



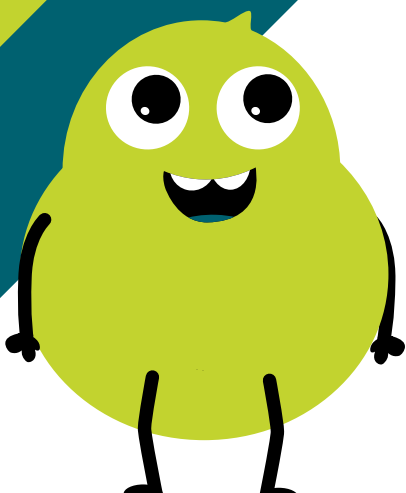
GROWTH

SNEAK PEEK PRIMARY ACTIVITY PACK

11-20 March 2022

britishscienceweek.org

A range of activities to be run
with pupils under the age of 11



Delivered by



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This teaser pack includes an exciting mix of **activities and ideas** to help teachers, parents or guardians prepare for **British Science Week**. It is designed to give you a taste of our full Primary activity pack, which will be released in January 2022. Feel free to adapt or extend any of the activities to suit your pupils' needs or the curriculum you are delivering.

When developing this pack, we looked for activities which promote cross-curricular learning and break down the stereotypes surrounding science, technology, engineering and maths (STEM). We therefore encourage you to use British Science Week as an opportunity to link STEM to other curriculum subjects and to your pupils' own backgrounds, lives and interests.

This year, we have included activities for pupils to complete in any setting, whether that's their school, a club, an organisation or at home with their families.

Enter our poster competition

Why not ask pupils to design a poster based on any of the activities in this pack and enter it into our poster competition? Simply look out for the activities marked with the paintbrush symbol shown opposite! The theme for this year's poster competition is 'Growth', and you can find more information on how to enter on **page 12** and at britishscienceweek.org/plan-your-activities/poster-competition 🖌️.





BRITISH
SCIENCE
WEEK
2022

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INTRODUCING THE THEME

The theme this year for British Science Week is 'Growth'! Introduce the theme to pupils in a fun, imaginative way to get them excited about the week ahead. Check out some ideas on how to do this below.

➤ **Share your brilliant activities, vlogs or images on social media!**

Join the conversation or see what's happening during the Week by tagging the British Science Association (@ScienceWeekUK ✨) and using the hashtag #BSW22.

➤ **Try a game,** give an audio-visual presentation, explore a mystery or special object, or create a pop-up display which communicates the theme of 'Growth'. These are great to use as fun warm-up activities and are a fantastic way to start British Science Week.

➤ **Get pupils to dress up** to personify 'Growth'. They could come to school as their favourite scientist (and feel free to think outside the box – the costume can be more than a white laboratory coat!), or perhaps as an innovation that

drove growth. Invite them to share the story behind their costume with the class.

➤ **Encourage pupils to come up with an acrostic poem** for GROWTH by asking them what comes to mind when they hear it. You can even turn their acrostic poem into a jingle which you can sing with them throughout the Week to help them remember their ideas.

➤ **Engage pupils** by discussing how growth is part of people, plants, animals, materials, countries and other things in their everyday lives. What are good examples of growth?

➤ **Invite a special guest** or someone from the school community to share with pupils their own experience of growth (for example, how they started their career and gained their expertise), showing how great things can start from small beginnings. [See page 5](#) for information on how to get volunteers.

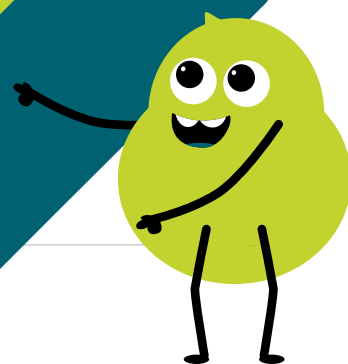
Here are some other ideas to include at the beginning of British Science Week.

