

## The Periodic Table for KS3 - Worksheet

### Activities

Have a look at this Interactive Periodic Table from the Royal Society of Chemistry. You can find out about each element. <https://www.rsc.org/periodic-table/video>

How about trying some Element Su Doku <https://www.stem.org.uk/rx335z>

### Questions

1. On the copy of the periodic table (next page) label the following:
  - a. metals and non metals
  - b. groups (with numbers)
  - c. periods (with numbers)
  - d. transition elements
2. How are elements in the periodic table ordered?
3. Find two examples where the mass number does not increase.
4. Name three properties of a metal?
5. Name three properties of a non-metal?
6. What is the name of the Russian Chemist who is credited with discovering the modern periodic table?
7. How did he order the elements?
8. Why did he leave gaps?
9. Reactivity decreases going down group 7. Would the reactivity of bromine be higher or lower than the reactivity of chlorine?
10. Melting point increases down group 2. Would the melting point of Calcium be higher or lower than the melting point of strontium.



The Periodic Table  
for KS3 Science

1	H	hydrogen	1.0079	beryllium	2	He	helium	4.0026
3	Li	beryllium	6.941	4	Be	boron	10	Ne
11	Mg	magnesium	24.305	12	Ca	carbon	6	F
19	K	calcium	39.098	20	Ti	nitrogen	7	O
37	Rb	strontium	85.468	39	V	oxygen	8	Fluorine
55	Cs	barium	132.91	40	Cr	nitrogen	9	Neon
87	Fr	cesium	132.91	41	Mn	oxygen	10	Argon
89-102	Ra	rutherfordium	223	42	Nb	nitrogen	11	Neon
103	Lr	livermorium	223	43	Tc	oxygen	12	Argon
172	*	*	172	44	Ru	oxygen	13	Argon
173	Lu	lutetium	173	45	Rh	oxygen	14	Argon
174	Hf	hafnium	174	46	Pd	oxygen	15	Argon
175	Ta	tantalum	175	47	Ag	oxygen	16	Argon
176	W	tungsten	176	48	Cd	oxygen	17	Argon
177	Re	rhenium	177	49	In	oxygen	18	Argon
178	Os	osmium	178	50	Sn	oxygen	19	Argon
179	Ir	iridium	179	51	Sb	oxygen	20	Argon
180	Bh	bismuth	180	52	Te	oxygen	21	Argon
181	Db	dubnium	181	53	I	oxygen	22	Argon
182	Rf	rutherfordium	182	54	Xe	oxygen	23	Argon
183	Lr	livermorium	183	55	Xe	oxygen	24	Argon
184	*	*	184	56	Po	oxygen	25	Argon
185	Uuu	ununtrium	185	57	At	oxygen	26	Argon
186	Uub	ununhexium	186	58	Rn	oxygen	27	Argon
187	Uq	ununseptium	187	59	Uq	oxygen	28	Argon
188	Uqq	ununoctium	188	60	Uqq	oxygen	29	Argon
189	Uqqq	ununnonium	189	61	Uqqq	oxygen	30	Argon
190	Uqqq	unundecium	190	62	Uqqq	oxygen	31	Argon
191	Uqqqq	unundecium	191	63	Uqqqq	oxygen	32	Argon
192	Uqqqq	unundecium	192	64	Uqqqq	oxygen	33	Argon
193	Uqqqq	unundecium	193	65	Uqqqq	oxygen	34	Argon
194	Uqqqq	unundecium	194	66	Uqqqq	oxygen	35	Argon
195	Uqqqq	unundecium	195	67	Uqqqq	oxygen	36	Argon
196	Uqqqq	unundecium	196	68	Uqqqq	oxygen	37	Argon
197	Uqqqq	unundecium	197	69	Uqqqq	oxygen	38	Argon
198	Uqqqq	unundecium	198	70	Yb	oxygen	39	Argon
199	Uqqqq	unundecium	199	71	Er	oxygen	40	Argon
200	Uqqqq	unundecium	200	72	Tm	oxygen	41	Argon
201	Uqqqq	unundecium	201	73	Hf	oxygen	42	Argon
202	Uqqqq	unundecium	202	74	Eu	oxygen	43	Argon
203	Uqqqq	unundecium	203	75	Gd	oxygen	44	Argon
204	Uqqqq	unundecium	204	76	Tb	oxygen	45	Argon
205	Uqqqq	unundecium	205	77	Dy	oxygen	46	Argon
206	Uqqqq	unundecium	206	78	Ho	oxygen	47	Argon
207	Uqqqq	unundecium	207	79	Er	oxygen	48	Argon
208	Uqqqq	unundecium	208	80	Tm	oxygen	49	Argon
