examples of this feature. Click here for more documentation on this resource type.

URL/Link



These are simple links on the internet to a website or online file. Usually, they lead to additional information for further research or to additional web-tools that are useful or necessary for an activity. Click here for more documentation on this resource type.

At the right side of your course overview, you can access a selection of mostly orange boxes. If you or your students find them distracting, you can collapse them or have a minimized version of them docked to the left edge of your screen. Simply click the respective button in the top right corner of the orange box.

Navigation

Use this block to navigate through the different site pages (*Site pages*), your user profile (*My profile*), different course sections and activities (*Current courses*), and other courses in which you are enrolled as a user (*My courses*).

Click here for more documentation on this side block.

Administration

Use this block to administer your course. In fact, all the basic settings for your course have already been prepared and set – so only use this block if you need to make any further changes to your course page (for advanced users). Two useful settings in this block are:

- Course administration → Turn editing on: Lets you access this editing mode, e.g. to make certain
 assignments, resources, and links invisible.
- Switch role to...→ Student: Lets you switch your user role to that of a student, i.e. you only see links and settings that your students can see. Thus, in this mode you do not see e.g. any invisible links such as the teaching notes.

Click here for more documentation on this side block.

Activities

In this block, all available activity types for your course are displayed. Clicking on these activity types leads you to an overview list with all activities of this type in your course. This list also includes a basic summary of participation in these activities.

☑ Click here for more documentation on this side block.

Online users

A list of users currently online. Clicking on a user's name leads you to their profile page.

Click here for more documentation on this side block.

Modul 1:

Ziel: Die Schüler_innen erklären vorgegebene Begriffe zum Thema (erneuerbare) Energieträger.

Zu Beginn wird das Vorwissen der Schüler_innen bezüglich (erneuerbarer) Energieträger über einen Fragebogen – auf Moodle oder in Papierform – abgefragt. In diesem Modul sollen sich die Schüler_innen mit vorgegebenen Begriffen zum Thema (erneuerbarer) Energieträger auseinandersetzen, darüber diskutieren und kritisch reflektieren. Hierfür wird unter anderem auf historische Quellen (z.B. die Ölkrise) und auf ein Video zurückgegriffen.

Modul 2:

Ziel: Schüler_innen nennen unterschiedliche Energieträger. Sie recherchieren mithilfe verschiedener Medien die Eigenschaften sowie die Verfügbarkeit der unterschiedlichen Energiequellen und vergleichen diese.

Der Fokus liegt bei diesem Modul auf den unterschiedlichen Energieträgern mit ihren Eigenschaften und ihrer Verfügbarkeit. Die Schüler_innen erarbeiten sich in Gruppen selbstständig Expertenwissen zu jeweils einem Energieträger. Hierfür stehen ihnen vorbereitete Informationsblätter und das Internet zur Verfügung. Ihre Informationen halten sie auf einem Plakat oder in einer Powerpoint-Präsentation fest, um ihre Ergebnisse zum Abschluss der Einheit zu präsentieren.

Modul 3:

Ziel: Die Schüler_innen erklären den Zusammenhang von Kohlenstoffdioxid-Emissionen und -Senken und der atmosphärischen Kohlenstoffdioxid-Konzentration.

In diesem Modul erarbeiten die Schüler_innen die Auswirkungen und Folgen des Klimawandels und diskutieren politische Entscheidungen. Der Kohlenstoffkreislauf wird thematisiert und sie interpretieren Diagramme bzw. Grafiken.

Die Schüler_innen führen das Badewannen-Experiment durch. Sie protokollieren, analysieren und interpretieren ihre Beobachtungen und beziehen das Modell auf die Kohlenstoffdioxid-Konzentration in der Erdatmosphäre. Anhand des Models erklären Sie die Auswirkungen des Verhältnisses von Kohlenstoffdioxid-Emissionen und Kohlenstoffdioxid-Senken auf die atmosphärische Kohlenstoffdioxid-Konzentration.

Modul 4:

Ziel: Die Schüler_innen erklären die Folgen und Auswirkungen der Nutzung der unterschiedlichen Energiequellen und nennen wichtige Aspekte der Finanzierung.

Das Hauptaugenmerk bei diesem Modul liegt auf den Auswirkungen und Folgen der Nutzung der verschiedenen Energiequellen. Die Schüler_innen erarbeiten sich zu diesem Thema mithilfe von vorbereiteten Informationsblättern und dem Internet selbstständig Wissen und diskutieren ihre Ergebnisse

Darüber hinaus erarbeiten Sie die Auswirkungen des Klimawandels mithilfe der Website klimafolgenonline.com im Rahmen von sechs Forscherwerkstätten zu Themen wie z.B. Landwirtschaft oder Tourismus.

