CHEMYSTERY SHOW

ASHOKA EDUCATION

THE PROJECT IN A NUTSHELL

«HELPING STUDENTS TAKE OWNERSHIP OF, AND GAIN RECOGNITION FOR THEIR SKILLS BY ORGANIZING A CHEMISTRY SHOW»

CHALLENGE

In science classes, secondary school students can sometimes be unaware of the fact that they are learning useful things. Even with practical courses most concept remain abstract. Premade experiments don't tend to foster ownership. For the students, it is often difficult for them to feel as if they have learned or accomplished something, and even more difficult to gain recognition for the skills acquired in the classroom.

PROJECT

The 'CheMystery Show' is a project where students use the knowledge acquired from chemistry class to perform experiments in front of an external audience. The show is independently organized by the students, with the support of the teacher. The objective of the 'CheMystery Show' is to make science tangible for the students as well as for their audience by generating excitement about chemistry. It shows students that they can be proud of what they have learned and that science can actually be helpful in everyday life.

STAKEHOLDERS

School administration: make sure you have access to a big room in the school for the final CheMystery Show.
Other partners: it is possible to realise this project without the help of other teachers or partners. However, it can be interesting to have other teachers involved in order to create a bigger, more interdisciplinary show!

WORKLOAD

It takes around 1 hour per week for 3 months to prepare the show, which itself lasts about 1 hour. Make sure to start before Easter holidays in order to have enough preparation time.

RESOURCES

This project recquires a chemistry lab as well as specific material and substances for each experiment. Ask the students to make a list of the materials needed, and their cost, before buying them with the allocated school budget.

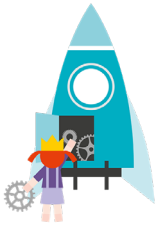
HOW TO IMPLEMENT THE PROJECT IN YOUR SCHOOL

1 - INFORMATION & INSPIRATION

About 3 months before the show, inform the students about the project and ask them to individually reflect on 2 questions:
- What do I want to learn from the show?
- Why do I want to participate in the show?

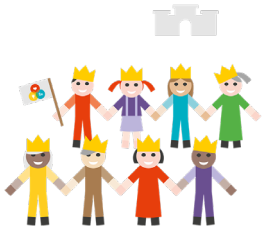
VISION BOARD

Based on their answers to these first questions, ask the students to visualize their objectives in the form of a vision board. Explain that they will have 2 types of responsibilities to prepare the CheMystery Show:
- chemistry experiments
- organisation (logistics)



4 - START THE EXPERIMENTS

Students should independently start their experiments in the laboratory using the material and substances they need and making sure they follow safety measures. When they're stuck on an issue or calculation, the teacher can help them. They can decide to work either alone or in teams.



6 - SHOW TIME!

Make sure to thank everybody at the beginning of the show and then handover the show to the students. Let each show happen one by one. Make sure to break the rythm with different group sizes and with questions/answers with the audience after each experiment!

2 - LOGISTICS

Invite an event planning expert to discuss what it means to organise an event. Brainstorm with the students what it takes: food, material, place, communication, safety, invitations... Then, the students can choose what they want to do and start taking ownership of their new role.

3 - PLAN THE EXPERIMENTS

Inspire the students with videos and experiments from the previous years and invite them to think of an experiment of their own that they would like to propose. Before starting the experiments, invite them to discuss the following elements with you.

- EXPERIMENT DESCRIPTION
- SAFETY MEASURES
- REQUIRED MATERIAL & BUDGET
- DETAILED EXPERIMENT PROTOCOL

5 - REHEARSALS AND PREPARATION

An experiment is considered ready when it works and when the students know how they will perform it. Organise a performance rehearsal in front of their classmates!
Also, take a couple of hours one week before the show to make sure the logistics are ready and give them clear instructions to finish all the preparation work.

PRE-REQUISITES FOR THE PROJECT

Early in the year, make sure to check the level of responsibility of the students regarding safety measures in the lab before you start the project. It is indeed critical that the students can work independently on their experiments without needing the assistance of a teacher each time they use the lab.

Also, when planning the experiments, make sure they understand all the safety measures and know how to perform their experiment without risk.

BEST PRACTICES AND LESSONS LEARNT

STUDENTS LEADERSHIP

The engagement of the students is crucial for the project and relies on 3 ingredients: leadership, learning and fun! As a teacher, it is therefore essential to believe in the capacities of the students and to trust them without taking things too seriously. Guide them through the process but allow them to experience by themselves by giving them as many responsibilities as possible.

ROADMAP

Have a clear and visual roadmap with the steps to prepare for the show. It will give clarity to you and to the students, stimulate them and increase their ownership by helping them visualise how they can get ready for their performance on time.

21ST CENTURY SKILLS

The CheMystery Show is based on the 21st century skills framework and works on the «4Cs» : creativity - collaboration - critical thinking - communication. It is therefore important not to forget any part of this framework by making sure they rehearse their performance in front of their classmates but also in front of another audience before the real show.

LOGISTICS

Let the students choose who they want to invite to their CheMystery Show. They can of course invite their school mates along with other teachers, but also parents and friends from outside the schools if they want to. Also, don't allocate too much time on the logistics early in the preparation as students are usually more concentrated on their experiments and start focusing on logistics and communication only 2 or 3 weeks before the show.

MORE INFORMATION TO GO FURTHER

CONTACT

Meet with the project owner
Dag De Baere
dag.debaere@gmail.com

VIDEO

Discover the story, the participants and behind the scenes of the project in video:
ashoka.org/en-be/eduinnovation