

Biomolecular Pick'n'mix email report

Whilst we do not have a formal report on our outreach activity from March I can provide you with the following summary.

Firstly, we ultimately changed the name of the activity to "3D Jigsaws - how do biomolecules fit together". The content however remained similar to that outlined in our application. The activity ran on Saturday 13th March as part of Cambridge Science Week. During the four hours in which the Department's doors were open we had 576 visitors, a record for the Department. The general response of visitors as they went around our activities was highly positive and we received plenty of positive feedback. In fact the feedback questions we had after each activity showed that between 85 and 95% of people both learnt from and enjoyed the activity.

The activities we ran followed a general theme of understanding what proteins are made from, what shapes they have and what they can do. To demonstrate these processes we ran a series of activities. These included:

- **Model building of amino acids (run in partnership with Hills Road Sixth Form).** A very popular activity in which participants got to build models of amino acids and learn about the different atoms involved and the varying properties of the amino acids.
- **Making and weighing proteins.** Using the models they'd made participants were introduced to the different weights of amino acids, the way that they are joined together and how we can use the information about protein weight to identify different proteins
- **Photoshoot.** Children could have their photo taken with there amino acid model and a cut-out of the Departmental Nobel Laureate Fred Sanger, famous for his work on the sequence of insulin. These were printed out and could be taken away.
- **Does this contain protein?** A selection of everyday foods and common lab solutions were available to test for protien content. A useful way to highlight what foods are protein rich.
- **Where is this protein and what does it do?** A selection of pictures and information cards about various proteins in the body were provided along with a full-size skeleton. Participants had to place these cards where they thought that protein would be found.
- Microscopes were set up to look at histopathological slides of cells and tissues from the body to highlight the functional role of proteins.

- **How do we work with proteins?** Hands on activities to highlight the principles of chromatography (using sweets and pens) and other protein purification using magnetic fish. Done in partnership with GEHealthcare.

- **What do proteins look like?** 20 custom made jigsaws of different protein structures along with information sheets, models of insulin, haemoglobin and poliovirus, colouring in sheets, computer graphics and poster displays to inform and educate about the different shapes and functions of proteins.

Overall the activities were a great success and we clearly engaged successfully with our target audience 8-15yr olds (and their families). Some people even came back later in the day for another go with things. Part of this success is obviously down to those volunteers who helped out in advance and on the day. In addition the continuity of activities and messages meant that there was clear reinforcement of learning. We have retained the material used where possible and hope in the future to actually take these out to local schools.

Many thanks to the Biochemical Society for helping fund this event and please don't hesitate to ask for any more information.

Best wishes
Tom