



Case study: Fenland and East Cambridge Curriculum Days

Client: Opportunity Area Programme, Cambridgeshire County Council

The Challenge

In January 2017, Fenland and East Cambridgeshire was designated as one of 12 Opportunity Areas by the Department for Education (DfE). This was in response to findings in the 2016 Social Mobility Index that showed that Fenland and East Cambridgeshire are 'cold spots' for social mobility.

Currently in the region, a number of projects within the Opportunity Area programme required school staff to take time out of the classroom to attend training. Naturally, a requirement to take significant time out of the classroom to attend training caused issues for schools in terms of their ability to cover lessons. There was therefore a need to provide 'curriculum days' for these schools, enabling them to release their staff to attend training while the school remains open and pupils remain engaged in learning.

Our challenge: Support schools with relevant and engaging full-day sessions for the whole school to enable staff to attend training days.

Our Solution

We worked as part of a framework of providers to offer full day provision for schools.

We produced 4 key offers - a Big Bang @ School Day, a Destination Rail Day, an Enterprise Day, and a Motivation/Aspiration Day - which schools could choose from based on their needs and their number of students.

Each offer included:

- Trained and engaging delivery staff to run activities
- Equipment and resources for the day, including the development of bespoke sessions and printing of worksheets
- Organisational support for the school to ensure all workshops, exhibition and activities are in place effectively, i.e. timetabling support

We then worked directly with the schools to create a suitable and bespoke curriculum day for their students.

Between November 2019 and March 2020, we ran event days in 5 primary schools and a further 2 in November and December 2020. 2 primary and 2 secondary event days were postponed due challenges caused by the COVID-19 pandemic.



The Curriculum Days

Each curriculum day was designed to fit each school's timetable, the space available and the number of students, whilst working within the framework of the initial offer.

Looking specifically at the Big Bang @ School days, our intervention addressed the need to widen student's awareness of the breadth of career opportunities in STEM (Science, Technology, Engineering and Maths) and their knowledge of STEM subjects. The intervention also aimed to breakdown stereotypes around STEM careers only being for particular people. This was achieved by ensuring a diverse group of people delivered the activities including women and BAME individuals.

We brought together several activities from our own organisation and partner organisations to cover a range of STEM topics through interactive workshops and high-impact shows, which were appropriate for the age group and linked to the National Curriculum.

Timetable example: Elm C of E Primary School

Year Group	8.50-9.40	9.40-10.30	10.30-10.45	10.45-11.35	11.35-12.15	12.15-1.15	1.15-2.05	2.05-2.55
Reception	Show by Atomic Science	Stars and Space	Break	Magnificent minibeasts	Animal experience	Lunch	Bridge Building	Medical Mavericks
1		Medical Mavericks		Stars and Space	Magnificent minibeasts		Animal experience	Bridge Building
2		Bridge Building		Medical Mavericks	Stars and Space		Animal experience	Magnificent minibeasts
3		Animal experience		Bridge Building	Medical Mavericks		Stars and Space	Animal experience
4		Experiments		Design Challenge	Robotics		Design Challenge	Design Presentations
5		Robotics		Experiments	Design Challenge		Robotics	Science of Sport Show
6		Design Challenge		Robotics	Experiments		Experiments	

Timetable example: Swaffham Prior CE Primary School

Year Group	9.00-9.50	9.50-10.00	10.00-10.50	10.50-11.20	11.20-12.00	12.00-12.10	12.10-13.00	13.00-13.10	13.10-13.50	14.04-15.00
Reception	Cycles of Plants	Break	Serious Slime	Break	Human Body	Lunch	Magnificent Minibeasts		Show	
1+2	Human Body		Magnificent Minibeasts		Cycle of Plats		Serious Slime			
3+4	STEMcelent Quiz		Circuits		Paper Wind Turbines	Lunch	Robotics			
5+6	Paper Wind Turbines		Robotics		STEMcelent Quiz		Circuits			

COVID-19 Response

Challenges caused by the COVID-19 outbreak meant we needed to alter our approach to the curriculum days. After a contract extension to July 2021, we were able to continue deliver into the academic year 2020-21, which ensured no schools missed out on their offer as a result of the pandemic.

Our approach now needed to take into consideration COVID-19 safety guidelines. We did this by:

- Ensuring that all classes remained within their 'bubble' – and with the same deliverer – for the whole day, in order to limit social contact
- Training all delivery staff on COVID-19 safe working procedures and providing them with a face shield and anti-bacterial wipes for cleaning equipment after use and between sessions
- Adhering to the school's own procedures regarding moving around school, wearing masks and hand-sanitisation

Feedback

Across the Big Bang @ School days a sample of 32 students were asked to give feedback on their experience via a paper-based feedback form.

Of those responses:

- 81% of student enjoyed the activities
- 88% said the people who ran the activities were knowable and fun
- 69% would like to do more STEM activities in future.

Feedback and comments were also collected from teachers and teaching assistants who were present during the activities. All agreed that the content of the workshops and presentations were relevant for the participants.

Fantastic the children and adults loved it

The team went above and beyond to engage the children (SEND)

Brilliant day! Kids enjoyed and learnt lots. Staff happy and complementary.

All the children really enjoyed the day. The team worked very well in all the classes and during lunch many of the pupils were talking about the experiments and how excited they were to learn more

How did this event hit the Gatsby Benchmarks?

The event adhered to the following Gatsby Benchmarks for 'good' careers guidance:

2. Learning from career and labour market information

Children got an insight into the various different career opportunities available in STEM in their local community as well as nationally and globally.

4. Linking curriculum learning with careers

Activities throughout the curriculum days linked topics in the National Curriculum, for example space or electricity, to specific career roles.

The schools involved

Murray Park school
Littleover Community school

Comments

Learn by Design has had a fantastic working relationship with Murray Park School for a number of years now which has brought many exciting STEAM opportunities for our students for both KS3 and KS4.

In order for Murray Park to work towards achieving the Gatsby Benchmarks, Learn by Design has helped enrich and add value to our Careers programme to ensure that ALL students across ALL year groups have the opportunity to take part in meaningful encounters with local STEAM employers and activities.

Collaboration with local employers like Toyota have linked in with Learn by Design to provide a number of bespoke STEAM workshops and events for our students which has seen a great increase in student engagement in STEAM subjects.

Working together with Louise and her Learn by Design team has been a real success, often it's quite difficult to justify the short-term impact of activities and much easier to measure the impact being made in the long-term which is what we've seen from our student's outcomes.'

We would like to thank Learn by Design for all their support over the years with our students and look forward to the continued partnership working moving forward.

Tim Taylor
Aspirations Careers Employability (ACE) Coordinator - Murray Park School

In 2016, we commenced our educational journey with Learn by Design, our aim being to inspire and excite young people to enjoy and investigate the possibilities of STEM subjects via future study and then potentially long-term careers. By supporting young people, we are inspiring our future workforce whilst filling the engineering and manufacturing pipeline for local businesses. Our partnership is built upon excellent communication, trust, respect, and mutual understanding of how our businesses operate.

*Mandy-Jayne Evans - Senior Specialist - Young People Education – Technical Skills
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Links to Gatsby Benchmarks?

2. Learning from career and labour market information
4. Linking curriculum learning to careers
5. Encounters with employers and employees
7. Encounters with further and higher education