Day 1 is dedicated to introducing your students to the scenario of the project week / simulation. In other words, students will be provided with varied input materials. They should use these materials to deduce information about the general situation in Leinwig (descriptive level), define the underlying problem posed to them (analytic level), and map out the different fields of action that they will address in the coming days (application level).

In terms of language skills, this phase emphasizes receptive skills of reading and listening/viewing comprehension. While the suggested viewing and reading tasks scaffold this process, you should evaluate which other support your students may need here. Have your students use the glossary "Energy Lingo" to create annotations and share definitions of important terms and concepts.

TASK: Think like a community energy planner

Objective

Students can describe the concept of community energy planning, the action areas it involves, and can connect this concept to their own home community.

Procedures

Students will watch a TED talk on community energy planning and answer and discuss open questions and viewing comprehension questions from the viewing guide in class, including pre-, while- and post-viewing questions.

Students will discuss the relevance of community energy planning for their own community and identify examples of such activities they have come across.

Notes

- This is an authentic video (TED talk), but English subtitles are available.
- The viewing comprehension questions pop up directly in the video.
- You can have your students watch the video together in class.
- If they are to watch it individually, ask them to bring headphones.
- Answers can be discussed orally in class or in writing in the forum.
- Alternatively, you can print the viewing guide (2 pages) for all students ahead of the class.

TASK: Solve Leinwig's energy challenge

Objective

Students can analyze and synthesize information from multiple text-based and visual sources to describe the project scenario. They understand the overall goal of the project week, i.e. that they will develop a community energy plan for the City of Leinwig that adequately addresses the issues raised by the mayor and reflects

knowledge of renewable energy science and best practices.

Procedures

Students read a letter from the Lord Mayor of the City of Leinwig in which she addresses the course as the 'Climate Solutions Council'. She asks the students for support to develop a community energy plan that should meet the city's ambitious climate and energy targets.

Students analyze and synthesize information from the different information sources provided about Leinwig and collaboratively create a digital or paper-and-pencil profile of the current situation of the city.

Notes

- This task has a primary focus on reading comprehension.
- The resource Letter from Mayor Johannsen provides the overall context of the project.
- Annotations of basic terms are provided, but students can contribute more by adding content to the glossary Energy Lingo.
- The letter and the additional materials reflect a certain redundancy of information, i.e. learners must systematically filter the key details they will need for the upcoming modules.
- The last part of the task requires learners to create a city profile. This can be done interactively with Popplet, which has the advantage that all learners can access it simultaneously and at anytime and anywhere, and they can add links and multimedia content.
- Findings can also be documented in the Project Journal.

TASK: Define the problem

Objective

Students can differentiate and describe different components of a larger problem and infer decision makers, decision criteria, and potential restrictions.

Procedures

Students analyze the scenario and define the problem in small groups using the handout "Defining a problem". They identify the underlying problem question that is to be solved, the status quo, who the decision makers and affected persons are, as well as the decision criteria and restrictions or limitations of the solutions and discuss these aspects with their classmates.

Notes

- This task focuses on reading and writing skills, but also speaking skills (oral discussion of results).
- It aims at developing a more analytic understanding of the scenario by re-examining the materials from above with a more fine-grained perspective.
- The results can be discussed orally in class and/or in written form using the forum for this task (with prepared analysis questions from the handout).

• The findings can be documented in the Project Journal.

Day 2 of the project week serves to familiarize your students with different aspects of the potential solution to the overall problem by introducing them to various best practice examples of community energy planning (CEP) in the U.S. and Germany.

In terms of language skills, the research phases focus on receptive skills and information literacy, i.e. filtering contents adequately to facilitate further project steps. The subsequent presentation/discussion fosters speaking skills and the negotiation of meaning with classmates.

TASK: Develop a vision – your mission statement

Objectives

Students analyze mission statements for community energy planning by U.S. communities and understand their components and function(s) for developing, administering, and evaluating a CEP. They can formulate their own mission statement that reflects the values and goals for Leinwig's CEP.

Procedures

Students will analyze sample mission statements and identify their components and linguistic features.

Students will discuss the targets mentioned by the mayor and decide what goal(s) they would like to pursue in their CEP.

Students will formulate a mission statement collaboratively, beginning with three powerful words, critical verbs, and ambitious but achievable goals.

