

Chemistry 1 a Week Activity		Higher	15 th Week
Name:		Class:	

The symbols for two isotopes of iron are shown below.

$^{54}_{26}\text{Fe}$

$^{57}_{26}\text{Fe}$

i. How do these two isotopes differ in their atomic structure?

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ii. Determine the number of neutrons present in one atom of the isotope $^{57}_{26}\text{Fe}$

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iii. Determine the number of electrons in one Fe^{3+} ion.

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Complete the word equation for the reaction of bromine with aqueous potassium iodide.

bromine + potassium iodide $\rightarrow$

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Describe the structure of diamond.

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Complete the dot and cross diagram for the ammonia molecule shown below.

Show only the electrons in the outer shell of each atom.

Hydrogen-oxygen fuel cells, not chemical cells, can be used to power some vehicles.

i. Give **one** advantage of using a hydrogen-oxygen fuel cell, rather than using a chemical cell, to power a vehicle.

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ii. Complete the half-equation for the reaction taking place at one of the electrodes in a hydrogen-oxygen fuel cell.

$\text{O}_2 + \dots\dots\dots\text{H}^+ + \dots\dots\dots \rightarrow \dots\dots\dots \text{H}_2\text{O}$