

Creating a Greener Cleaner 製作環保清潔劑

Why a “Greener Cleaner”?

As we realize the consequences of human action on the environment, the need to raise children to be environmentally conscious grows. In our first project, students explored the effects of pollution on water ecosystems. Water pollution is a major issue in our world today and through this project, students were able to brainstorm ways we can lessen our impact on the environment. One of those ways is to create our own house hold products with environmentally safe, non-toxic ingredients.

Time to Clean Green!

Our students learned about the importance of using environmentally friendly products through hands-on learning. We began with a lab to explore whether water is truly clean if we clean it with bleach. Then they used that knowledge to look at the effects water pollution can have on the environment. The topic culminated with a challenge where the students had to design and make a “Greener Cleaner”, an environmentally friendly cleaner. They then tested their cleaner on different surfaces to determine how well it cleans and after that, they brainstormed ways to improve their cleaners based on their test results.

The Process

The students practiced valuable skills while working through this project. This project focused on designing, finding eco-friendly solutions, teamwork, mixing and testing solutions, as well as problem solving. We believe that the students will find these skills useful as they continue their path through life!

為什麼使用環保清潔劑？

隨著我們意識到人類行為對環境的影響，培養孩子的環保意識與日俱增。在學生的第一個專題裡，他們探究汙染對水生生態系統的影響。水汙染是現今全球的重大議題，透過這個專題，學生集思廣益如何減輕環境汙染的影響。其中一種方法即是使用環保、無毒的成分製造自己的家用產品。

用環保方式清潔吧！

學生透過實作學習瞭解使用環保產品的重要性。從實驗開始，我們探究如果我們用漂白劑清洗水是否真的乾淨。接著，他們利用這些知識探討水汙染對環境的影響。此專題的挑戰在於學生需設計並製造出環保清潔劑。他們於不同物品的表面測試清潔劑以確定清潔程度，並根據測試結果，加以改進清潔劑成份。

製作過程

專題探究的過程中，學生練習了重要技能。此專題著重於設計、尋找環保的解決方案、團隊合作、混合和測試方法，以及問題解決等。我們相信學生會發現這些技能在生活當中是非常受用的。

1 ASK + IMAGINE 提問 + 創思

Students testing their individual ingredients to help them choose the right ingredients for their recipe.
 學生們測試他們的個別成份，以幫助選擇正確的材料成份。



3 PLAN 計畫

Students designing their recipes, using the results of the individual tests.
 學生們利用個別測試的結果設計材料。



4 CREATE 創造

Students making their Greener Cleaners.
 學生們製作環保清潔劑。



5 IMPROVE 改進

Students busy testing their improved cleaner.
 學生們測試調整成份過後的清潔劑。



6 PRESENT 展現

Students presenting their Greener Cleaner to the class.
 學生們與全班展示他們的清潔劑。