Notes

- While Leinwig's mayor mentions concrete climate and energy targets in her letter, the specific focus and scope of the CEP is up to your students. They can shape these aspects with the mission statement.
- Have your students collect their suggestions for the mission statement and/or their three-word statements in the Course Forum to facilitate a greater focus on form and a documentation of the work process.

TASK: Review best practices

Objectives

Students can identify best practices in sample CEPs and deduce potential action areas and measures for their own CEP. They can adapt best practices to a defined local context (Leinwig).

Procedures

Students will brainstorm in class potential actions Leinwig can take to meet the goals of its CEP.

Students will review and analyze CEPs from German and U.S. communities in groups and identify best practices and potential action areas relevant to their plan.

Students will evaluate the transferability of best practices, summarize their findings on a poster, and present/discuss their results orally in a 'fishbowl' format.

Students will select action areas and measures for their own CEP.

Notes

- The brainstorming activity can be done online in the Course Forum. If done in class, e.g. using the chalkboard, have your students take a photo of the result and post it into the Project Journal.
- The case studies target different action areas, e.g. energy efficiency, transportation, emissions reduction, etc. Your CEP does not have to include all of these areas.
- The posters can be created in paper-and-pencil format or digitally, e.g. using apps like Popplet.

Project plan template

Objectives

Students can reflect on and plan their own learning process and formulate achievable learning goals for their work.

Procedures

Students will decide on different action areas for their CEP collaboratively and form expert groups accordingly.

Students will fill out the project plan template, which outlines their work unit's focus, its main goals, time frame, involved stakeholders, and the necessary resources and materials.

Notes

- In keeping with the project-based approach, students take responsibility for their own work and plan their next procedures.
- The task provides two template versions: an online database or a PDF version (same content). The online version can be accessed by all other groups and commented on. If you choose the PDF version, make enough copies in advance and have your students share their plans in the database Learner Texts or the Project Journal to allow for a better coordination between the groups.

The primary focus of Day 3 is on developing the CEP in the expert groups. For this purpose, students organize their time and procedures more independently with the help of the Project plan template. The second focus is to critically evaluate their work units by performing a SWOT analysis.

In terms of language use, this day involves a strong focus on oral interaction, whether in the groups during collaborative processes or in class for the presentation of work results and discussion of further plans.

TASK: Do a SWOT analysis

Objective

Students can organize and carry out their group work procedure independently. They can develop and critically evaluate a selected work unit / action plan for their CEP.

Procedures

Students will meet in class to report their day's plan and launch the expert group phase.

Students will develop their work unit collaboratively with the help of the materials from the previous modules, e.g. the best practices.

Students will perform a SWOT analysis of their work unit and report their results orally and/or in a forum.

Notes

- Students can organize their group work independently here, but you can include a kick-off, mid-day, and end-of-day student conference and have students briefly report about their plans, achievements/results, encountered/expected challenges and problems.
- While it may not always possible to have your students speak English during the group phase, you could have them report their work results and procedures in the Course Forum or the Project Journal.
- Consider having different work stations, e.g. with different media and materials (e.g., tablet computer, handiwork supplies, etc.).

On Day 4, students will begin working towards the outcomes of the project week, i.e. they will finish up their work units and arrange them together to form a coherent CEP for Leinwig. This final outcome is going to be a pitch, i.e. an oral presentation to an expert commission (to be organized by you), along with written summaries from the individual expert groups. If your course opts to participate in the school competition, they will have to produce a short video describing their CEP.

In terms of language skills, the pitch is an opportunity to practice oral presentation skills and review criteria of effective presentations. Writing summaries / practice reports can be practiced with the written expert group reports. The video fosters media skills and creative speaking and improvisation.

TASK: Make a pitch for a community energy plan

Objective

Students can collect research findings collaboratively and integrate them in a joint product (CEP for Leinwig). They can plan and deliver a presentation to an expert audience with the help of different presentation media.

Procedures

Students will discuss and decide on a format and structure of their final CEP pitch, including the selection of speakers and moderators.

Students will practice presenting the results of their work unit orally to an expert commission.

Students will summarize their work unit's results on a two-page handout.

Notes

- For the pitch, you (or your students) will have to invite an expert commission. It could be comprised of the EFL and science teachers, members of the school administration, representatives of the community, e.g. people who are involved with CEP like business people, elected officials, parents involved in NGOs etc.
- Also, the pitch should be moderated by a student who introduces speakers, addresses the commission, gives a closing statement etc.
- Provide the evaluation criteria for your students in advance. A suggestion can be found in the course. It can be adapted to your context.

