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Project Based Learning
Utena + Soverato + German language + Physics
Technical places and devices in Utena and Soverato for German visitors – students from technical schools

Community need

In Utena we have many interesting technical places: a hydro-power plant, bridges, old factory machines, and the water tower. Many German tourists come to our region, but there is no simple information available in German. We want to create materials that will help them understand and enjoy the local technical culture. This project will also show that our students can connect science with real life (one of the PBL objectives).

We also want to increase our international visibility and establish new connections and cooperation with schools in Italy; therefore, we invite technical schools from Soverato to join this project.

Subjects

Physics and German language. The project connects technical knowledge with communication and language skills.

Driving question

What might be interesting for German technically oriented students in Utena and Soverato?
How can students help German visitors learn about the technical side of Utena and Soverato?
How can our students present interesting technical objects in German in a way that is helpful for visitors?

Idea of the project

This project is international. Students from Utena and students from Soverato will work partly together online. We will use Zoom for meetings, and the final meeting with presentations will end the project.

Activities and products

Students form small groups (3–4 people).

Each group chooses one interesting technical place in Utena or Soverato (the hydroelectric power plant, the old bridge, the old water tower; the exact list of objects will be defined in the project's objectives).

They visit the place, take photos, talk with people, and look for information online.

They describe "how it works" — using simple physics explanations.

They translate their texts into German with the help of the teacher and online tools (DeepL, Google Translate).

They design a brochure and a poster using Canva, Google Slides, or Microsoft Publisher.

They add QR codes linking to short videos or audio guides in English and German.

Each group prepares a short presentation for the school and local community and for the final online meeting.

Local teachers, parents, and community members can attend the presentations and vote for the best work (local contest).

Students in both cities collect and create information about technical places in their town in German.

Students in Soverato

Students collect information about solar panels, wind power, water supply for plants and animals, bridges, the seaside promenade, and bike roads. They will also analyze water samples collected by the teachers from Soverato (checking mineral content, pollution, and salinity). They use photos taken on site, write short texts, and explain the physics behind these objects in the simplest possible way for clarity and easy dissemination.

Later they translate the results into German, using the same product templates as Lithuanian students.





Students' workflow

Students are divided into small groups, and each group researches one “object”. They talk with people, search the internet, and use various technical tools (recommended earlier or their own). All students first write their text in English or Lithuanian/Italian, and then translate it into German. They make mistakes and learn by correcting them. Teachers help when necessary. Students use Canva, Google Slides or Word to prepare brochures and posters. They add QR codes linking to videos or audio in German. When materials are finished, students upload their work to Padlet or Google Drive. Groups from Utena and Soverato can view each other's work and give short feedback (1–2 sentences) during a series of online meetings.

Final products

Brochure and poster: Technical Devices in Utena and Soverato
Interactive maps with QR codes for tourists
Short videos (German-speaking) from each group describing their work
Zoom recording of the final international presentation for school websites
Presentations in schools and selected local communities
Local contest

Articles written by participating students about their experiences, in three languages, published on school websites

Expected results

Students apply physics knowledge in real situations

They practice German communication

They improve teamwork, creativity, and presentation skills

Tourists receive clear and friendly information about Utena

Our school becomes more visible and modern in the community

Students learn German vocabulary related to technology and science

They collaborate with students from another country

They understand that physics is the same in Lithuania, Italy, and Germany

They feel proud because their materials are useful and publicly available

The results will be published online (school websites)

Printed brochures will be distributed at the Utena Tourism Center and local events; in Soverato, they will be distributed in selected places

Presentation

During the final international Zoom presentation, students show their brochure or poster, explain in simple German why these places are interesting for tourists who enjoy physics, and present the physics behind them. Students are encouraged to ask each other simple questions in German.

Reflection

After the international presentation, students write short reflections answering:

What did I learn about physics?

What did I learn about teamwork and language?

What was difficult for me?

What would I change next time?

Teachers discuss the results together with the students and help them understand how learning connects to real life.

Preparation phase and requirements

Students' initial skills:

Students already know basic physics topics like energy, forces, electricity, and machines.

They can use simple German phrases and write short sentences (A2).

They have basic digital skills: taking photos, using Canva, Google Docs, and Word, and making simple posters.

Recommendations for starting the project:

Review key physics concepts (energy, machines, electricity).

Teach or revise useful German vocabulary: "die Brücke", "das Wasserwerk", "die Maschine".

Prepare sample templates for brochures and posters (Canva or Google Slides).

Encourage students to create short sample videos or audio recordings with their phones.

German teachers co-assess linguistic accuracy; physics teachers check scientific content.

Establish and present a clear time schedule and evaluation criteria at the beginning.