

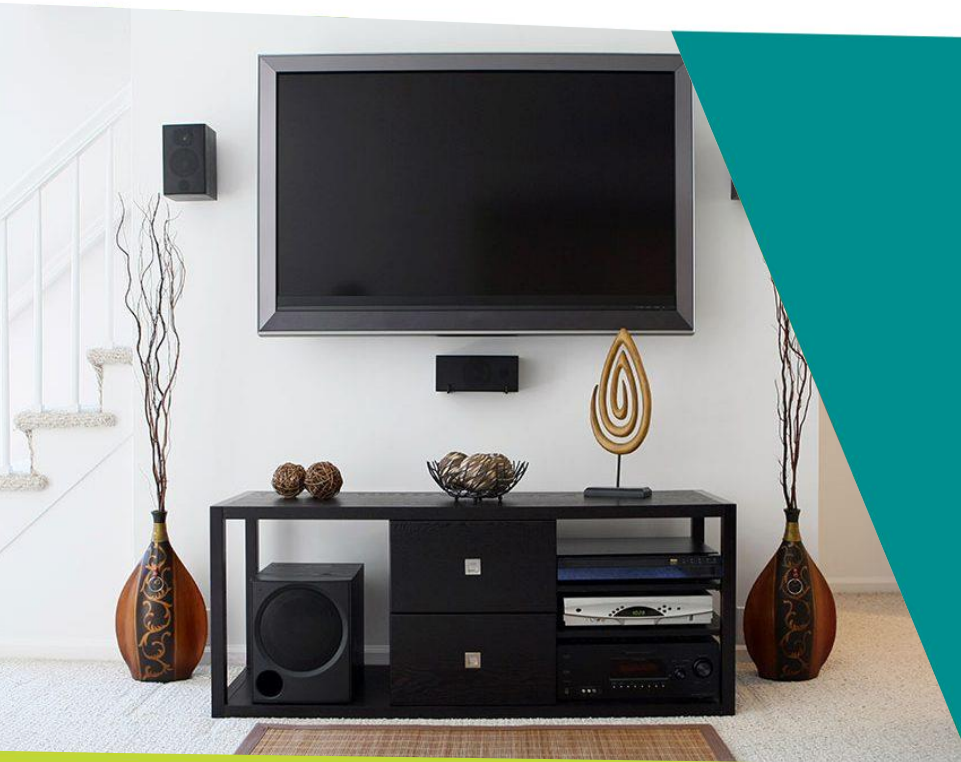


BRONZE AWARD

HOME ENTERTAINMENT CABINET



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



**Design & make
project**

Design and build a cabinet for your home entertainment system.

#technology

#design

#entertainment



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 CREST Bronze 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 CREST Bronze Award

Hard work deserves a reward! Celebrate and certify your student's achievements by entering their project for a CREST Bronze 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**

Home entertainment cabinet

With all the different components needed for a home entertainment system, the potential for a chaotic mess of boxes and wires in your living room is immense. How can all the components and their wires be built into one unit? In this project you will design and build a cabinet for your home entertainment system.

Getting Started

Decide what you would like to fit into the cabinet and what you need and work out what sorts of dimensions are generally used for these components. Survey the types of cabinet currently available on the market. Identify the good design features of each. Design a cabinet that incorporates all the components and all the best features of existing systems.

Building your cabinet: Once you have a design, you need to think about how your cabinet will be built. You need to think about:

- The dimensions and weight of each component. You could make cardboard boxes of the right dimensions, and put weights in them based on information you find in the technical specifications.
- The connections between each component - can they all be wired together easily, with the wires be hidden away?
- The heat produced by each component - how will the cabinet be ventilated?
- The type of material the cabinet will be built out of - how will you join it together? Carry out tests to make sure the materials and the joins are going to be strong enough before you start building. Remember to think about costs of material.
- The aesthetics and ergonomics of the cabinet. You may want to do some research to find out what these terms mean - or ask your teacher!

Once you have built your cabinet think about whether you managed to include everything you intended to. What problems did you have?

Things to think about

Do all the components fit into the cabinet correctly?

What do other people think of your design? You could conduct a survey of 'customer satisfaction'

Useful Resources

Why not conduct a survey of all the different components needed for a comprehensive home entertainment system?



STUDENT BRIEF

BRONZE AWARD



Health and Safety

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.

Make sure you use tools properly, supervised in your school's D+T workshop – and always follow the proper health and safety guidelines.

Don't ever experiment with live mains electricity. You may have to make some 'fake' wires to test this out.

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.