**Example experiments**

As part of ANSTO’s Year 11 Chemistry tour, volunteer students will perform two investigations with help from the Education Officer. We will be investigating:

* **How radioactive are different household objects?**

Use a scintillation counter to measure and record the radioactivity of various objects such as uranium glass, potash fertiliser, a radium watch, thorium gas mantle and a fiestaware plate.

The purpose of this investigation is to select an appropriate material to be used for one of the investigations outlined below.

Teachers and their students also select one experiment from the following list:

* **How does radioactivity change with distance from the source?**

Use a scintillation counter and a source chosen from the radioactive household objects to measure the amount of radiation at different distances from the source measured using a ruler. Students can make predictions about how radioactivity changes with distance, and can plot this on a graph.

* **How does the thickness of a shielding material affect radiation penetration?**

Use a scintillation counter and a source chosen from the radioactive household objects to measure the radioactivity of the source through different thicknesses of a particular shielding material, either paper, aluminium or lead.

* **How do different types of shielding material affect radiation penetration?**

Use a scintillation counter and a source chosen from the radioactive household objects to measure the radioactivity of the source through different types of shielding material, including paper, aluminium, lead and water.