Increasing Activity

Single Displacement Reactions

Activity Series of Metals

Element	Reactivity
Li Rb	React with cold H ₂ O and acids,
K	replacing hydrogen.
Ва	
Ca	
Na	
Mg	React with acids or steam, but not usually liquid water, to replace
Al	
Mn	hydrogen.
Zn	
Cr	
Fe	
Ni	React with acids, but not water, to replace hydrogen.
Sn	
Pb	roptaee ny ar og em
H_2	
Cu	React with oxygen to form oxides.
Hg	
Ag	
Pt	Mostly unreactive.
Au	

Halogens	Reactivity
$\begin{array}{c} F_2 \\ Cl_2 \\ Br_2 \\ I_2 \end{array}$	Listed from most reactive to least reactive.

Types of DECOMPOSITION Reactions

Carbonates (CO₃⁻²)
$$\rightarrow$$
 Metal Oxide + CO₂
Ex. $Na_2CO_3 \rightarrow Na_2O + CO_2$

Hydroxides (OH⁻¹)
$$\rightarrow$$
 Metal Oxide + H₂O
Ex. $2 NaOH \rightarrow Na_2O + H_2O$

Chlorates (CIO₃⁻¹)
$$\rightarrow$$
 Metal Chloride + O₂
Ex. $2 NaClO_3 \rightarrow 2 NaCl + 3 O_2$

Acids (H⁺)
$$\rightarrow$$
 Non-Metal Oxide + H₂O
Ex. $H_2SO_4 \rightarrow SO_3 + H_2O$
 $H_2SO_3 \rightarrow SO_2 + H_2O$
 $H_2CO_3 \rightarrow CO_3 + H_2O$

Oxides (O⁻²)
$$\rightarrow$$
 Elements
Ex. $2 Na_2O \rightarrow 4 Na + O_2$

*NOTE Energy for decomposition may be supplied by HEAT (Δ), light, mechanical shock, or electricity.