➤ **Tell pupils about the plan for the Week** and give them a challenge related to the theme. If you are sending home a family experiment, maybe you could introduce or demo it at your setting first.

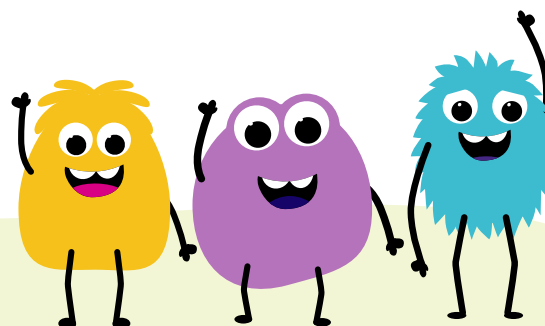
➤ **Growth is all around us.** What are examples of good and bad growth? Is there any way you can encourage conversations about this with pupils?

➤ **Launch the poster competition** and let parents know about this. [See page 12](#) ✨ of this pack for more details.

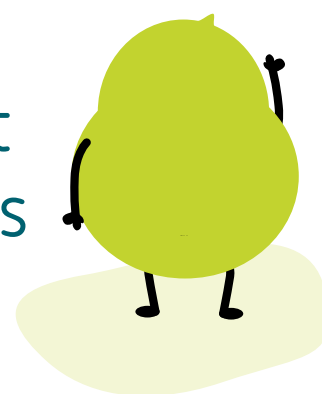
GROWTH



MAKING THE MOST OF VOLUNTEERS



While face-to-face engagement with external visitors is now possible, don't forget that there are still opportunities to get volunteers and presenters to engage with students online.



STEM Ambassadors are volunteers who offer their time and enthusiasm to help bring science and technology subjects to life, and to demonstrate their value to young people. It is now possible to request both in-person and remote STEM Ambassador support, meaning that Ambassadors from across the UK can inspire young people wherever they are.

Find out more and make a request for STEM Ambassador support at stem.org.uk/stem-ambassadors/find-a-stem-ambassador ✎.

You can also look for presenters and volunteers via *Science Live* (sciencelive.net ✎) or ask parents if they work in STEM-related jobs to describe what they do in more detail.

You could also try some of the following things.

- **Kick off British Science Week with a career talk** or demo from from an inspiring volunteer to engage the pupils. The volunteer could highlight how they grew to be an expert in their field, or what significant contributions they have made to bring about that growth.
- **Schedule two or three different guests** for careers talks during the Week, if possible, to get pupils anticipating who the next guest will be and what they do. These sorts of experiences can inspire pupils to think about what they want to be in the future. Remember, they are never too young to explore their career options!
- **Where available, choose volunteers/ambassadors** who challenge stereotypes the pupils might have absorbed and promote positive attitude towards science, like female engineers. Let the volunteers/ambassadors share how their job is making

a difference in the world, or an anecdote of what science activity they loved to do as a child.

- **Book your visitors early** (as many speakers get booked up during British Science Week). Have a clear idea of what you want them to do and communicate this with them ahead of time.

Volunteers come from a range of careers and experiences, from engineers, designers and architects to scientists and technicians, so get pupils looking forward to inspirational career talks which broaden their choices and develop their job interests!

Visit the *Inspiring the Future* website (inspiringthefuture.org ✎) for some helpful ideas for using volunteers, some of which may be transferable when using remote engagement.

