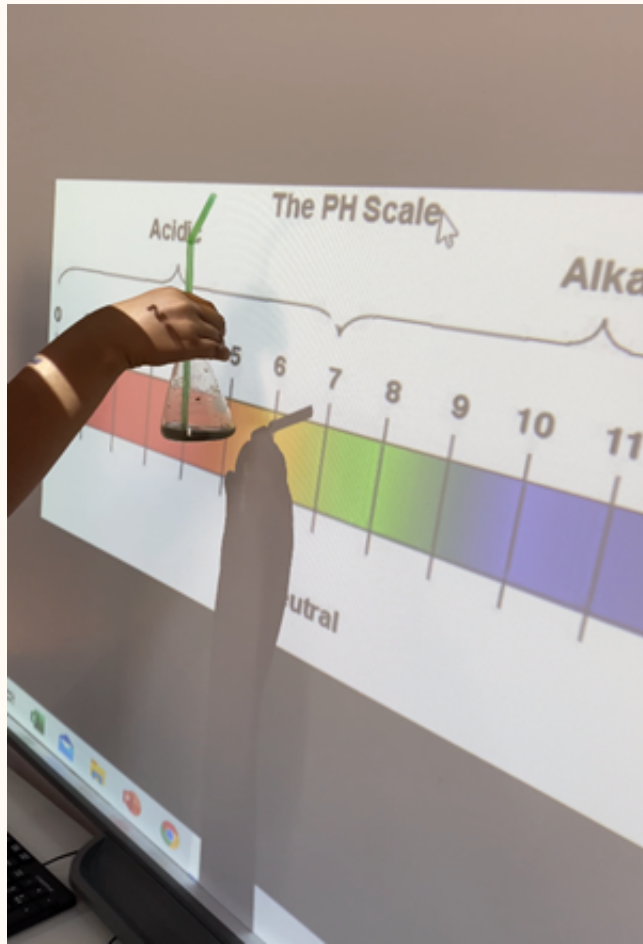


Testing Soil pH - STEM project

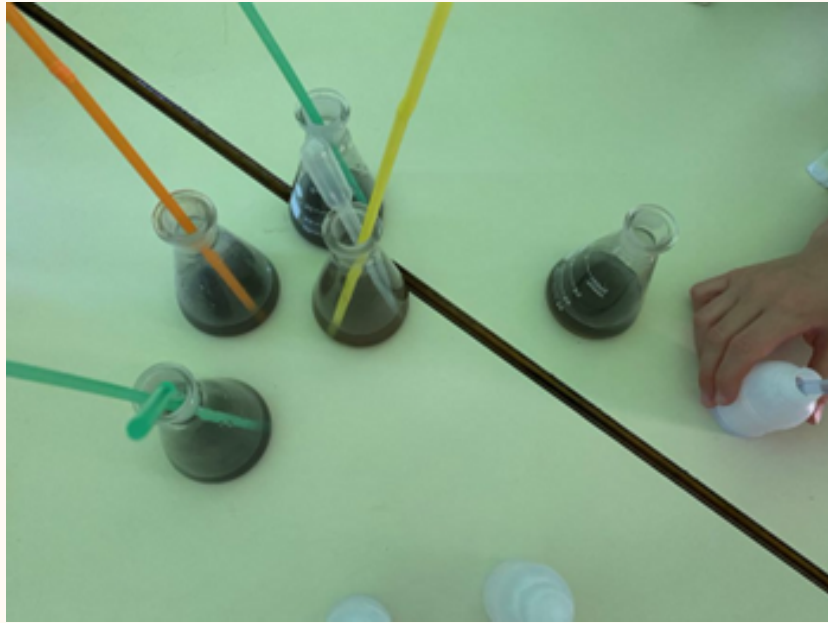


Subject of the study. The subject of this STEM project is the concept of soil pH and its effects on plant growth.

Aim of the study. This project aims to introduce elementary school students to the concept of soil pH, and help them understand how it can affect plant growth.



Summary. The STEM project "Testing Soil pH" aims to teach elementary school students about the concept of soil pH and its effects on plant growth. In this experiment, students will collect soil samples from different areas and test their pH levels using pH test strips or indicator solutions. They will compare their observations with the pH scale chart and record their findings. The project encourages students to observe the growth of plants in each soil sample and assess which plants grow best in acidic or alkaline soil. The project also includes extension activities such as researching plants and their preferred soil pH levels and creating a poster or presentation on the importance of soil pH in plant growth.



Objectives of the study.

- To teach students about the concept of soil pH and its effects on plant growth.
- To provide students with hands-on experience in testing soil pH using pH test strips or indicator solution.
- To encourage students to observe the growth of plants in different soil samples and assess which plants grow best in acidic or alkaline soil.
- To promote students' interest in environmental science and sustainability.

Research methods

The research method used in this project is a simple experiment in which students will collect soil samples from different areas, test their pH levels using pH test strips or indicator solution, and observe the growth of plants in each soil sample.



Tools that can be used

- **Soil samples from different areas (e.g. garden, playground, forest)**
- **Distilled water**
- **Clear plastic cups**
- **pH test strips or pH indicator solution**
- **pH scale chart**
- **Notebook or record sheet for observations**
- **Seeds of different plants**

How to investigate

To investigate the concept of soil pH and its effects on plant growth, students will collect soil samples from different areas, mix them with distilled water, and test their pH levels using pH test strips or indicator solution. They will compare their observations with the pH scale chart and record their findings. The students will then plant seeds of different plants in each soil sample and observe and record the growth of the plants.

Findings

The findings of this project will show that different plants require different soil pH levels to grow, and that soil pH can affect plant growth. The students will learn how to test soil pH using pH test strips or indicator solution and observe the growth of plants in different soil samples.