



BRONZE AWARD

THE PERFECT CUP OF TEA



Typically 10+ hours of project work
Recommended for 11-14 year olds



**Design & make
project**

Investigate a range of methods for making tea and devise an experiment to make the perfect cup of tea for you.

#food

#chemistry

#engineering



HOW TO RUN CREST USING THIS ACTIVITY

Looking for some support? Find a mentor by contacting your local STEM Ambassador hub:
www.stem.org.uk/stem-ambassadors/local-stem-ambassador-hubs

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

- **Complete a minimum of 10 hours of project work**
- **Consider the broader impact of their project and demonstrate an innovative approach**
- **Complete the project workbook or short report in another medium**
- **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 Bronze Award project with the name(s) of the student(s) and the title of their project. If you don't have all the details, 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 workbook or profile to plan and carry out their project, keeping a record of all their amazing progress.

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. They should now fill in any remaining sections of their workbook. This is a chance for them to reflect on all the interesting things they've learnt and the invaluable skills they have used.

Enter your project for a Bronze CREST Award

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

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

Select the project and upload a sample of the students' workbooks or other project evidence.

Check the participating students have met each of the criteria on the teacher assessment page.

Finally, complete the delivery and payment details to order your snazzy certificates.

Congratulations on completing CREST Bronze!

What next?

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

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

BRONZE AWARD

The perfect cup of tea

Most people know how to make a cup of tea. But not everyone makes it the same way. In this project, you can carry out some experiments to work out how to make the perfect cup of tea for you. Then you'll write a standard procedure (a set of really detailed instructions) so that other people can make tea just how you like it.

Getting started

Setting up some experiments:

Any results will depend on your own personal taste. But you can still carry out some fair tests to decide how you like your tea best. All the things listed above are variables. If you keep them all the same, but change one, you can work out what you prefer.

For example make three cups of tea keeping all these things the same:

- The amount of water
- The type and amount of milk and whether you put it in before or after the water
- The same number and type of tea bag and the length of time you leave it in the cup

Use three different temperatures of water (for example, one cup with 50°C, one with 75°C and one with 100°C). By tasting each cup, you can decide which temperature of water to use for your perfect cup of tea. Do lots more experiments, but keep different variables the same, and change others. After each experiment, you should write down your preference.

Instructions on how to make the perfect cuppa:

Now you've decided on all your personal variables you can write a standard procedure. This is a set of really detailed instructions (a bit like a recipe) so people can make tea exactly how you want them to.

Things to think about

How much water should you use and how hot should it be?

How much tea should you use?

Will you use tea bags, or loose tea?

How much milk will you use, and will you put it in before or after the water?

What sort of milk will you use: full fat, semi-skimmed or skimmed?

How long should you leave the tea bag (or tea leaves) in the cup?

Do you want sugar? How much?

Useful resources

Go to a local supermarket and find a variety of teas.

Try boiling bottled and tap water to see if there's a difference.



STUDENT BRIEF

BRONZE AWARD



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 never carry out tasting experiments in a laboratory or using lab equipment. Use a food technology room instead.

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.