TASK: Create a video and participate in the school competition

Objective

Students can plan and produce a video introducing their CEP to an online audience in a creative and convincing way.

Procedures

Students will collaboratively write a video script.

Students will act out and/or film different scenes according to their script.

Students will engage in different aspects of video production, e.g. filming, directing, cutting, editing visual and audio elements.

Notes

- The video competition is a great opportunity to open the project to a wider audience and implement explicit practice of media skills (writing a script, recording the video, using different camera angles, using background music and visual and sound effects, producing the video etc.).
- The video can (and should) also be used for the pitch (see above).
- You do not need highly specialized video equipment most smartphones will be capable of producing a video of sufficient quality.

Day 5, the final day of the project week, focuses on the presentation of results, i.e. the oral pitch, the written summaries/portfolio, and the video. In this context, the students' achievements should be acknowledged. Enough time should be reserved for a critical reflection and evaluation of the project and a debriefing.

In terms of language skills, this day's main emphasis is on oral presentation skills and listening comprehension, as well as spoken interaction with the expert commission and the audience in general.

• Note: The first two tasks are the same as in Teaching Note: Day 4

TASK: Make a pitch for a community energy plan

Objective

Students can collect research findings collaboratively and integrate them in a joint product (CEP for Leinwig). They can plan and deliver a presentation to an expert audience with the help of different presentation media.

Procedures

Students will discuss and decide on a format and structure of their final CEP pitch, including the selection of speakers and moderators.

Students will practice presenting the results of their work unit orally to an expert commission.

Students will summarize their work unit's results on a two-page handout.

Notes

- For the pitch, you (or your students) will have to invite an expert commission. It could be comprised of the EFL and science teachers, members of the school administration, representatives of the community, e.g. people who are involved with CEP like business people, elected officials, parents involved in NGOs etc.
- Also, the pitch should be moderated by a student who introduces speakers, addresses the commission, gives a closing statement etc.
- Provide the evaluation criteria for your students in advance. A suggestion can be found in the course. It can be adapted to your context.

TASK: Create a video and participate in the school competition

Objective

Students can plan and produce a video introducing their CEP to an online audience in a creative and convincing way.

Procedures

Students will collaboratively write a video script.

Students will act out and/or film different scenes according to their script.

Students will engage in different aspects of video production, e.g. filming, directing, cutting, editing visual and audio elements.

Notes

- The video competition is a great opportunity to open the project to a wider audience and implement explicit practice of media skills (writing a script, recording the video, using different camera angles, using background music and visual and sound effects, producing the video etc.).
- The video can (and should) also be used for the pitch (see above).
- You do not need highly specialized video equipment most smartphones will be capable of producing a video of sufficient quality.

TASK: Final evaluation and reflection

Objective

Students can reflect upon and evaluate their learning in terms of procedures and outcomes. They can identify successful strategies as well as ineffective behavior and can suggest adequate alternatives for future learning encounters.

Procedures

There is no concrete procedure suggested for this phase. Select a procedure that fits the project implementation in your specific learner group and your overall curricular goals.

Notes

- This task is not posted to the curriculum but should be implemented by you after the CEP pitch.
- This final phase should provide room for both individual and collaborative reflection. This can be supported, e.g. by the Project Journal, which could be used as a collaborative documentation and reflection tool for the project week.
- A final reflection and evaluation should focus on the learning processes and outcomes. The following aspects could be of interest:
 - Has the initial project goal been sufficiently met? Has the problem defined at the onset been successfully solved?
 - Have the students engaged in successful and effective behavior and have they applied learning strategies effectively? Have learners encountered challenges or breakdowns in their learning that kept them from attaining their goals?
 - Have learners engaged in language learning (implicitly or explicitly)? What language skills has the project fostered?
 - What content knowledge have learners acquired during the project? What do they know now that they

did not know before?

- How is that knowledge or are the fostered skills relevant to the students' lifeworld? How can they
 apply knowledge and skills in other contexts as well?
- What has been left out in the project? What would students like to learn more about going forward?
- o Do learners want to continue the project in some form, e.g. focus on CEP in their own community?

This section does not contain any tasks or activities, but is used as a repository for interesting online tools or additional materials, e.g. the learning tips referred to throughout the study modules.