209	Uqqqq	unundecium	209	81	Yb	oxygen	50	Argon
210	Uqqqq	unundecium	210	82	Er	oxygen	51	Argon
211	Uqqqq	unundecium	211	83	Tm	oxygen	52	Argon
212	Uqqqq	unundecium	212	84	Yb	oxygen	53	Argon
213	Uqqqq	unundecium	213	85	Er	oxygen	54	Argon
214	Uqqqq	unundecium	214	86	Tm	oxygen	55	Argon
215	Uqqqq	unundecium	215	87	Yb	oxygen	56	Argon
216	Uqqqq	unundecium	216	88	Er	oxygen	57	Argon
217	Uqqqq	unundecium	217	89	Tm	oxygen	58	Argon
218	Uqqqq	unundecium	218	90	Yb	oxygen	59	Argon
219	Uqqqq	unundecium	219	91	Er	oxygen	60	Argon
220	Uqqqq	unundecium	220	92	Tm	oxygen	61	Argon
221	Uqqqq	unundecium	221	93	Yb	oxygen	62	Argon
222	Uqqqq	unundecium	222	94	Er	oxygen	63	Argon
223	Uqqqq	unundecium	223	95	Tm	oxygen	64	Argon
224	Uqqqq	unundecium	224	96	Yb	oxygen	65	Argon
225	Uqqqq	unundecium	225	97	Er	oxygen	66	Argon
226	Uqqqq	unundecium	226	98	Tm	oxygen	67	Argon
227	Uqqqq	unundecium	227	99	Yb	oxygen	68	Argon
228	Uqqqq	unundecium	228	100	Er	oxygen	69	Argon
229	Uqqqq	unundecium	229	101	Tm	oxygen	70	Argon
230	Uqqqq	unundecium	230	102	Yb	oxygen	71	Argon
231	Uqqqq	unundecium	231	103	Er	oxygen	72	Argon
232	Uqqqq	unundecium	232	104	Tm	oxygen	73	Argon
233	Uqqqq	unundecium	233	105	Yb	oxygen	74	Argon
234	Uqqqq	unundecium	234	106	Er	oxygen	75	Argon
235	Uqqqq	unundecium	235	107	Tm	oxygen	76	Argon
236	Uqqqq	unundecium	236	108	Yb	oxygen	77	Argon
237	Uqqqq	unundecium	237	109	Er	oxygen	78	Argon
238	Uqqqq	unundecium	238	110	Tm	oxygen	79	Argon
239	Uqqqq	unundecium	239	111	Yb	oxygen	80	Argon
240	Uqqqq	unundecium	240	112	Er	oxygen	81	Argon
241	Uqqqq	unundecium	241	113	Tm	oxygen	82	Argon
242	Uqqqq	unundecium	242	114	Yb	oxygen	83	Argon
243	Uqqqq	unundecium	243	115	Er	oxygen	84	Argon
244	Uqqqq	unundecium	244	116	Tm	oxygen	85	Argon
245	Uqqqq	unundecium	245	117	Yb	oxygen	86	Argon
246	Uqqqq	unundecium	246	118	Er	oxygen	87	Argon
247	Uqqqq	unundecium	247	119	Tm	oxygen	88	Argon
248	Uqqqq	unundecium	248	120	Yb	oxygen	89	Argon
249	Uqqqq	unundecium	249	121	Er	oxygen	90	Argon
250	Uqqqq	unundecium	250	122	Tm	oxygen	91	Argon
251	Uqqqq	unundecium	251	123	Yb	oxygen	92	Argon
252	Uqqqq	unundecium	252	124	Er	oxygen	93	Argon
253	Uqqqq	unundecium	253	125	Tm	oxygen	94	Argon
254	Uqqqq	unundecium	254	126	Yb	oxygen	95	Argon
255	Uqqqq	unundecium	255	127	Er	oxygen	96	Argon
256	Uqqqq	unundecium	256	128	Tm	oxygen	97	Argon
257	Uqqqq	unundecium	257	129	Yb	oxygen	98	Argon
258	Uqqqq	unundecium	258	130	Er	oxygen	99	Argon
259	Uqqqq	unundecium	259	131	Tm	oxygen	100	Argon
260	Uqqqq	unundecium	260	132	Yb	oxygen	101	Argon
261	Uqqqq	unundecium	261	133	Er	oxygen	102	Argon
262	Uqqqq	unundecium	262	134	Tm	oxygen	103	Argon
263	Uqqqq	unundecium	263	135	Yb	oxygen	104	Argon
264	Uqqqq	unundecium	264	136	Er	oxygen	105	Argon
265	Uqqqq	unundecium	265	137	Tm	oxygen	106	Argon
266	Uqqqq	unundecium	266	138	Yb	oxygen	107	Argon
267	Uqqqq	unundecium	267	139	Er	oxygen	108	Argon
268	Uqqqq	unundecium	268	140	Tm	oxygen	109	Argon
269	Uqqqq	unundecium	269	141	Yb	oxygen	110	Argon
270	Uqqqq	unundecium	270	142	Er	oxygen	111	Argon
271	Uqqqq	unundecium	271	143	Tm	oxygen	112	Argon
272	Uqqqq	unundecium	272	144	Yb	oxygen	113	Argon
273	Uqqqq	unundecium	273	145	Er	oxygen	114	Argon
274	Uqqqq	unundecium	274	146	Tm	oxygen	115	Argon
275	Uqqqq	unundecium	275	147	Yb	oxygen	116	Argon
276	Uqqqq	unundecium	276	148	Er	oxygen	117	Argon
