

# Properties and changes

+ Eg.

Iron reacts with oxygen,  
forms Iron (II,III) oxide  
when strongly heated

— describes substances  
changing into/ reacting  
w/ other substances

Chemical  
properties

Chemical  
change

—  $\geq 1$  new substance  
are produced

— eg.  $\text{Fe} \rightarrow \text{FeCl}_2$  when  
reacting w/  $\text{HCl}$

1. appearance (colour + state)

2. smell (odour [less]?)

3. density  $>$  or  $<$  than

4. melting / boiling point

5. hardness / strength

6. solubility in ...

7. conductivity (electrical / thermal)

8. malleability & ductility  
(rolled  $\rightarrow$  sheets) (pulled  $\rightarrow$  wires)

— determined w/o  
having to change  
to new substances

Physical  
properties

Physical  
change

— no new substance  
are produced

