

Saint Christina's Space Mission and Space Day

The Plan

To celebrate the 70th anniversary of the founding of Saint Christina's School, 1949 – 2019, we wanted to do something really special that all the children would remember for a very long time. We also wanted a project that would inspire the children to marvel at the wonder and power of science as well as understand the value of perseverance and team work.

We decided that sending a package containing important items for our school into space and taking a photo of a special Saint Christina's image against the backdrop of the curvature of the earth would fit this bill nicely.

The Year Six girls went to work learning all about high altitude ballooning; figuring out how it was possible to fill a latex balloon with helium or hydrogen, carry a polystyrene payload containing cameras and GPS tracking equipment to an altitude of 30,000 metres (after checking it was OK by the CAA) where it would eventually explode due to the decrease in pressure and then and fall back down to earth on a parachute and hopefully be retrieved!

We got in touch with a team of experts in Sheffield, who liked the sound of our mission and were excited to help us achieve our goal.

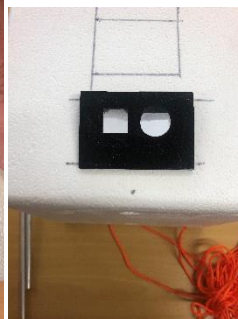
The image

Year Six created lots of Saint Christina's anniversary images which we could send up, with the image opposite, created by Tansy being the image finally chosen.

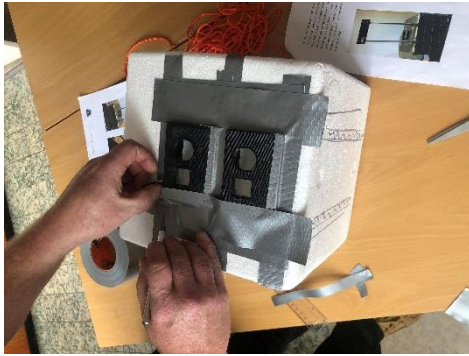


Building the payload

Next we had to make the payload for our items to go up in. Here we are cutting the holes for the cameras with a hot knife.



We also had to insulate the payload, the altitude we were hoping to achieve would be -60 degrees Celsius so the electronics needed to be protected from that. We also added the image stand.



Astronauts and special items

For our special items, we contacted the Sisters, who provided us with a Saint Raphaela Maria pendant and a special crucifix with 'Jesus and Mary pray for us' engraved on it. *What space mission would be complete without some astronauts?* So it was then over to Mr Gloag to pick names out of the payload in a raffle to be our astronauts and tie representative. Gina's name was picked for the tie and then we had our astronauts below.



The complete package

After becoming well acquainted with Mr Steve's ridiculously strong tile glue, our astronauts were in place and secure. We were now ready with what we wanted to launch into space and were raring to go!



The launch site

We initially planned to launch our balloon from Newbury, but this plan was twice foiled; firstly with weather forecasts predicting us to land in the Bristol Channel and secondly with a CAA ruling that there was a potential national security threat resulting in a restriction on

balloon launches for 10 weeks (although nothing to worry about). After consulting with our Sent into Space experts, we arrived at a new plan which involved getting a train to Sheffield as we were OK to launch from there and the forecast was looking promising.

The day before

Before the launch, Alex from Sent into Space, came down to visit us. He gave an excellent assembly going through exactly what would happen the next day and the science behind the balloon launch. He taught the girls about the different areas of the atmosphere and where our balloon would be going. He was able to answer lots of questions allowing the excitement to really build.

Space Day – By Sophie, Miriam and Imogen (Year 6)

On Friday 21st June, Year 6 were fortunate enough to celebrate St Christina's 70 anniversary by going to Sheffield to witness a balloon launch into space. It is an event that will go down in Saint Christina's history.

The day before, Alex Keen came to school to tell us all about what was going to happen and about the payload. We learnt it was going to go in the stratosphere, just above the troposphere where we live and breathe.

Early in the morning, we met Mr Hirst and Miss Fernandez at King's Cross St Pancras to get on the train to head up to Sheffield. The train was buzzing with excitement and enthusiasm; you could hear it from miles away!

After two hours on the train we finally arrived and were met by Alex and hopped onto what we called the "Party Bus" where we sang songs, played games and looked at the beautiful country view.

Next we arrived and had to climb a colossal hill to get to the place we were going to send up the balloon carrying with it...

A polystyrene box to keep our payload

The image

Our lego astronauts

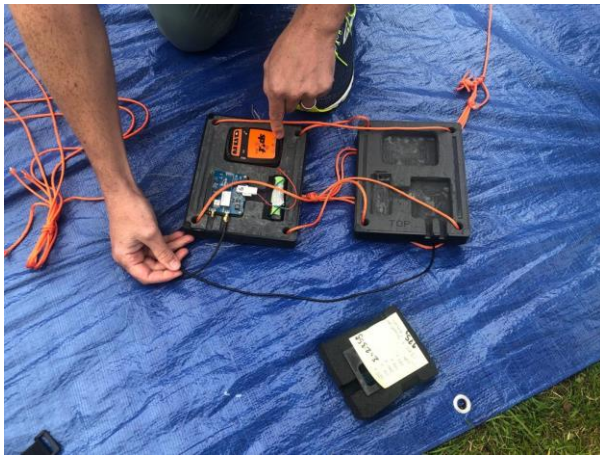
A school tie belonging to Gina, Year 1

And a camera to watch the beautiful landscape!