BRITISH SCIENCE WEEK AT HOME

Do you want to help pupils carry on participating in British Science Week at home, but are not sure how? Here are our **top tips for engaging parents and carers with the Week.**

- **Make the most of parent newsletters**, the Parent-Teacher Association (PTA) and chat group and text messaging services if you have them. Let all the parents know at least a month in advance of the Week what you have planned, and how you'd like them to be involved. They might be able to collect or donate materials for use during the Week, and if you want them to get involved in any experiments at home they may need time to plan and collect materials themselves. The PTA may be able to support you financially to run activities during the Week or help to drum up parent volunteers.
 - **Get parents thinking** about how their own jobs might link to STEM subjects and encourage them to chat with their children about this. You could do this via a newsletter or send pupils home with activities they can do with their parents, which may then lead onto further conversations. (See page 11 ✨ for a great take-home activity.)
 - **Encourage exploring outdoors**, in the community or in local cultural spots. This could be anything from going on a nature walk around local parks, to spotting STEM in action on the streets around pupils' homes. Many of our CREST activities (collectionslibrary.crestawards.org/#5-11 ✨) are quick and easy to do as fun outdoor challenges too.
 - **Send an experiment idea home** during the Week to perhaps spark mealtime discussions around science. Try to make it as low-resource as possible. It can help if it's something the pupils have tried or seen at school first so that they feel like the 'experts' when they do it at home with family, allowing them to lead the learning. We have a range of science-based home activities requiring few resources in the CREST at home collection (collectionslibrary.crestawards.org/#tab_ethlCKF5NwsMjQq8 ✨).
- In addition to this pack**, there are lots of other useful ideas for take-home activities from series such as this one from *The Royal Institution*: [rigb.org/families/experimental](https://www.rigb.org/families/experimental) ✨.



GATHERING RESOURCES FOR THE CLASSROOM OR HOME

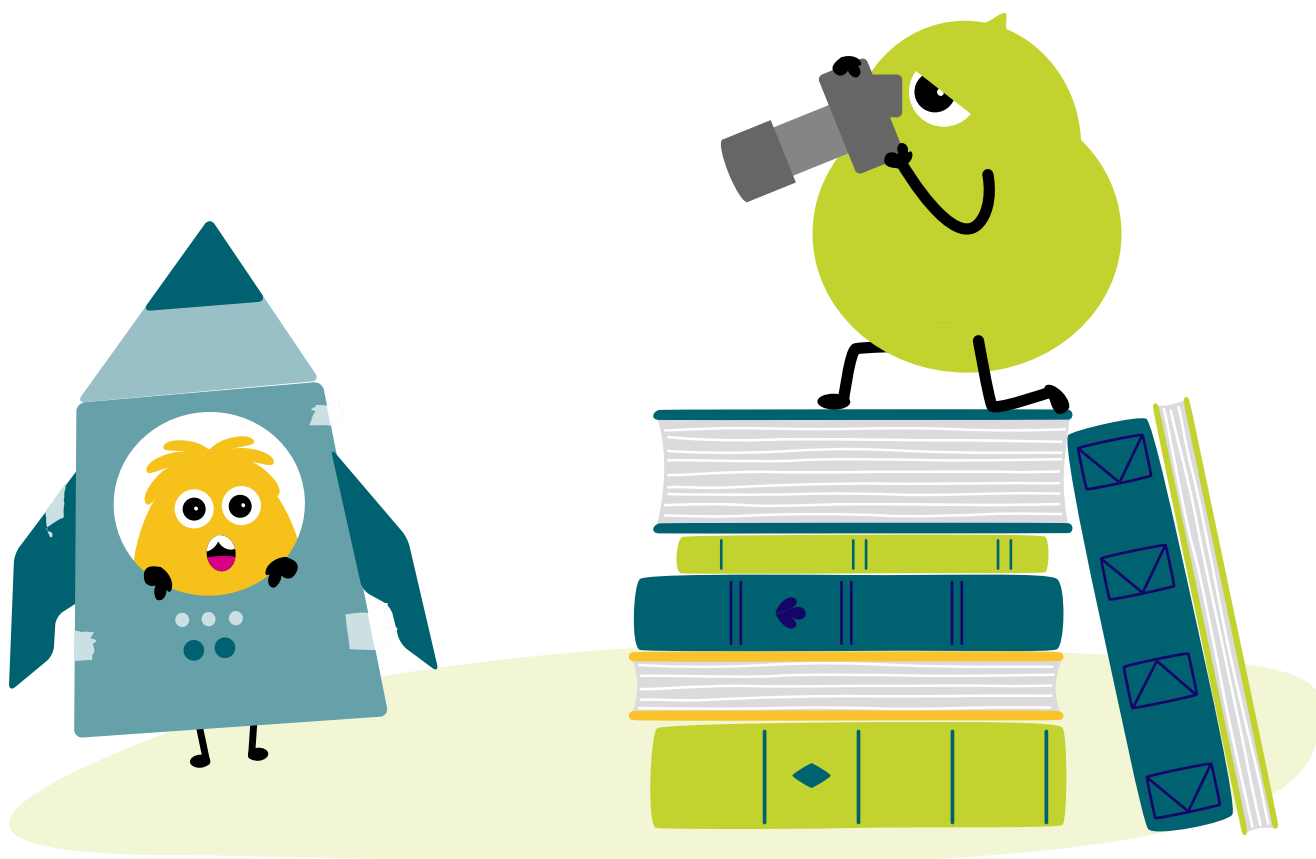
➤ **If you can, try to collect materials all year round** that can be cleaned for use during British Science Week. Alternatively, check to see whether there is a scrap shop/store/club open in your local area. These places are often membership based and can be a brilliant, inexpensive or free resource for card, fabric and other bits of material. These things