4 TIPS

In the sub-section "TIPS" you and your students can find the learning tips referred to in many of the above tasks, e.g. the TIP: Analyzing cartoons or TIP: Conducting research. These documents provide a general introduction to the respective task types with many valuable explanations for your students. They conclude with a self-assessment grid in which learners can assess their knowledge or performance.

Presources

In the sub-section "RESOURCES" you will find an additional small selection of useful resources connected to specific tasks in this course or the sustainability action plan. We have also included a teaching tip on researching and using political cartoons in the EFL classroom.

TOOLS

Finally, the section "TOOLS" provides links to web-tools that were referred to in the course assignments.

Teach About US invites all project participants to submit their action plans to the annual Going Green student competition with awards for outstanding classroom projects. The competition ends around Earth Day (April 22) each year. The submission deadline will be announced.

We believe that this is an excellent opportunity to boost student motivation and to strengthen the understanding that their approaches for sustainable development are relevant to their communities and beyond. From our teacher and student feedback we have learned that in most cases, student engagement to produce an action plan exceeded their teachers' expectations (and ours included) by far! Many participants saw their action plans and project outcomes featured in local newspaper articles and radio reports, at school festivities and even town hall meetings.

We would like to emphasize that participants are encouraged to submit their contributions, regardless of class grade or school level or even the type of action plan. In 2014, the competition categories were formed after receiving the submission, reflecting the open character of the contribution. As educators ourselves, we understand that a poster should not have to compete with a complete website and social media campaign, that some participants naturally will have more time to prepare their action plans than others, and that young learners (in 2014, a grade-six course from Aalen won one of the awards!) will produce different outcomes than, for example, a year twelve AP English course.

In order to take part in the Going Green student competition, your students (one representative) or you will have to submit your course's contribution by the submission deadline. This will be done by uploading the product (or a link to the product) onto the *Teach About US* platform. To do this, a registered and logged-in user must

- · visit the platform's Going Green section,
- enter the Virtual Town Hall,
- go to the section 'Your sustainability action plans'
- and enter your action plan into the DATABASE: Your sustainability action plan.

If—for whatever reason—your upload fails, you may also submit your group's contribution via e-mail to Katja Krüger (krueger@life-online.de). The contributions will be reviewed by an expert jury and members of the Teach About US team. We will announce more information on this procedure in due time.

This project week is a truly collaborative efford and was co-developed by English and Science scholars at Leuphana University Lüneburg, Germany, and the Teach About US Team in Berlin. We are particularly grateful for the invaluable contributions by Prof. Dr. Simone Abels (Professor of Science Education), Sybille Hüfner (researcher and PhD candidate), and especially their assistants Heike Janz and Sarah Hoffmann. Together they developed the introductory science modules and contributed to the project week curriculum. We are also indebted to the many teachers who participated in the project week workshop at the U.S. Embassy Teacher Academy 2017 in Nürnberg and offered their expertise on an early prototype of this course. We are also grateful for the methodological and scientific advice by Adalbert Pakura of the Leuphana Freshmen Week team, and advice on the community and climate data offered by the Klimaschutzleitstelle für Hansestadt und Landkreis Lüneburg.

The following partners gave permission to use portions of their work in this course. We would like to thank:

- The Potsdam Institute for Climate Impact Research in Potsdam, Germany / section PIKee for designing and maintaining the platform KlimafolgenOnline and providing the research workshops used in the TASK: Exploring climate change impacts in your neighborhood
- ◆ The Gelfand Center at Carnegie Mellon University in Pittsburgh, Pennsylvania, USA and their SUCCEED program for the permission to adapt the FACT SHEETS: Renewable energy technologies. These materials were produced with support from the Center for Climate and Energy Decision Making (SES-0949710), through a cooperative agreement between the National Science Foundation and Carnegie Mellon University.
- ▶ Dr. Kai Niebert Niebert (Professor for Science and Sustainability Education, University of Zurich, Switzerland) and Friedrich Verlag for the permission to adapt the task cycle TASK: The bathtub experiment from the publication: Niebert, K. (2017). Den Klimawandel bremsen lernen. In U. Kattmann (Ed.), Biologie unterrichten mit Alltagsvorstellungen Didaktische Rekonstruktion in Unterrichtseinheiten (pp. 92–105). Seelze: Friedrich Verlag.
- ▶ LEIFI Physik (www.leifiphysik.de/) and the Joachim Hertz Stiftung for permission to use the Text "Energiebegriff" in the TASK (a) What do we mean by 'energy' (in German)
- The Leuphana University Opening Week for their permission to adapt their worksheet for the TASK: Define the problem.