

Your

## Ugly Animal

Challenge

“ So many ugly animals are facing extinction and they need your help!

We are dull in what we consider beautiful and really only seem to care about cute animals – usually mammals, creatures that like us, have hair and are warm blooded. Humans are egotistical like that.

Vertebrates like mammals, birds, reptiles, amphibians and fish make up just five per cent of animal life.

I challenge you to start a project on an ugly animal and show how it benefits other animals and humans.

Then enter your project into the National Science + Engineering Competition!

”

*Simon Watt  
TV presenter, Channel 4's  
Inside Nature's Giants*

## Where to get your idea

Here are some big ideas in conservation, do you have any more?

- **Extinction** How does extinction affect ecosystems?
- **Cures** What treatments or medicines have come from animals and nature?
- **Evolution** How have ugly animals adapted to their environment through evolution?
- **Genetics** How can we learn about extinct animals through their DNA?
- **Psychology** What determines how ugly we think something is? Why do we think some animals are uglier than others?

## Take your idea forward

Here are some things to think about when doing your project:

- **What's your animal?** Do some research on the type of animals you're interested in and then pick one to focus on for your question.
- **Use your imagination** Ugly animal projects can include elements from all areas of science – biology, chemistry, physics and even engineering.
- **How does it fit?** Don't just focus on the animal, but also look at its habitat and how it affects the ecosystem around it.

## Did you know?

So you think insects are small? Think again! The longest insect in the world is Chands Mega Stick and it is mega. It is a stick insect that is up to 2 feet in length. Giant wetas are enormous bugs that are related to crickets. The largest giant wetas can weigh in excess of 70 grams, making them among the heaviest insects in the world. They can weigh more than a sparrow.

**Could you design and create an ugly animal project to enter in the Competition? For more information, please see: [www.nsecuk.org](http://www.nsecuk.org)**

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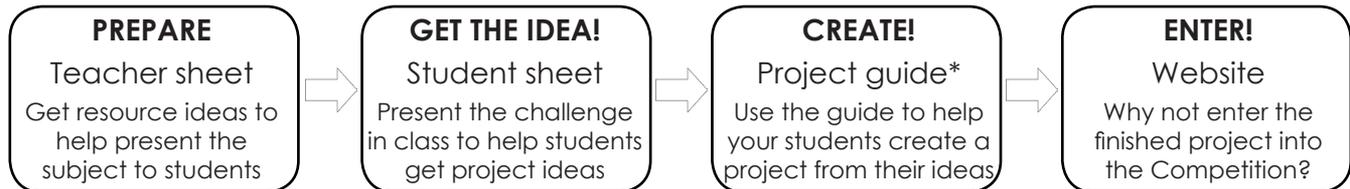


## Teacher's Guidance Notes

### The Competition and the Challenge

The National Science + Engineering Competition is open to 11-18 year olds across the UK and is a great way for young people to explore project work on specific topics just like professional scientists and engineers do. Visit the website: [www.nsecuk.org](http://www.nsecuk.org)

#### How to use these resources for Key Stage 3 and 4



\* The 'Guide to project work' can be found in the Challenge Pack or downloaded from [www.nsecuk.org](http://www.nsecuk.org)

### Hints and tips to start

- There are lots of ways to take students' ugly animal project work out of the classroom and make it more exciting and memorable. Contact your local wildlife trust, they may be able to help you take part in local projects featuring British uglies, such as bats or beetles.
- Projects can take a while to complete, so plan the work carefully and monitor progress regularly. Make sure your students' project ideas have specific goals and a realistic timetable. If you are doing this for the first time, you may want to start with a smaller group,
- Use the opportunity to explore cross-curricular links with all the STEM subjects, including biology, physics, chemistry and even engineering so that students learn how subjects interconnect.

### Have a look at...

There are lots of places you can look for inspiration to help students to develop ugly animal project work. Here are some that we particularly like:

1. **What:** Free resources from ARKive to explore conservation  
**How:** Design a conservation programme to help a species survive  
**Where:** <http://www.arkive.org/education/teaching-resources-14-16>
2. **What:** Ugly animal films on extinction, cures, variety and helping uglies on your doorstep  
**How:** Use the short films to explore key themes around ugly animal conservation  
**Where:** [www.youtube.com/uglyanimal](http://www.youtube.com/uglyanimal)
3. **What:** Conservation resources from the World Wildlife fund.  
**How:** Ideas for conservation or science communication projects.  
**Where:** <http://gowild.wwf.org.uk/>