Designing a Greener Cleaner!
製作環保清潔劑！

Introduction

We use commercial cleaners on a daily bases to clean our houses, wash our clothes, and even clean our dishes. Have you ever thought what the dangerous chemicals in them can do to you, the environment and our planet? Our fourth graders have done a project to prove that using environmentally safe ingredients, they can make cleaners that can do the same job, safely.

Time to Clean Green!

Our students learned about natural resources and conservation through hands-on learning. We began with a lab to explore how groundwater pollution can affect the quality of water. The topic culminated with a challenge where the students designed and made an environmentally friendly greener cleaner. They then tested their cleaners to determine how well it cleans and then brainstormed ways to redesign their mixtures based on their testing results.

Biodegradable Packaging

After completion of this project, we took it further. The students learned about the disadvantages of traditional food packaging, and how scientists and engineers are creating new Biodegradable Packaging, that is more environmental friendly. Teaching them the importance of Environmental Engineers in our communities.

簡介

我們每天用市售清潔劑打掃家裡、清洗衣物、甚至洗碗。但是你有想過其中的危險化學成分會對人體、環境及地球造成什麼影響嗎？四年級學生透過這個專題，證實使用環保的原料，同樣可以製造出好用又安全的清潔劑。

環保清潔時間到！

學生們動手實作，了解自然資源及保護。透過研究地下水污染如何影響水質，他們設計並製作環保清潔劑。學生們測試其清潔效果，並根據測試結果，重新思考清潔劑的成分。

生物分解性包裝

專題完成後，學生接著探討傳統食品包裝的缺點，以及科學家和工程師是如何創造對環境友善的生物分解性包裝，進而了解環境工程師對社會的重要性。

ASK + IMAGINE 提問 + 創思

What environmentally safe ingredients can we use to replace the commercial cleaners?
什麼樣的安全成分可以替代市售的清潔劑？

CREATE 創作

We enjoyed testing different, safe household ingredients to make our Greener Cleaners.
我們喜歡測試不同及安全的成分，並製作環保清潔劑。

PLAN 計畫

Planning recipes for our cleaners was a lot of fun. It was important to write down the ingredients and the volume of each.
自己設計清潔劑成分很有趣。寫下成分及含量很重要。

IMPROVE 改進

How can we make our cleaners even better?
要怎麼讓我們的清潔劑變得更好？