

0	1
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A more reactive metal can displace a less reactive metal from a compound.

A student placed a piece of copper wire into a solution of iron sulfate.

0	1	.	1
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What, if anything, would be observed, and why?

[2 marks]

.....

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0	1	.	2
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A student placed a strip of magnesium into a solution of zinc chloride.

What, if anything, would be observed, and why?

[2 marks]

.....

.....

0	2
0	2

Zinc displaces the iron from iron nitrate solution.

Complete the word equation below:

[1 mark]

zinc + iron (II) nitrate \rightarrow +

0	2	.	2
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Write the balanced symbol equation for this reaction.

[1 mark]

.....

Displacement reactions are examples of redox reactions in which a species is oxidised while another species is reduced.

0	2	.	3
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Name the species from the equation in 02.2 that is oxidised:

[1 mark]

.....

0	2	.	4
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Name the species from the equation in 02.2 that is reduced:

[1 mark]

.....

0	2	.	5
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Explain your reasoning in terms of electrons.

[2 marks]

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.....

.....

(Total 10 marks)

End

(See next page for Data Sheet)

1		2		3		4		5		6		7		0	
7	Li lithium	9	Be beryllium	11	B boron	12	C carbon	14	N nitrogen	16	O oxygen	19	F fluorine	20	Ne neon
3	Na sodium	4	Mg magnesium	5	Al aluminium	6	Si silicon	7	P phosphorous	8	S sulfur	9	Cl chlorine	10	Ar argon
19	K potassium	20	Ca calcium	21	Sc scandium	22	Ti titanium	23	V vanadium	24	Cr chromium	25	Mn manganese	26	Fe iron
85	Rb rubidium	88	Sr strontium	89	Y yttrium	90	Zr zirconium	91	Nb niobium	92	Mo molybdenum	93	Tc technetium	94	Ru ruthenium
37	Rb rubidium	38	Sr strontium	39	Y yttrium	40	Zr zirconium	41	Nb niobium	42	Mo molybdenum	43	Tc technetium	44	Ru ruthenium
133	Cs caesium	137	Ba barium	139	La lanthanum	178	Hf hafnium	181	Ta tantalum	184	W tungsten	186	Re rhenium	190	Os osmium
55	Fr francium	56	Ra radium	57	Ac actinium	72	Rf rutherfordium	73	Db dubium	74	Sg seaborgium	75	Bh bohrium	76	Hs hasseium
[223]	Fr francium	[226]	Ra radium	[227]	Ac actinium	[261]	Rf rutherfordium	[262]	Db dubium	[266]	Sg seaborgium	[264]	Bh bohrium	[277]	Hs hasseium
204	Tl thallium	201	Hg mercury	202	Pb lead	208	Po polonium	209	Bi bismuth	210	Po polonium	210	At astatine	210	Rn radon
81	Tl thallium	80	Hg mercury	82	Pb lead	83	Bi bismuth	84	Po polonium	85	At astatine	86	Rn radon	86	Rn radon
31	Ga gallium	30	Zn zinc	31	Ga gallium	32	Ge germanium	33	As arsenic	34	Se selenium	35	Br bromine	36	Kr krypton
115	In indium	112	Cd cadmium	113	Sb antimony	114	Sn tin	115	Sb antimony	116	Te tellurium	117	I iodine	118	Xe xenon
49	In indium	48	Cd cadmium	49	Hg mercury	50	Tl thallium	51	Pb lead	52	Po polonium	53	At astatine	54	Rn radon
108	Au gold	107	Hg mercury	108	Tl thallium	109	Pb lead	110	Bi bismuth	111	Po polonium	112	At astatine	113	Rn radon
63.5	Cu copper	63.5	Zn zinc	64	Ga gallium	65	Ge germanium	66	As arsenic	67	Se selenium	68	Br bromine	69	Kr krypton
59	Ni nickel	59	Co cobalt	59	Ni nickel	59	Co cobalt	59	Ni nickel	59	Co cobalt	59	Ni nickel	59	Co cobalt
106	Pd palladium	106	Rh rhodium	106	Pd palladium	106	Rh rhodium	106	Pd palladium	106	Rh rhodium	106	Pd palladium	106	Rh rhodium
195	Pt platinum	195	Ir iridium	195	Pt platinum	195	Ir iridium	195	Pt platinum	195	Ir iridium	195	Pt platinum	195	Pt platinum
[271]	Ds darmstadtium	[271]	Mt meitnerium	[271]	Ds darmstadtium	[271]	Mt meitnerium	[271]	Ds darmstadtium	[271]	Mt meitnerium	[271]	Ds darmstadtium	[271]	Ds darmstadtium
111	Rg roentgenium	111	Rg roentgenium	111	Rg roentgenium	111	Rg roentgenium	111	Rg roentgenium	111	Rg roentgenium	111	Rg roentgenium	111	Rg roentgenium

1	H hydrogen
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KEY	
1	relative atomic mass
H	atomic symbol
hydrogen	name
1	atomic number