

Big Data: Covid

Evaluation
summary

**BIG DATA
COVID**



The Institute for
Research in Schools

About the project

The amount of data available in our modern world is endless. Learning what good data looks like and how to decipher it will continue to be a valuable skill. Big Data: Covid-19 introduces students to the art of data science through contextual learning. They start by gaining context into SARS- CoV-2, then move onto big data. Lessons involve working with real virology, SARS-CoV-2 data, providing insight into how epidemiologists model pandemics.

Once they've got the basics down, budding data scientists get to further their skills using the global Covid database. Students learn to use Excel and its Data Analysis package to develop a narrative using basic statistics, creating linear regressions, and plotting histograms. Once they master this, they move on to R, a mathematical statistics programming language.

Student registrations

This project is predominantly aimed at post-16 students, however, a small number of younger students with an interest in statistics and data take part each year.

	22-23	23-24	24-25
Number	55	54	15
Post-16	93%	85%	100%
Female	51%	56%	60%

Project Aims

The Big Data: Covid project aims for students to:

- use computer software to manage large data sets
- understand how STEM can help in the real world
- work as a team
- develop skills in carrying out research
- evaluate sources of information
- formulate scientific questions
- develop their computing skills

Methodology

Data on the running and impact of the project has been gathered from the pre and post IRIS evaluation survey data since the inception of the project.

Impact on students

Students said they:

- enjoyed working with others
- learned how to analyse large datasets and present information using Excel data functions
- found the project fun, challenging and rewarding
- explored STEM outside the curriculum

95% of students rated the project good or very good

Through the project, students...

87%	...were more aware of how STEM can help in the real world
72%	...learned that research can be hard work but is rewarding

“It is extremely rewarding and going out of my way to research things that are critical and effective increased my knowledge in STEM.”

Year 12, female student

“It has helped me gain skills that can be applicable to a wide variety of areas in education and day to day life.”

Year 12, female student

“The project boosted my problem solving abilities and collaboration skills as well as my analytical skills.”

Year 12, male student

Big Data: Covid-19.

Through the project, students...

89% ...know more about what it's like to work in STEM

74% ...felt more certain about the exciting opportunities for them in STEM

62% ...were more aware of the different job opportunities in STEM

“I may like to explore STEM areas more before deciding what to do as I have discovered different opportunities.”

Year 9, female student

“It was a very interesting and beneficial experience as I was able to explore certain topics I normally wouldn't have.”

Year 12, male student

“It's a fun research project that stretches you past the curriculum.”

Year 12, male student

“I got to share my knowledge and actually debate with others, including very knowledgeable people about my findings.”

Year 12, male student

Evaluation Summary

Teacher feedback

Teachers said that working on this project helped their students to feel like real researchers. They echoed the feedback from students, agreeing that it helped students develop problem solving and teamworking skills, as well as resilience.

The project also enabled their schools to offer students a different type of opportunity which provided stretch and challenge and encouraged teachers to highlight research links in the curriculum.

“[It] opened up the curriculum and learning through research.”

Teacher, Further education college

“[It showed students the] importance of technology in all science projects.”

Teacher, state school

“Data projects allowed for maths, computer and physics pupils to work together.”

Teacher, state school