Creating a Greener Cleaner
製作環保清潔劑

Inquiries

Students looked at regular household cleaners and read the labels. They determined that these cleaners were toxic and could pollute our waterways. Students look at how pollution affects living organisms for next the inquiry. In teams, students proceeded to test one of five environmentally friendly ingredients to see how well they could clean a carpet. The groups created charts and graphs to share with each other.

Planning and Creating

Grade four determined our current cleaners can be detrimental to our water and that there are other possible "greener alternatives". The teams gathered the information from their inquiries and planned a recipe to make a "Greener Cleaner". The students discussed what ingredients they wanted to include and how much.

Testing and Improvements

The team members followed their recipes and mixed the ingredients and conducted three tests. They gave a score on their cleaner from 1 to 4 with one being the cleanest. Afterwards, the students went back and created a second recipe. The teams displayed the data into a graph and reflected on their recipe's success in their reports.

調查

學生觀察普通家用清潔劑並閱讀瓶上標籤，確認了這些清潔劑有毒，並會污染我們的下水道。學生下一個研究為觀察污染如何影響生物，各團隊學生分別進行測試五種環保成分中的其中一種，試看看清潔地毯的狀況為何，並建立圖表以分享結果。

規劃和創造

四年級學生確認目前的清潔劑可能對我們的水源有害，也還有其他「更環保的清潔劑替代品」。各組從搜尋中收集了資訊，並計劃製作「環保清潔劑」的配方。學生討論想要加入的成分和容量。

測試和改進

團隊成員按照配方混合成分並進行三項測試。他們給清潔劑依照 1 到 4 分給分數，接下來再度製作第二個配方。小組將數據紀錄在表格中，並於成果報告展現他們成功的配方。

1 ASK + IMAGINE 提問 + 創思 2

We saw how pollution can inhibit the growth of organisms and its effects on our rivers. We also investigated labels on regular cleaners to see if they might be harmful!
我們觀察到污染會抑制生物的生長及其對河流的影響，並進行調查普通清潔劑上的標籤，看看它們是否有害！

3 PLAN 計畫

We created a recipe for the "Greener Cleaner".
我們製作環保清潔劑的配方。

4 CREATE 創造

The teams made and tested the recipes and recorded the data.
團隊創造並測試配方同時將其記錄下來。

5 IMPROVE 改進

The groups made improvements by trying different mixtures and volumes to create the best cleaner.
小組透過不同混合物與容量進行改進。

6 PRESENT 展現

We shared the results and discussed what we could have done to make our recipe better.
我們分享結果並討論我們能如何能改進配方。