can be turned into rockets, cars, spaceships and more. You name it – the pupils will think of it! Look at childrensscrapstore.co.uk ✨ to find a UK directory of scrap stores.

➤ **Take photographs** when out and about and share these with the pupils to foster discussion and raise their level of understanding about the growth of plants,

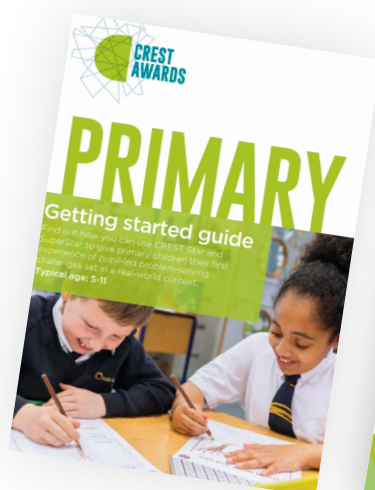
building structures and so on. The more colourful, the better! You can also use these photographs for the guessing game 'I spy', where you can describe your observation of growth and the pupils can attempt to guess it.

➤ **Collect story books** and reference books around the theme of 'Growth' to create a themed library.

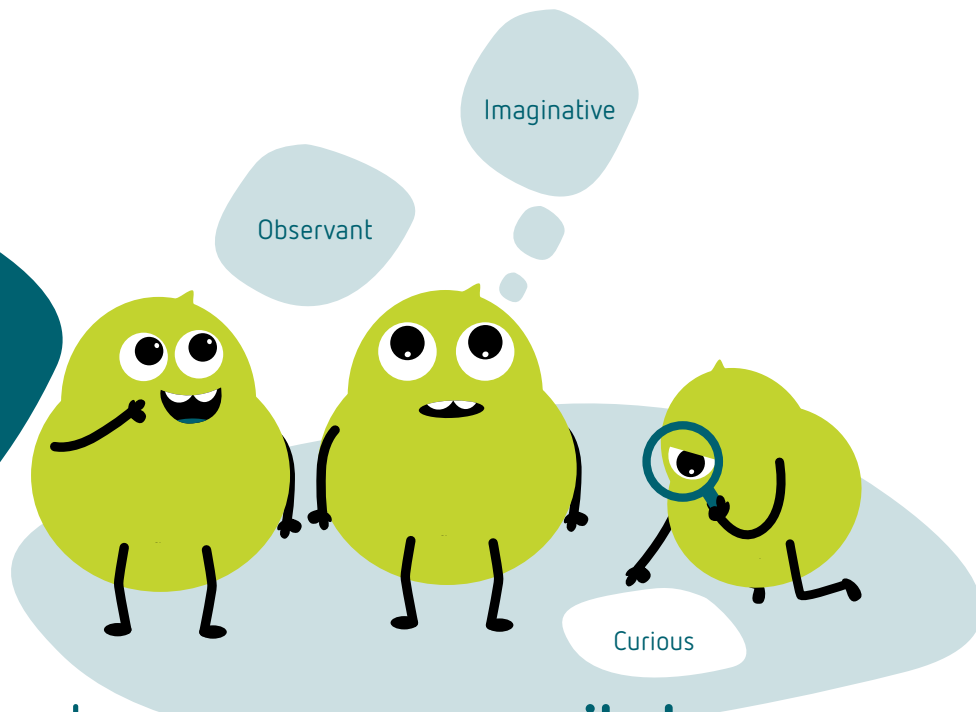


The exploration and curiosity don't have to end once British Science Week is over! Some of the following ideas could help you to expand the learning beyond the Week.

- Get pupils to take part in a CREST Award. CREST is a scheme that encourages young people to think and act like scientists and engineers. To achieve a CREST Award, pupils complete hands-on projects to suit their abilities, interests and age groups. Take a look at the different primary-level projects here: primarylibrary.crestawards.org ✨
- If you have the opportunity, consider running a STEM club or curiosity lab. You can find supporting resources at stem.org.uk/stem-clubs ✨



UNLOCKING SKILLS



A fantastic way to encourage pupils to take an interest in STEM is to introduce transferable skills used by those working in STEM-related jobs.

These skills will strengthen positive attitudes and reduce stereotypes of those working in the field.

You could, for example, engage pupils in this *STEM Person of the Week* (nustem.uk/stem-person-of-the-week) activity from NUSTEM at Northumbria University.

Ask pupils to identify what attributes people working in STEM need. These might include being observant, creative, patient, good at communication, or curious. Look out for the skills set tags for each activity in this pack.

