

### AromAtom: The Smell of Space

A student-led project created to engage the public with what are often seen as challenging or niche subjects: astronomy, geophysics and space exploration.

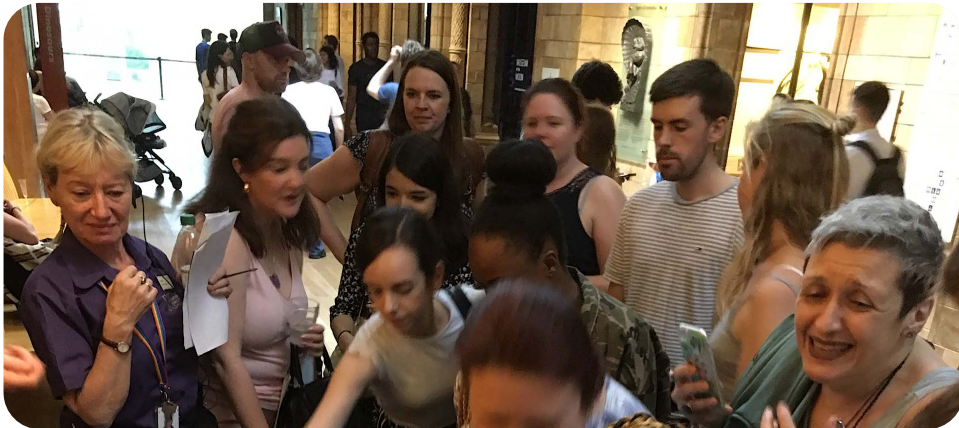


Figure 1. Excited crowds at the Natural History Museum in London.

Specially designed to reach children and audiences who do not usually engage with science, but who would be enticed by astronomy and other STEM subjects if presented in a creative and evocative manner.



The Double Cluster © Daniel Gaussen ([www.flickr.com/photos/130223747@N03/](http://www.flickr.com/photos/130223747@N03/))

Figure 2. The work of amateur astronomers and astrophotographers, such as the above image, is exhibited at events to encourage people to stargaze and even take a few pictures themselves!

*#SpaceSmellsLike*

Through collaboration with early career scientists joining as volunteers, the project also aims to promote a more creative and fun way to communicate science.

## How Does it Work?

AromAtom is an olfactory encounter with space that takes people on a guided tour, travelling from the Earth to the centre of the Milky Way.



Figure 3. Small display at the Science Museum London in 2019.

While experiencing a range of space-smells, astronomy, astrochemistry and geophysical concepts are woven into the story, helping participants to form an idea of what space might be like, and giving context to their sensory experience.

The hypothetical smells of space ignite the curiosity and imagination of children and adults. They are based on:

- The composition of planets and satellites.
- Geophysical processes that shape planetary bodies.
- Molecules detected in gas clouds.
- Accounts of Apollo and ISS astronauts.

