

## Chapter 8: Occurrence and Extraction of Metals

---

All the following "answers" are for your reference only!

The "best" answers are based on your actual experimental results!

---

### Experiment 8.1 : Heating the metal oxides

---

3. (a) It relights.  
(b) Oxygen.
  4. A black powder.
  5.  $2\text{Ag}_2\text{O}(\text{s}) \longrightarrow 4\text{Ag}(\text{s}) + \text{O}_2(\text{g})$
  6. (a) No.  
(b) No.
  7. Yes. Since both zinc and copper are above silver in the Reactivity Series and their oxides do not decompose.  
Mercury is below silver, so its oxide should decompose.
- 

### Experiment 8.2 : Reduction of metal oxides by carbon (reducing agent)

---

4. Yes.
  5.  $2\text{PbO}(\text{s}) + \text{C}(\text{s}) \longrightarrow 2\text{Pb}(\text{s}) + \text{CO}_2(\text{g})$
  6. Carbon  
Lead(II) oxide  
Carbon  
Lead(II) oxide
  8. Yes (Colour change: hot - yellow; cold - white)  
Yes (Colour change: hot - orange; cold - yellow; to silvery)  
Yes (Colour change: black to brown)
-