Resolver un problema ambiental

Introducción

Esta actividad emplea un enfoque de aprendizaje basado en proyectos (PBL, por sus siglas en inglés) en el que los estudiantes buscan la solución a un problema ambiental seleccionado por ellos.

La actividad se desarrolla a lo largo de varias lecciones y, al final del ciclo, los estudiantes seleccionan su propio método para presentar el resultado de su proyecto.

El ciclo de lecciones termina con una reflexión guiada por un estudiante acerca del proceso de aprendizaje. Animar a los estudiantes a reflexionar sobre sus procesos de aprendizaje puede lograr que sean alumnos más eficaces.

Referencia de duración del seminario web: 25:13 – 26:38

Nivel: Intermedio B1+

Duración: 2 horas (el tiempo se puede dividir entre varias lecciones)

Objetivo:

- Desarrollar habilidades en los estudiantes para trabajar en equipo con el fin de abordar un problema.

- Animar a los estudiantes a reflexionar sobre su proceso de aprendizaje.

Preparation:

- If you aren't familiar with PBL, check through the additional resources section, and you'll be able to find out more.

Procedure:

Lesson 1

- Put your students into small groups and ask them to brainstorm local environmental problems.

- Set them a time limit and ask them to think of as many as possible, big or small.

- Next, find out which group thought of the most problems and ask them to share them with the class as you list them on the board.

- Ask the other students if they can add any to the list.

- Next, ask the students to decide which 4 – 5 they are most concerned about.

- Get the students to vote and select the top 5.

- Divide your students into 5 groups and give each group one of the problems. Note: You may want to let the students choose which group they want to be in according to their interest, but try to have a similar number of students in each group.

- Now ask the groups of students to work together to share and write down everything they know about the problem.

- Once they have finished, ask them to write down 8 - 10 things they don't know about the problem.

- For homework, ask the students to research the things they don't know and try to find the information.

Lesson 2

- Put the students into their groups and ask them to share what they discovered about the problem.

- Now that students better understand the problem, ask them to brainstorm ways of solving the problem. Again, ask them to focus on quantity of ideas rather than quality and set them a time limit. Note: If you have sticky notes, get the students to write each idea on a note.

- Ask the students how many ideas they have for solving their problem.

- Now ask the students to divide their ideas into two groups – Those that may work and those that could never work.

- Ask them to look at the ideas again and think about whether they can combine any of the ideas together to make better ideas.

- Next, ask them to pick two of the best ideas and develop them in more detail to see how they could be made to solve the problem.
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  Next, ask half of the students from each group to change to a different group. Get the students to share their ideas for fixing the problems in their new group and get feedback and suggestions on the ideas.

- Ask the students to move back to their original groups and share the feedback they got from their peers. Ask them to evaluate the feedback and use the useful feedback to adapt their ideas.

- Next, ask them to compare the two ideas and decide which is the most viable.

- For homework, ask the students to think about how they could present their idea to potential investors and what they would need to tell them to raise money to make their idea a reality.

Lesson 3

- Ask the students to prepare some form of presentation of their ideas and how they could make them a reality. They can use the presentation guide in the materials section to help them.

- Tell them they can decide on the format of their presentation. It could be a video, a poster or a formal presentation using PowerPoint slides.

- Give the students time to work on their presentation together.

- When they are ready, ask the students to share their presentations. Note: You could ask students from other classes to come along and view the presentations.

Lesson 4

- Ask the students to reflect on the process of creating a solution to the problem, and ask them if they can remember the steps.

- Give the students the reflection task and give them some time to work through the questions alone.

  Get some feedback from the students and ask them to share their reflections.

Materials:

Presentation guide

Choose the format of presentation you think is most suitable for your message. In your presentation, you should include the following points.

- The problem

- The cause of the problem

- Who is impacted by the problem

- How they are impacted by the problem

- Your solution

- Why your solution will work

- What resources you need to make your solution a reality

Project reflection guide

Think about the steps that you took to produce a solution to the problem. Which steps did you find most difficult?

1. Identifying a problem

2. Defining what we know about the problem

3. Defining what we don't know about the problem

4. Researching the problem

5. Brainstorming solutions

6. Evaluating solutions

7. Getting feedback on solutions

8. Revaluating solutions

9. Presenting a solution

What part of the process would you like to do better?

How could you improve your ability to do better?

What did you learn from using this process?

Additional resources

Climate Action in Language Education lesson plans

- This series of twelve lesson plans provides teachers with step-by-step guidance and resources. They are an ideal starting point to help to address issues of sustainability in the classroom.

https://www.teachingenglish.org.uk/article/climate-action-language-education-lesson-plans

Gold standard PBL: Essential project design elements

- A research-informed model for improving, calibrating, and assessing your practice. Student learning goals for projects include standards-based content as well as skills such as critical thinking, problem-solving, communication, self-management, project management, and collaboration.

  https://www.pblworks.org/what-is-pbl/gold-standard-project-design

Project work in the secondary classroom

- Are you looking for a way to keep your secondary students interested and motivated in class? In this session we will examine how a project-based approach can increase student engagement and promote collaborative learning as well as provide a setting in which students practise their language skills in an authentic way, with genuine reasons for communication.

  https://www.teachingenglish.org.uk/article/project-work-secondary-classroom

Global North-South project-based learning: Student to student telecollaboration for language learning

- Watch a recording of this webinar looking at student to student projects across continents.

  https://www.teachingenglish.org.uk/article/global-north-south-project-based-learning-student-student-telecollaboration-language

Project work with teenagers

- Project work is becoming an increasingly popular feature within the ELT classroom. Common projects are class magazines, group wall displays about students' countries and designs for cities of the future.

  https://www.teachingenglish.org.uk/article/project-work-teenagers