

# Case Study: Explore-At-Bristol

## Magic Planet accelerates learning for KS2 students

“Using the Magic Planet accelerates their learning. A teacher recently told me ‘In 1 hour you have covered the work that was going to take me 6 weeks. Thank you!’”

Dr Lucy Berthoud is part of the four-person team delivering schools’ workshops at the Explore-At-Bristol Science Centre in Bristol. “Earth, Sun and Moon” is a very popular workshop targeted at Key Stage 2 pupils, with over 50 workshops booked for 2009, often paired with a visit to Explore’s Planetarium.

### Day and night

In September 2008 Lucy was looking for new, better ways to explain day and night and the cycle of the seasons, both of which are important parts of the Key Stage 2 curriculum. She wanted to do this in 3D, as teachers tell the Explore team that explaining 3D events is one of their most difficult challenges. While Explore has commissioned films to help with this, these are still in 2D.

Lucy decided to incorporate the Magic Planet, a 3D digital globe, into the Earth, Sun & Moon workshop after seeing it in use at Explore, where colleagues were using it on the exhibition floor as part of their activities.

### An amazing technology

The feedback from these colleagues was that it is an amazing technology that

grabs attention and generates a great response with children.

### Using the Magic Planet

After consulting with Vivifeye, the Magic Planet’s UK distributor, Lucy found new material and exhibits ideally suited to her needs for the workshop.

At the start of the workshop Lucy reveals the Magic Planet to her audience with just a basic picture of the Earth, with no rotation. She explains that these are real pictures of the Earth taken from space and this is what you would see if you were on a space station. But, she explains, it is still not quite right. “What would make it look more realistic?” she asks her audience.

### Make it spin!

Someone will suggest that the Earth should be spinning, at which point she adds rotation to the Magic Planet. “What else?” she asks. “There should be weather, with moving clouds”, someone offers, so she adds these too – showing clouds circling the Earth.

Perhaps a student then mentions the stars or the Sun. “If the Sun were over here, then what would it look like on the other side of the Earth?” she asks.

Dr Lucy Berthoud, Explore-At\_Bristol



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“There would be a shadow”, so now she adds the day/night terminator to the mix. “What are these white bits on land?”. “Lights”, comes the reply.

That’s not the end either. When she asks if there is anything else that would add even more realism, a workshop participant might mention that the Earth has a tilt, so she shows what this looks like and discusses the effect of tilting the Earth’s axis on the seasons.

“Kids love it”, says Lucy. “Understanding the 3D aspects of the solar system is one of the most difficult things to get across at Key Stage 2 and the Magic Planet achieves this. Even creating an understanding that the Earth spins is a major advance for many students.

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The main reason she is able to cover so much ground, says Lucy, is that the Magic Planet engages the students’ attention much better than conventional methods. “They are interested to see what it does and because they are interested they are listening. This makes

it easier for them to grasp concepts that are difficult, even for adults.”

In fact using the Magic Planet has been so successful in her workshop that Lucy is keen to start using it for other topics, with climate change and volcanoes top of her list.

### **More about Explore-At-Bristol**

*Explore-At-Bristol runs formal and informal learning programmes and aims to make science accessible to all. It is one of the UK’s most exciting hands-on science centres where students can discover interactive exhibits and special exhibitions, see a Planetarium show or join the Live Science Team for fun experiments and activities.*

*Earth, Sun and Moon is a fun-packed workshop in which students discover how astronauts explore space, make their own Moon dials and sample some real space food. They also find out how the movements of the Earth relate to night/day and the seasons using the Magic Planet digital globe and 3D animations.*

**To find out more information on these workshops, or a visit to Explore, please call: 0845 345 1235 or visit the website [www.at-bristol.org.uk](http://www.at-bristol.org.uk)**

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