



STEM celebrations!

Rosemary Russell, Ursuline Academy



for farmers who would otherwise struggle to grow crops. Over the past ten months the students have been testing and doing experiments with different types of food seeds under their prototype greenhouse. The use of solar glass also presents a unique alternative to electricity that these people might otherwise not be able to access.

material makes the best insulation. As part of their experiment they have been using the husk from coconuts to mix and test as an insulator and to see how it binds with clay for construction. With climate change a hot topic they have been working closely with the company Mike Wye & Associates, they provided the girls with natural insulation for use in their experiments and have helped with sponsorship to fund their project.

The second group called 'Sus-tain-ables' is an investigation project focused on understanding the insulation properties of mud as a building material. With the aim of developing materials to use in the construction of housing in Bangladesh, using recycled materials and natural resources.

At the regional Big Bang Fair held last year at Westminster Kingsway College in London the teams from the Ursuline Academy were named as two of the ten finalists through to the finals of the prestigious Big Bang Fair where the teams went on to win two awards:

- The Shell Prize for Sustainability**
Ella Nicholson, Amanjit, Somal, Aine Duffy, Amani Uddin, Floriane Fidegnor- Edoh, Sorcha Grant, Ursuline Academy Ilford
- Science Angels: Agriihouse revolutionising third world agriculture**

- The UKFT Textile Edge Prize**
Klara Prela, Swetha Thayalasamy, Fionnuala Greensmith, Celine Ababio, Kelly Bocarro, Shannon Taylor, Ursuline Academy Ilford
- Sus-tain-ables: What makes the best insulation and mud as a building material?**



Watch the students in action on their CREST journey to the Big Bang Fair: <https://www.youtube.com/watch?v=y0uZZTqLfEE>



At Ursuline Academy we currently have a design and technology STEM club that is run by myself and Tina Darsey. It is through this STEM club that one of the design and technology teachers in the school first became aware of Practical Actions' Global CREST Challenges (practicalaction.org/crest) following a meeting with Liz Anderson, our CREST co-ordinator. CREST is a scheme run by the British Science Association (a Make the Link associate) where students work on projects they are interested in and can gain awards as a result.

departments could work on together and the CREST global challenges fitted that perfectly.' We then worked with two groups of students on projects looking at shelter and agriculture in Africa, using Practical Action's material to guide them.

Laura Filipe, Ursuline's Key Stage 3 Science co-ordinator said 'We wanted a project that the design and technology and science

The first group called themselves 'Science Angels' and their project named 'Agriihouse', has been developed in partnership with the company Polysolar Ltd which incorporated Polysolar's revolutionary transparent photovoltaic glazing. The Science Angels greenhouse has been designed with the third world agricultural farmer in mind. With a blend of new and reinvented features, they aim to make this greenhouse accessible and usable