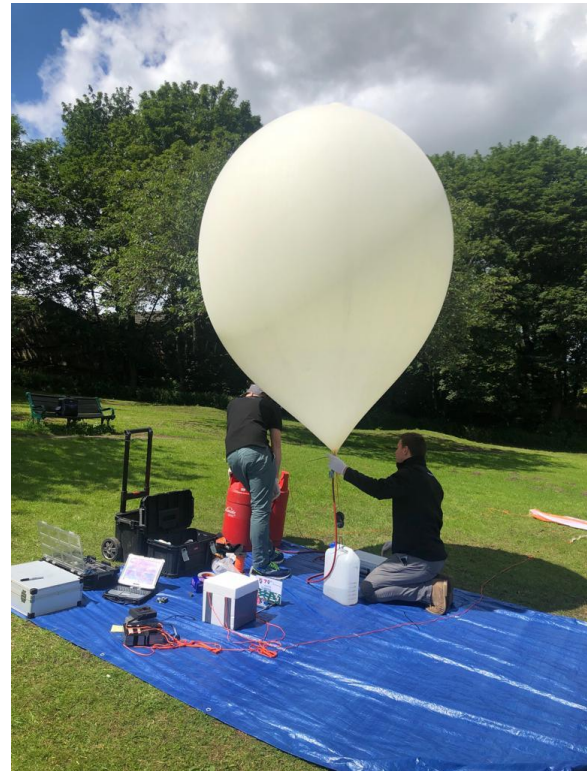




We met the “Sent into Space” team and had a chance to ask lots of questions while the team filled up the balloon and added the tracker, camera and parachute for the technical end. The whole thing was streamed



live back to school!



We counted down 5,4,3,2,1.... And then we saw the balloon go up and up into space!

On the way back to London, we received updates from the tracking team and finally received the image we had been waiting for...

We are so privileged to be able to witness such an exciting trip, which we will remember forever! Thank you to Mr Hirst for organising this monumental event in St Christina’s history, “Sent into Space” and Alex Keen for making this dream a reality and Ms Fernandez for accompanying us.

By Sophie, Miriam and Immy



Space Day

Meanwhile, back at school everyone else was having a great time celebrating Space Day – no sooner had Early Years and KS1 finished their Sports Day they were straight into watching a live feed of the space launch from their classrooms.

The children were able to send questions through to the launch site for Alex to answer.

Questions included:

How long will it take to get into space?

How long does it take to get to its largest size?

Will it reach the international space station?

Is there any chance it could get knocked by a space rock?

After watching the balloon ascend into the clouds accompanied by 'Chariots of Fire' the rest of the afternoon was dedicated to enjoyment learning about space. Here are some of the great things the children did with their teachers in school.

Year 2 and 5

We celebrated Space Day by doing a science experiment with Y2. We brought in small items and created a box to put the items in! Afterwards, when all the boxes were crafted, Y5 and Y2 went outside into the playground together to attach the boxes with the items inside to a kite, and then flew the kites! We also attached balloons so that the boxes would at least fly up a bit! After that first experiment, we made parachutes to go with the boxes. We used paper for the boxes, and paper towels for the parachute, and when we created the parachutes and attached them to our boxes, we went to the top floor and let our boxes fly downstairs! We thought it was really fun and I enjoyed doing the experiment!

By Anna, Kitty and Clarissa!





How to launch a rocket

To launch a rocket you need lots of thrust so let it go up to orbital speed. It should go up to about 360 km per hour.

To travel beyond Earth towards other planets and beyond, you need "multistage" rockets. You need to use a probe such as "Voyager" which travels to escape gravitational pull of the Earth and Sun. Voyager is a "flyby" probe that was launched in 1977 on a tour of the outer Solar System. More than 30 years later, it continues to transmit data and travel into interstellar space. In March 2001, the European Space Agency launched the "Rosetta" probe to visit comet 67P. It was the first probe to orbit a comet.

How to make a Rocket in 3 steps

Needed: paper, Cellophane, card

1. Cut 3 pieces of paper and roll them up in 3 tubes. Now cut off the ends 1/2 of the big one. Tape them together.
2. Now cut 3 fins. Tape them on the big tube.

By Mia and Henry

Alien Album





A huge thank you to everyone involved in making Saint Christina's Space Mission a success and a day that we will certainly all remember! You can watch a video of the flight here, taking in the incredible journey of our space flight and its eventual recovery near Scunthorpe:

https://youtu.be/T_vD0LnK6nU

Mr Hirst

Deputy Head