

Partnership Grants: Example project titles

This document provides example project titles to spark ideas and show the sorts of project topics that have been funded by the <u>Partnership Grant scheme</u> in the recent past. These can be used as inspiration for teachers or STEM partners who are preparing a Partnership Grant application.

For advice on how to prepare your Partnership Grant application please visit www.royalsociety.org/partnership or email education@royalsociety.org. There is additional advice available on the website for those wishing to undertake a project that specifically supports students with special educational needs and disabilities (SEND).

Project titles

Below is a list of example project titles showing the breadth of investigations undertaken through the Partnership Grants scheme. Partnership Grant projects must have a title that is a question, and the investigations suggested as part of the project aim to help the students answer this question. This list is not exhaustive but may give you some ideas of what could be investigated with your students.

All the project titles below could be adapted for use with students at a range of primary and secondary levels, dependant on the depth and complexity of the investigations undertaken as part of the project.

Observing the world around us:

- 1) What lives in our green space and why is it important?
- 2) What are the important features of gardens and particular flowers for wild pollinators?
- 3) Which species do we share our neighbourhood with?
- 4) How do badgers respond to scent from distant populations?
- 5) Why did the stickleback lose its spines?
- 6) Can daffodil phenotypes be identified from the plastosome sequence?
- 7) Can a school-based digital weather station provide accurate and useful data?
- 8) Can we power classroom items with renewable energy?
- 9) Does our biology influence our mood?
- 10) Can collecting physiological data help school sports team performance?
- 11) Can Drosophila melanogaster learn visual and olfactory cues?
- 12) How can we predict and measure growth rates of tardigrades?
- 13) Will improving our knowledge of the components of food, improve our eating habits?
- 14) How are different materials effected by tension and compression and how does this inform the design of a bridge?

Exploring beyond Earth:

- 1) What's in our atmosphere?
- 2) Can we use a radio antenna to detect the ionisation trails from meteors entering the Earth's atmosphere?

- 3) What are Moon rocks made of?
- 4) How would we grow food in space?
- 5) What needs to be prepared for a mission to Mars?
- 6) Can your team build a rover fit to explore Mars?
- 7) What are the best conditions to grow plants without soil?

Human impact on the environment:

- 1) What are the effects of flow regulation on river temperature?
- 2) What are the effects of water pollution on the ecosystem?
- 3) How can science help us investigate the impact of humans on our shoreline?
- 4) Is single-use plastic litter a problem on your local beach?
- 5) What is the prevalence of plastics in our local environment?
- 6) Does plastic have a future?
- 7) What impact do disposable contact lenses have on the environment?
- 8) How can agricultural bird feeding on farmland in the South Downs National Park best help mitigate declines in passerine birds?
- 9) How can we make our houses smart and energy efficient?

Solving problems with technology:

- 1) Investigating tissue engineering: how can we build new body parts?
- 2) Can you feed your phone for free?
- 3) How would ester flavourings be synthesised in industry?
- 4) Can robotic arms be improved using the latest technology?
- 5) Can a school contribute effectively to open source pharma via the synthesis of novel drug analogues?
- 6) How can we use data to improve the air that we breathe?
- 7) How do computers learn?
- 8) How do future self-drive cars work?
- 9) How is biometric security changing the world we live in?
- 10) How can robots work collaboratively to achieve an end goal?
- 11) Can low cost technology assist with social care?
- 12) Can 3D printing be applied in medical applications to improve the lives of others?
- 13) How can the use of drones impact positively on reducing pollution in the environment?