



NASA Space Apps Noida 2024

World's Largest Space & Science Hackathon

5-6th October 2024 | 36 Hours Hackathon

Innovation partner **I2S**



Team Details

- a. Team name: Lone Wolf
- b. Team leader name: Aditya Kumar
- c. Problem Statement: SDGs in the Classroom

SDGs in the Classroom: A Lesson Plan for High School Students

Introduction:-

The United Nations' 2030 Sustainable Development Goals (SDG) Agenda is a set of 17 goals focused on addressing global concerns such as climate change, global poverty, pollution, inequality, and many more. As we embark on the halfway point of the SDG Agenda, it is essential to find new ways to engage youth with the tools available to advance these goals and measure our progress in achieving them.

SDGs in the Classroom: A Lesson Plan for High School Students

Problem Statement:

The lack of awareness and engagement among high school students about the SDGs is a significant challenge in achieving the 2030 Agenda. The current education system often focuses on individual subjects, neglecting the interconnectedness of global concerns and the role of science in addressing them.

SDGs in the Classroom: A Lesson Plan for High School Students

Solution:

The "SDGs in the Classroom" project proposes a comprehensive lesson plan that integrates the SDGs into a science unit, providing students with a holistic understanding of the global concerns and the role of science in addressing them. The lesson plan will include interactive activities, real-world examples, and assessments to measure student understanding.

SDGs in the Classroom: A Lesson Plan for High School Students

Features:

- Interactive lesson plans and activities
- Real-world examples and case studies
- Collaborative group work and discussions
- Assessments and evaluations to measure student understanding
- Opportunities for students to develop solutions to achieve the SDGs

USP of the proposed solution:

- The unique selling point of this solution is its interdisciplinary approach to educating high school students about the SDGs through a science-based lesson plan.
- This approach will provide students with a comprehensive understanding of the SDGs and their role in achieving them.

Process flow diagram or Use-case diagram

The process flow diagram will outline the following steps:

- Introduction to the SDGs and their importance
- Selection of a specific SDG to focus on (e.g. climate action, sustainable cities and communities)
- Integration of the SDG into a science unit (e.g. weather, geology, soil health)
- Development of interactive lesson plans and activities
- Implementation of the lesson plan in the classroom
- Assessment and evaluation of student understanding
- Opportunities for students to develop solutions to achieve the SDGs

**SDG Odyssey
Begins Here!**

**Identify
Relevant SDGs**

**Develop
Interactive
Lesson Plans**

**Implement
SDG-Infused
Science Units**

**Empower
Students to Act**

**Review and
Refine Process**

Architecture diagram of the proposed solution

The architecture diagram will outline the following components:

- Lesson plan materials (e.g. interactive activities, case studies, assessments)
- Science unit integration (e.g. weather, geology, soil health)
- SDG focus (e.g. climate action, sustainable cities and communities)
- Assessment and evaluation tools

Technologies to be used in the solution

The solution will utilize a range of technologies, including:

- Learning management systems (e.g. Canvas, Blackboard)
- Interactive tools and software (e.g. simulations, games, virtual labs)
- Online resources and databases (e.g. NASA, UN SDG websites)

Implementation Plan:

- The implementation plan will involve the following steps:
- Development of the lesson plan materials and integration with the science unit.
- Pilot testing of the lesson plan with a group of high school students.
- Refining the lesson plan based on feedback from teachers and students.
- Scaling up the implementation to reach a larger audience

Budget:

- The estimated implementation cost will depend on the specific technologies and resources required to develop and implement the lesson plan.
- A detailed cost estimate can be provided upon further development of the solution.

Performance Metrics:

- The performance metrics will include:
- Student understanding and engagement with the SDGs.
- Student ability to develop solutions to achieve the SDGs.
- Teacher feedback and satisfaction with the lesson plan.
- Scalability and reach of the implementation.

Additional Details/Future Development (if any):-

Future development of the solution could include:

- Expansion to other SDGs and science units
- Development of a online platform for teachers to share and access lesson plans and resources
- Integration with other educational initiatives and programs focused on the SDGs.

Conclusion:

The "SDGs in the Classroom" project has the potential to engage high school students with the tools available to advance the SDGs and measure progress in achieving them. The project's interdisciplinary approach to educating students about the SDGs through a science-based lesson plan will provide students with a comprehensive understanding of the SDGs and their role in achieving them.





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Profile

ACCOUNT INFORMATION

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Participant Information

No Participation History

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Thank You

