

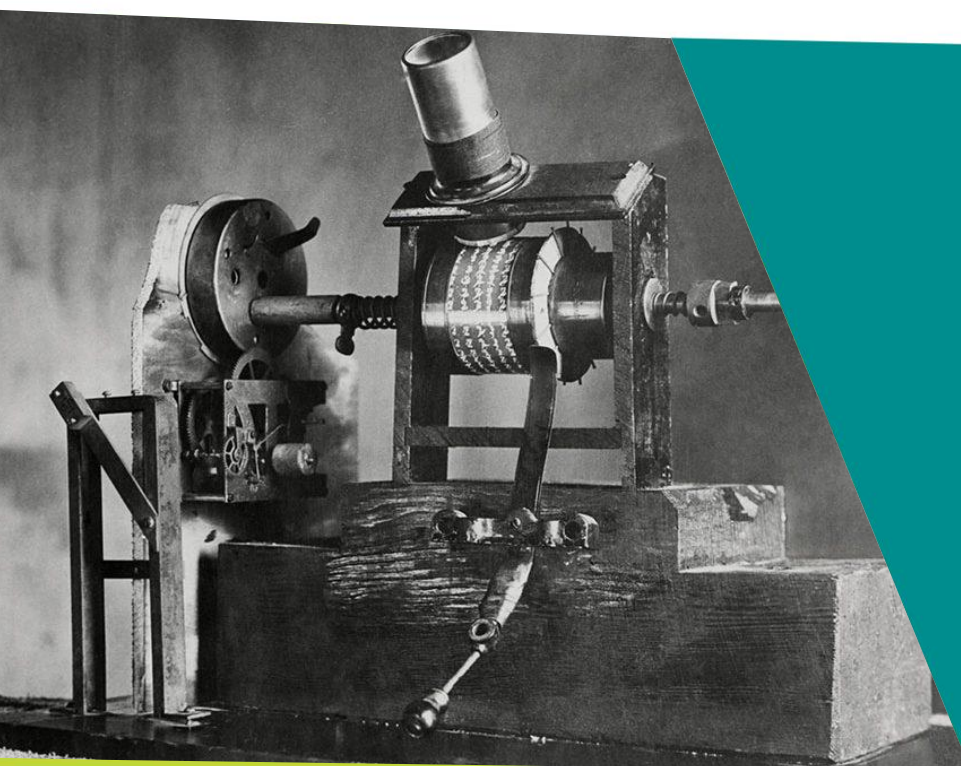


BRONZE AWARD

MAKE YOUR OWN ANIMATION



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



**Design & make
project**

Learn about animations by
designing and making your own.

#art

#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 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

Make your own animation

Animation is used in all sorts of TV programmes and films. In this project you will learn about animations by designing and making your own. Start by finding out about all the different types. For example, what sort of animation is used in Wallace & Gromit or The Simpsons, or big pictures like Toy Story 3 and Up.

Getting started

Carry out some research into the history of animation.

Spinning animations:

In 1860 Pierre Desvignes put a strip of paper containing drawings on the inside of a drum- like cylinder (sometimes called a 'kinetoscope'). The drum twirled on a spindle. If you looked through slits near the top of the drum the drawings seemed to come to life – they were moving. For the main part of this project, you're going to design and make a similar device.

The drum:

- What will the drum be made from, and how big will it be?
- How will you make the drum spin? Will you use a motor?
- How can you design it to spin at the right speed all the time?
- How far apart will the slits be?
- Will you make it so that you can insert different animations?
- Will it be hand held, or will you be able to mount it on, say, a table?
- What will your animation be of?

There are several ways you can make your film:

- Draw or paint characters.
- Use models and take photographs of each frame.
- Make a short film and print out individual frames.
- How many pictures will make up your animation?
- What material will you use to make the 'reel'? It will need to bend around the inside of the drum, but if it's too flimsy it might break.

Presenting your motion picture:

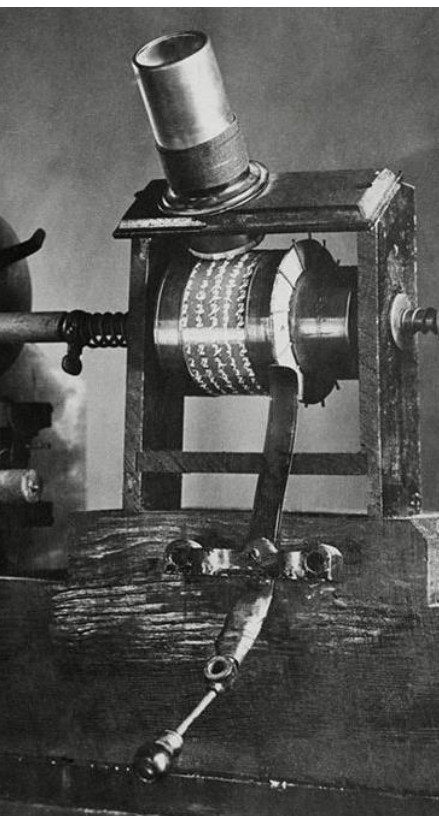
You could create a presentation using your research and homemade animations. This could tell people about the history of animation.

Things to think about

What did people do before Thomas Edison developed the motion camera?

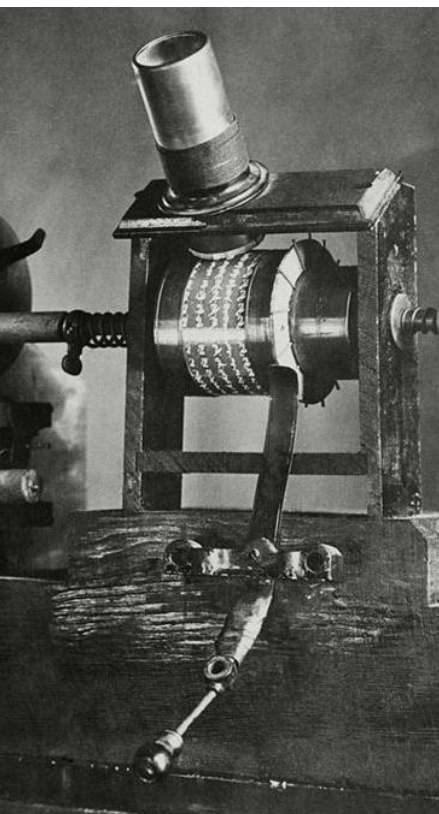
Try to explain how early forms of animation are dependent on the human eye's 'persistence of vision'. You may need to ask your teacher for some help with this. Try using science books as well as the internet to help your explanation.

Two early forms of simple animation are the 'thaumatrope' and the 'phenakistoscope'. You should research these and make them yourself.



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.

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.