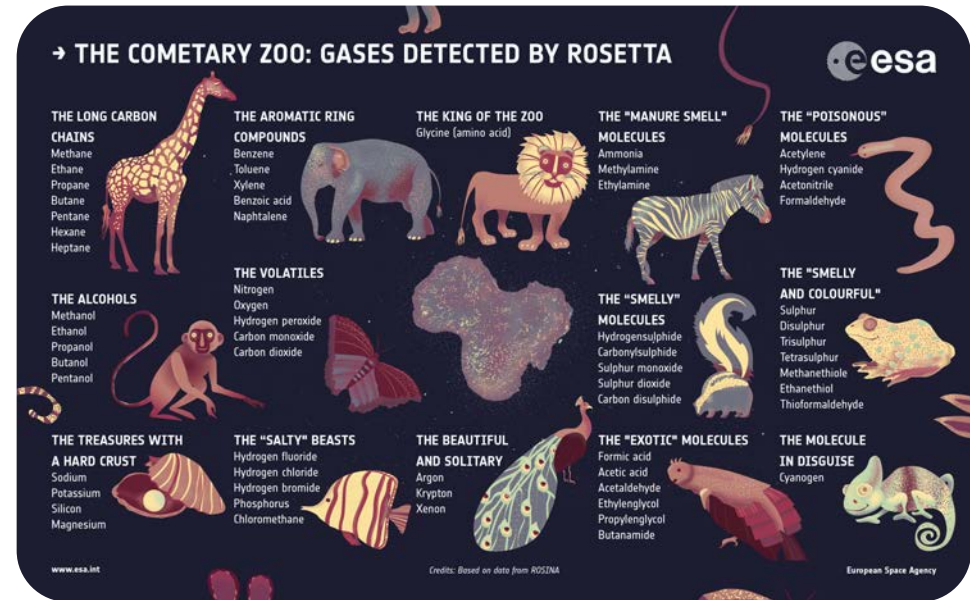


Figure 4. ESA's cometary zoo cards are used to talk about comets.



## Target Audience

*Science is not just for scientists.*

At its most basic level, the primary goal is to demystify science by presenting it as a fun and accessible experience that anyone can participate in, regardless of age, education, background or disability, always with a focus on inclusion and accessibility.

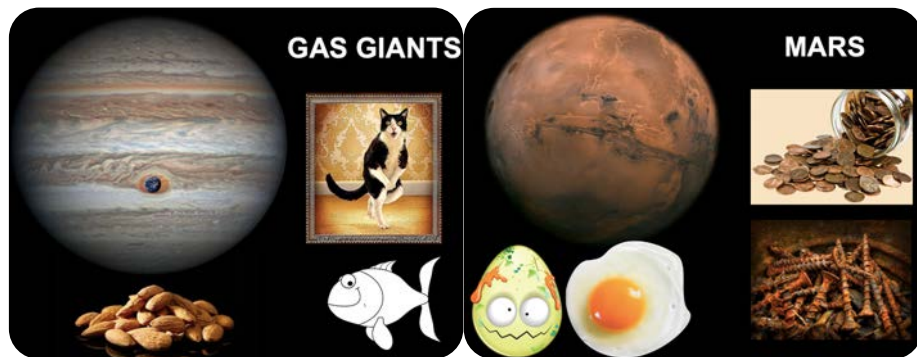


Figure 5. Classroom materials to help children relate the smell of space and the cause of such odours to everyday objects and funny anecdotes.

In the classroom, learning about space becomes a game as pupils laugh and make faces at each other in response to the strange smells of space.

Moondust... *"it smells like spent gunpowder"*

Astronaut Gene Cernan

## Reach since 2017

- School and youth groups outreach.
- Events for adults and children in English and Spanish.
- Podcasts in English and Spanish.
- Collaboration with LPI at 50<sup>th</sup> LPSC.
- Bluedot and Midlothian Science Festivals.
- Collaboration with New Scientist Magazine.
- Festival of Differences at University of Westminster.
- Summer of Space Festival and SENSory Astronights at Science Museum London.
- Space themed Lates at NHM London.
- Design of Mars-related activities for UK Association for Science and Discovery Centres and Destination Space.

## Evaluation

When participants are asked about their experience, the answers are that they:

- Learnt something new about the solar system and about space exploration missions.
- Enjoyed it and would recommend it.
- Felt included and engaged.
- Left with a new or renewed interest in space.



The Pillars of Creation © Daniel Gausson ([www.flickr.com/photos/130223747@N03/](http://www.flickr.com/photos/130223747@N03/))

Figure 7. The Pillars of creation, one of the favourite images used to discuss astrochemistry and the possibilities of astrophotography.

In the future, I hope to organise more events for adults and children with sensory and learning disabilities and continue providing educational activities in schools, museums and family friendly festivals. I will also continue to engage with the creative sector to help bridging the gap between art and science.

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Figure 6. Examples of materials used at the Science Museum London (left) and Bluedot Festival at Jodrell Bank Observatory (right), and stickers for children completing the activities.