See the table below for the complete list of skills developed by NUSTEM to use as a talking point or to share with other teachers. Or, as a little bit of motivation, why not award each of the pupils with a sticker or

certificate for a STEM skill which they demonstrate very well during the Week? You can download and print the stickers from britishscienceweek.org/british-science-week-marketing-pack.

Get pupils leading the way

A great way to encourage pupils' interest in STEM is by letting them lead the way. Here's how you can help them along.

➤ **Encourage pupils to run their own activities** during British Science Week. They could either run activities for other members of the class or run some CREST at home activities with their family, taking photos or present back to their class. Check out the CREST SuperStar activities

for inspiration: collectionslibrary.crestawards.org/superstar-home-learning/63241423.

- **Get pupils to run their own CREST projects** and then use them as inspiration for a mini science fair in class. We have lots of handy CREST resources on our website: library.crestawards.org.
- **Ask pupils** to research how growth has influenced the way we live our lives today and then write a report for the school newsletter or website.
- **Encourage pupils to design and create their own display**, such as a display of scientists through time. This could be a photo exhibit that emphasises the diversity of scientists, and which helps to overcome the 'scientist in a white lab coat' stereotype.

Observant	Open-minded	Committed	Tenacious
Creative	Imaginative	Patient	Collaborative
Resilient	Communicator	Passionate	Organised
Curious	Self-motivated	Hard-working	Logical



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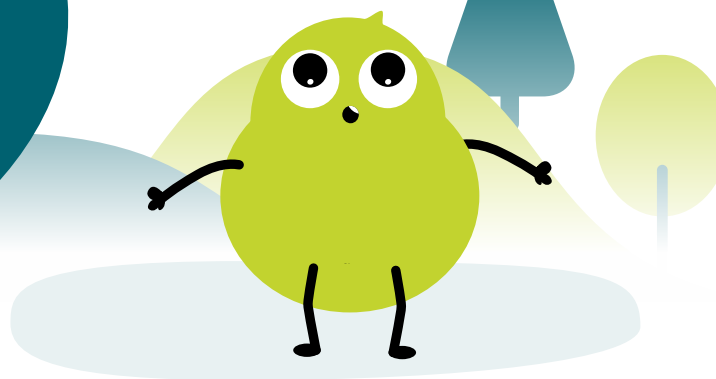
TREE TROUBLE



When any reasonably-sized tree grows, other living things also grow with it and live around it. This activity is designed to get pupils thinking about trees as habitats for other living things.

