This activity accompanies the article *Pollution in your home*: rsc.li/2OZbzX4

There are four stages in TOF-MS:
- ionisation (either electron impact or electrospray);
- acceleration;
- flight tube;
- detection.

Students sort the information about each of the four stages by arranging the triominoes.

Photocopy sets of triominoes and cut them up. Give small groups of students the central black triangles and the outer triangles separately, and ask them to match three outer triangles to each of the relevant central triangles.
The positive ions are accelerated using an electric field.

Lighter ions have a shorter time of flight.

Positive ions are accelerated using an electric field.

$X^+(g) + e^- \rightarrow X(g)$

$\rho = \frac{2KE}{m}$