

## Science 1.8 AS 90947 Investigate selected chemical reactions

### Thermal Decomposition Reactions – Writing Word and Symbol Equations

**Success Criteria: complete each level before moving onto the next**

- Basic: write **word equations** for the following thermal decomposition reactions
- Proficient: write **symbol equations** for the following thermal decomposition reactions
- Advanced: **balance the symbol equations** for the following thermal decomposition reactions

Remember: **metal carbonate** → **metal oxide** + **carbon dioxide gas**

**metal hydrogen carbonate** → **metal carbonate** + **carbon dioxide gas** + **water**

1. calcium carbonate powder is heated. Calcium carbonate is found in limestone rock and mollusc shells.

Word equation \_\_\_\_\_

Symbol equation \_\_\_\_\_

2. sodium hydrogen carbonate powder is heated.

Word equation \_\_\_\_\_

Symbol equation \_\_\_\_\_

3. copper carbonate powder is heated.

Word equation \_\_\_\_\_

Symbol equation \_\_\_\_\_

4. magnesium hydrogen carbonate powder is heated.

Word equation \_\_\_\_\_

Symbol equation \_\_\_\_\_

5. iron (II) carbonate powder is heated. Iron carbonate is an important iron ore.

Word equation \_\_\_\_\_

Symbol equation \_\_\_\_\_

6. potassium carbonate powder is heated. Potassium carbonate is used in the production of glass.

Word equation \_\_\_\_\_

Symbol equation \_\_\_\_\_