

Answers to module 2

Learning assessment 1

1. The four components of the 'Fire Tetrahedron' are: [heat](#), [fuel](#), [oxygen](#) and [chain reaction](#).
2. The Five Steps to Fire Risk Assessment are:
 1. Identify Fire [Hazards](#)
 2. Identify [People](#) at Risk
 3. Assess the Risk and Develop [Control Measures](#).
 4. Record, Plan, Inform, [Instruct](#) and [Train](#).
 5. [Review](#).
3. Flammable is specific to substances that can be ignited at [55°C](#) or below.
4. Highly flammable is the assigned descriptor for materials that can be ignited below [21°C](#).
5. [Extremely Flammable](#) liquids and gases have with a Flash Point lower than 0°C and a boiling point of 35°C or less.
6. [Flash Point](#) is the minimum temperature at which sufficient vapour is being produced above a liquid for a fire to be ignited, but not sustained.

Answers to module 3

Learning assessment 2

1. Air is the only source of oxygen to consider when assessing fire safety in the chemical laboratory.
False: Some examples of other oxygen sources are oxidising materials, cylinders of oxygen and even liquid oxygen.
2. Mixtures of flammable vapours will only burn if the fuel concentration lies within certain limits.
True: Combustible gases and vapours will only ignite within the defined range of the Lower Explosive Limit (LEL) and the Upper Explosive Limit (UEL).
3. There are some risks that may be considered acceptable during normal working hours that may not be acceptable during lone working.
True: Risks that may be considered acceptable during the working day may need to be restricted when people are working alone possibly because help is not immediately 'at hand'.
4. Class E fires are electrical fires.
False: There is no definition of a Class E in the British Standard. However, "Class E" is often misused to describe fires, hazards and cover concerning electrical hazards. As electricity does not burn, fires involving electrical hazards are in fact always fires of another class with the additional complication of the presence of an electrical hazard.
5. Fire extinguishers are different colours according to their type of extinguishers.
False: Fire extinguishers are now all red, although they do have colour coding on the labels. Foam: cream; dry powder: blue; carbon dioxide: black. Water extinguishers are all red.

