# 6. Extraction and uses of metals

### 2.2

Metals are extracted from ores found in Earth's crust and that unreactive metals are often found as uncombined element

#### 2.3

Method of extraction of metal is related to its position in the reactivity series

- combustion with carbon for metals lower reactivity than carbon
- electrolysis for higher metals than carbon

### 2.4

Comment on metal extraction process, given appropriate information detailed knowledge of the processes used in the extraction of a specific metal is not required

### 2.5

#### **Uses**

High Carbon Steel	Iron + More than 0.5% of Carbon	<ul><li>Very Strong</li><li>Brittle</li><li>Hard to Shape</li></ul>	- Tools - Knife/Knives - Swords
Low Carbon Steel	Iron + Less than 0.25% of Carbon	<ul><li>Strong</li><li>Malleable, Easy to work with and shape</li></ul>	<ul><li>Car Bodies</li><li>Buildings</li><li>Bridges</li></ul>
Stainless Steel	Iron, Chromium, Nickel, Carbon	- Shiny Appearance - Does <u>not</u> corrode	- Cutlery and pans - Medical Instruments

## 2.26

• Alloy - mixture of a metal and one or more elements, usually other metals or carbon

Alloys are harder than pure metals because latices are distorted