🕒 45 mins

Skills set: Communicator, observant, patient



Kit list

Magnifying glass

Binoculars

Clipboard and pens
or pencils

Identification charts

Computer for
research



Instructions

- 1 Encourage the pupils to think about all the creatures they know that live in or near the trees, and whether this is the same for all types of trees. They may need help to find simple and accessible identification guides and books.
- 2 Discuss whether or not cutting down an old tree is a good idea and why. How would it affect plants, animals and people if an old tree was being cut down?
- 3 Help them to conduct their investigation and record their results. Their results could be recorded in a table or drawn.
- 4 Ask the pupils to creatively present their findings to the rest of the group.



Watch out

- Pupils should wash their hands with soap after handling the trees and any other living things.
- Remind pupils of the rules for handling living things and for safe working outdoors.



Next steps

This activity can be put towards a CREST SuperStar Award. There also are many other CREST SuperStar activities that you can try for free – simply follow this link for more information: crestawards.org/crest-superstar ✨



Take it home:



OUTDOOR GYM

Doing physical exercise is important for pupils' growth and development and brings a lot of health benefits for everyone. This activity is designed to get pupils thinking about the different ways that people can exercise outdoors, as well as more unusual ways to keep fit outside.

🕒 45 mins

Skills set: Observant, organised, patient



Kit list

An outdoor environment

Including benches, steps and other objects

Camera

and other recording equipment

Instructions

- 1 Familiarise the pupils with the activity. Set the scene by discussing great ways for people of all ages to exercise outdoors, like doing leg lifts from a park bench.
- 2 Allow pupils to use the internet or books to research different types of outdoor activity.
- 3 Encourage pupils to talk together about how to exercise using parts of your local area as an outdoor gym. Ensure that they think about safety.

Here are some questions to help:
 - What can we use in the outdoor gym?
 - What types of exercises can we do?
 - How will these exercises help us to keep fit?
- 4 Help the pupils to record their survey in a table or similar.

