

STEM Education for Sustainable Development



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Replacing Plastics

An investigation into the suitability of natural polymers

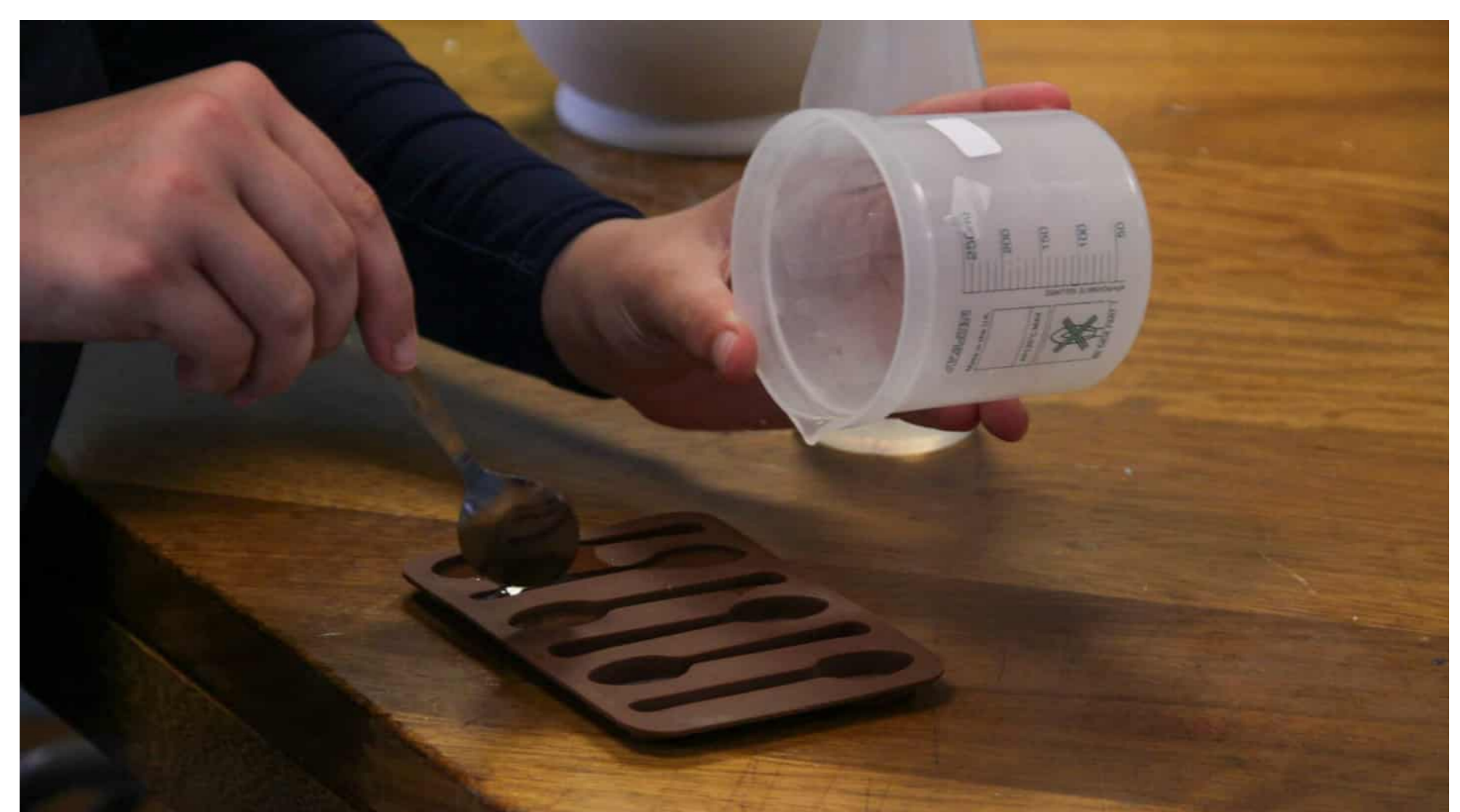
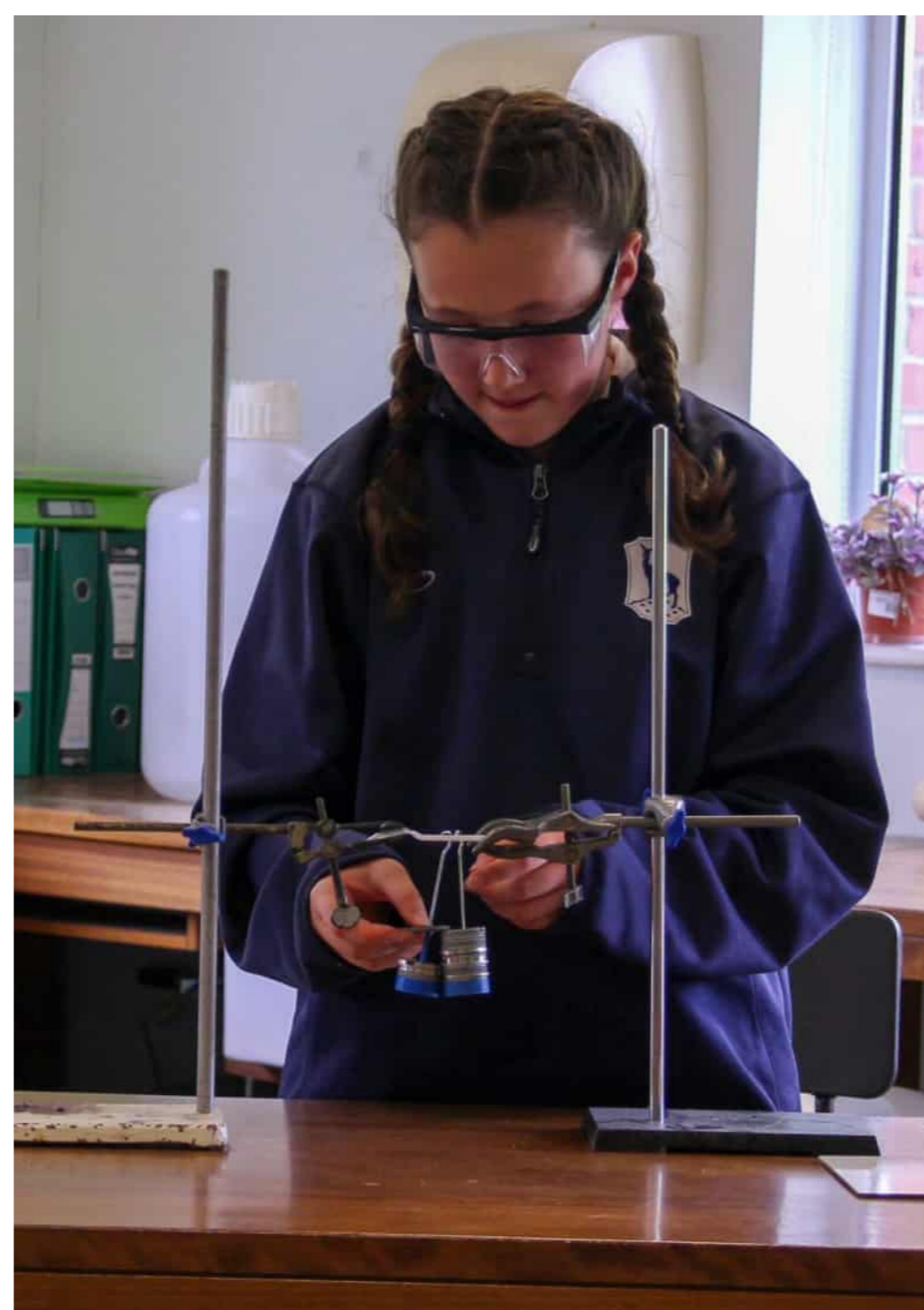
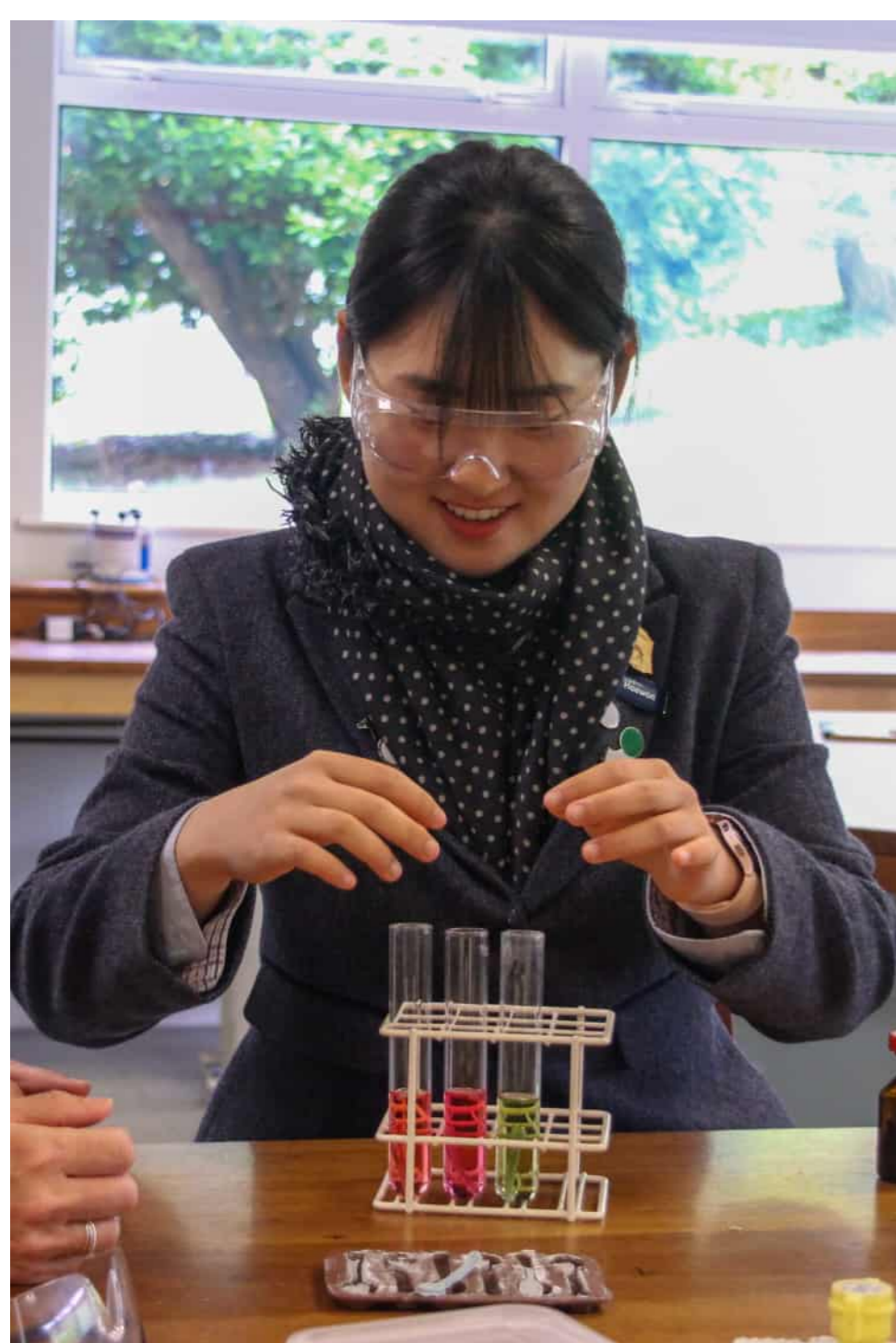
In this investigation students create natural polymer substances that resemble plastic, and then analyse the suitability of these substances as alternatives for plastics in everyday life.

Replacing plastics is a key to sustainable consumption and production of everyday materials, which is the United Nations' SDG 12, Responsible consumption and production. The project spans both chemistry and physics, helping students to work creatively across disciplines.



"I found it really easy to make the polymer paste."

The 'replacing plastics' project integrates skills, theory, and wider societal context. It starts with creating natural polymers, follows with material tests, and concludes with lively discussions.



"I'm really surprised at how durable the milk-polymer is in our tests."

Conclusion: The 'replacing plastics' project asks students to apply their knowledge across subjects, and to think creatively and critically about how to build a sustainable future.