277	Uqqqq	unundecium	277	149	Tm	oxygen	118	Argon
278	Uqqqq	unundecium	278	150	Yb	oxygen	119	Argon
279	Uqqqq	unundecium	279	151	Er	oxygen	120	Argon
280	Uqqqq	unundecium	280	152	Tm	oxygen	121	Argon
281	Uqqqq	unundecium	281	153	Yb	oxygen	122	Argon
282	Uqqqq	unundecium	282	154	Er	oxygen	123	Argon
283	Uqqqq	unundecium	283	155	Tm	oxygen	124	Argon
284	Uqqqq	unundecium	284	156	Yb	oxygen	125	Argon
285	Uqqqq	unundecium	285	157	Er	oxygen	126	Argon
286	Uqqqq	unundecium	286	158	Tm	oxygen	127	Argon
287	Uqqqq	unundecium	287	159	Yb	oxygen	128	Argon
288	Uqqqq	unundecium	288	160	Er	oxygen	129	Argon
289	Uqqqq	unundecium	289	161	Tm	oxygen	130	Argon
290	Uqqqq	unundecium	290	162	Yb	oxygen	131	Argon
291	Uqqqq	unundecium	291	163	Er	oxygen	132	Argon
292	Uqqqq	unundecium	292	164	Tm	oxygen	133	Argon
293	Uqqqq	unundecium	293	165	Yb	oxygen	134	Argon
294	Uqqqq	unundecium	294	166	Er	oxygen	135	Argon
295	Uqqqq	unundecium	295	167	Tm	oxygen	136	Argon
296	Uqqqq	unundecium	296	168	Yb	oxygen	137	Argon
297	Uqqqq	unundecium	297	169	Er	oxygen	138	Argon
298	Uqqqq	unundecium	298	170	Tm	oxygen	139	Argon
299	Uqqqq	unundecium	299	171	Yb	oxygen	140	Argon
300	Uqqqq	unundecium	300	172	Er	oxygen	141	Argon
301	Uqqqq	unundecium	301	173	Tm	oxygen	142	Argon
302	Uqqqq	unundecium	302	174	Yb	oxygen	143	Argon
303	Uqqqq	unundecium	303	175	Er	oxygen	144	Argon
304	Uqqqq	unundecium	304	176	Tm	oxygen	145	Argon
305	Uqqqq	unundecium	305	177	Yb	oxygen	146	Argon
306	Uqqqq	unundecium	306	178	Er	oxygen	147	Argon
307	Uqqqq	unundecium	307	179	Tm	oxygen	148	Argon
308	Uqqqq	unundecium	308	180	Yb	oxygen	149	Argon
309	Uqqqq	unundecium	309	181	Er	oxygen	150	Argon
310	Uqqqq	unundecium	310	182	Tm	oxygen	151	Argon
311	Uqqqq	unundecium	311	183	Yb	oxygen	152	Argon
312	Uqqqq	unundecium	312	184	Er	oxygen	153	Argon
313	Uqqqq	unundecium	313	185	Tm	oxygen	154	Argon
314	Uqqqq	unundecium	314	186	Yb	oxygen	155	

## The Periodic Table for KS3 - Worksheet (Answers)

1. On the copy of the periodic table (next page) label the following:
  - a. metals and non metals
  - b. groups (with numbers)
  - c. periods (with numbers)
  - d. transition elements

[See video](#)

2. How are elements in the periodic table ordered?

In order of increasing atomic number

3. Find two examples where the mass number does not increase.

Ar/K Te/I

4. Name three properties of a metal?

Any of the following: Shiny / high density / high melting point / solid / conductor of heat / conductor of electricity / sonorous / malleable

Not magnetic as this is a property of only 3 metal elements

5. Name three properties of a non-metal?

not shiny / low density / insulator / weak / brittle

6. What is the name of the Russian Chemist who is credited with discovering the modern periodic table?

Dmitri Mendeleev

7. How did he order the elements?

In order of atomic mass

8. Why did he leave gaps?

He left gaps for elements he predicted had not been discovered.

9. Reactivity decreases going down group 7. Would the reactivity of bromine be higher or lower than the reactivity of chlorine?

Bromine is less reactive than Chlorine

10. Melting point increases down group 2. Would the melting point of Calcium be higher or lower than the melting point of Strontium.

Calcium has a higher melting point than Strontium