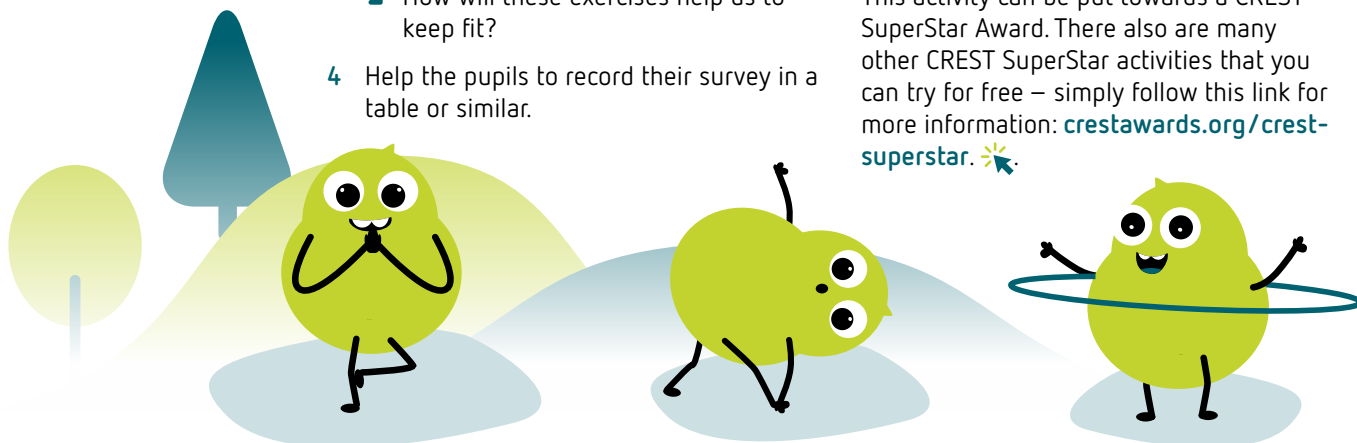
Watch out

- Ensure pupils wear appropriate clothing and sports shoes when exercising.
- Give pupils the opportunity to explain ideas to you before they test them out.
- Ensure that the area is safe and clean. Avoid hard or slippery surfaces.
- Ensure pupils try out age/size-appropriate activities.

Next steps

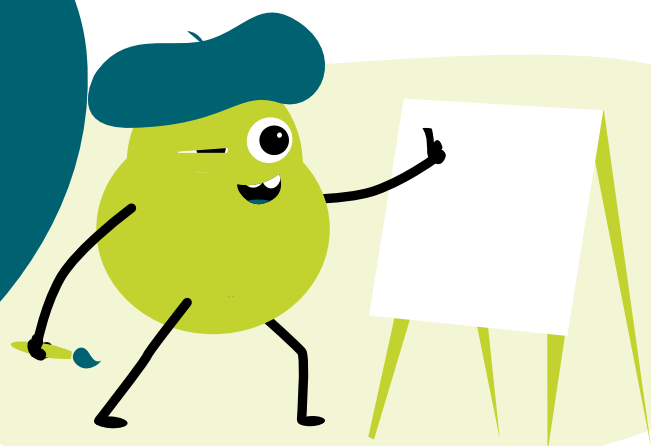
Perhaps you could start an outdoor gym club? Inspire the pupils to design a poster to encourage people to join in.

This activity can be put towards a CREST SuperStar Award. There also are many other CREST SuperStar activities that you can try for free – simply follow this link for more information: crestawards.org/crest-superstar.



POSTER COMPETITION

Pupils can get creative and enter the British Science Association's annual, UK-wide poster competition! They can make a poster about any version of 'Growth' that they like and be in with the chance of winning an array of prizes. The activities found in this pack, marked with a paintbrush symbol, could all be used as a source of inspiration to get pupils started.



Kit list

Paper (A4 or A3)

Creative materials

such as:

pens
pencils
scissors
glue
watercolours
paints
crayons
pipe cleaners
felt
thread
wool
foil
clay
string
beads
stamps
foam
pompoms

Instructions

Encourage pupils to think about different areas of growth so they can come up with ideas to include in their poster. Here are some points and questions to get you going.

- **Get pupils to think about their personal experience of growth** – from growing their own cress plants to overcoming a challenge that they thought they could not do! How has it helped them to become stronger, braver, kinder, or more accomplished?
- **How do pupils think the world has grown?** You could help them to consider population growth, plant growth, economic growth or even the growth of cities and society. What is an example of good growth?
- **Can pupils think of people who have helped or inspired them to grow?** Perhaps they could create a portrait of them to show this?

From the learning of new skills to the development of places and ideas that enable us to do things more efficiently in our everyday lives, growth is everywhere!

Making the poster

Once they've done the thinking, it's time for children to get creative! Posters must be A4 or A3 in size and you'll need to be able to take a photograph of each one so it can be sent to us online for judging. Pupils can use pop-up pictures, pull out tabs or use materials such as pencils, paints, crayons and paper to create their posters.

Submitting the poster

Posters will be judged on creativity, how well they fit the theme and how well they have been made or drawn. Once a child's poster is complete, take a photo of it and complete the online form to submit it as an entry.

Next steps

Celebrate! For more details, along with the full set of poster competition rules and tips, check out our website: britishscienceweek.org/plan-your-activities/poster-competition ✨