Make your own lipstick

30H Typically 30 hours of project work
Recommended for 14-16 year olds

Design & make project

Investigate how lipsticks are coloured.

#chemistry

#materials

#make-up

HOW TO RUN CREST USING THIS ACTIVITY

To use their project to achieve a Silver CREST Award your students will need to:

• **Develop and lead the project**
• **Complete a minimum of 30 hours of project work**
• **Consider the broader impact of their project and demonstrate an innovative approach**
• **Write a project report or portfolio of evidence**
• **Reflect on their work during the project using a student profile form**

Preparation

Ready to get going with CREST? Sign up for a CREST account here: **www.crestawards.org/sign-in**

Create a new Silver Award project with the name(s) of the student(s) and the title of the project. If you don't have the details yet, you can fill these in later!

Run the project

We have some super handy workbooks and profiles for your students to use when running a CREST Award. You can download these when you create your CREST account by following the link above.

Encourage your students to use the Silver student guide to plan and carry out their project. Each student involved in the project should complete their own profile form.

You don't want all their good work to go to waste, so be sure they keep a record of all their amazing progress. Keeping a regular project diary will save them precious time when writing their final project report.

Make sure you consider safety and risks!

Reflection

So, your students have been hard at work and completed their CREST project, but don't let this be the end of their learning. At the end of the project, each student should complete a Gold profile form and communicate their project. This is a chance for them to reflect on all the interesting things they've learnt and the invaluable skills they have used.

Students working in a group can either submit a joint report or separate reports, but they must each complete a profile form.

Use the CREST criteria on the profile form to help the students check that they have included everything in their report

Enter your project for a Silver CREST Award

Hard work deserves a reward! Celebrate and certify your students' achievements by entering their project for a Silver CREST Award. Simply:

Log in to your CREST account at **www.crestawards.org/sign-in**

Select your project and upload the profile form per student, project report and other evidence, such as pictures and diagrams.

Finally, complete the delivery and payment details for assessment and to order your snazzy certificates. Congratulations on submitting for CREST Silver!

What next?

Is university on the horizon for your students? They can use their project to help demonstrate their newly found STEM skills and knowledge in UCAS personal statements.

The scientific discovery doesn't need to end here. Students can have a go at the next level up - CREST Gold.

Don't keep all the fun to yourselves, encourage others to take part in CREST projects and share the wonder of science. For free ideas on how to get started, see **www.crestawards.org**

STUDENT BRIEF

Make your own lipstick

In this project, you will make your own lipstick or lip gloss and investigate how lipsticks are coloured.

Getting started

First things first, find a lipstick or a lip gloss recipe. These are readily available if you have a look on the internet. Try searching for "homemade lipstick".

Picking the pigments:

Carry out some research into how lipstick is coloured. What are pigments, and how do they vary?

You should now make your own coloured lipstick or lip gloss - or preferably both!

Experiment with different pigments and amounts of pigments until you have the desired colour.

Now you've experimented with different pigments, do you think you could work out how to copy any coloured lipstick? If you think you can, have a go!

Design and make a mould for the lipstick.

Re-writing the recipe:

When you've made your lipstick and carried out a few tests, you should re-write the recipe. Make it as unambiguous as possible. That way anyone who follows your recipe should make identical lipsticks. You could include illustrations as well.

Things to think about

You could try testing shop-bought lipsticks and lip glosses as well. How do they compare to your product? Which do you think offers the best value for money?

Useful resources

When making a lipstick container why not recycle old containers and either use or develop these?

STUDENT BRIEF

Health and safety

A science project work is both dynamic and exciting but can also carry some risk. To avoid any accidents, make sure you stick to the following health and safety guidelines before getting started:

- find out if any of the materials, equipment or methods are hazardous;
- assess the risks (think about what could go wrong and how serious it might be);
- decide what you need to do to reduce any risks (such as wearing personal protective equipment, knowing how to deal with emergencies and so on);
- make sure your teacher agrees with your plan and risk assessment.

You should test your lipsticks on the back of your hand rather than on your lips.

Only test your lipstick if it has been made hygienically in a food technology room with chemicals fit for human consumption. Make sure your information comes from a reliable source. Always complete a risk assessment and have it checked by your teacher before you start your experiment.

Remember!

Science isn't just about data. The most successful projects will demonstrate good communication skills and show original ideas that address a real-world problem.

Look at the world around you and consider all the innovative ways that you could address the challenge. Even if things go wrong, use this to show what you have learned. Don't forget to use the student profile form to help structure your project.