



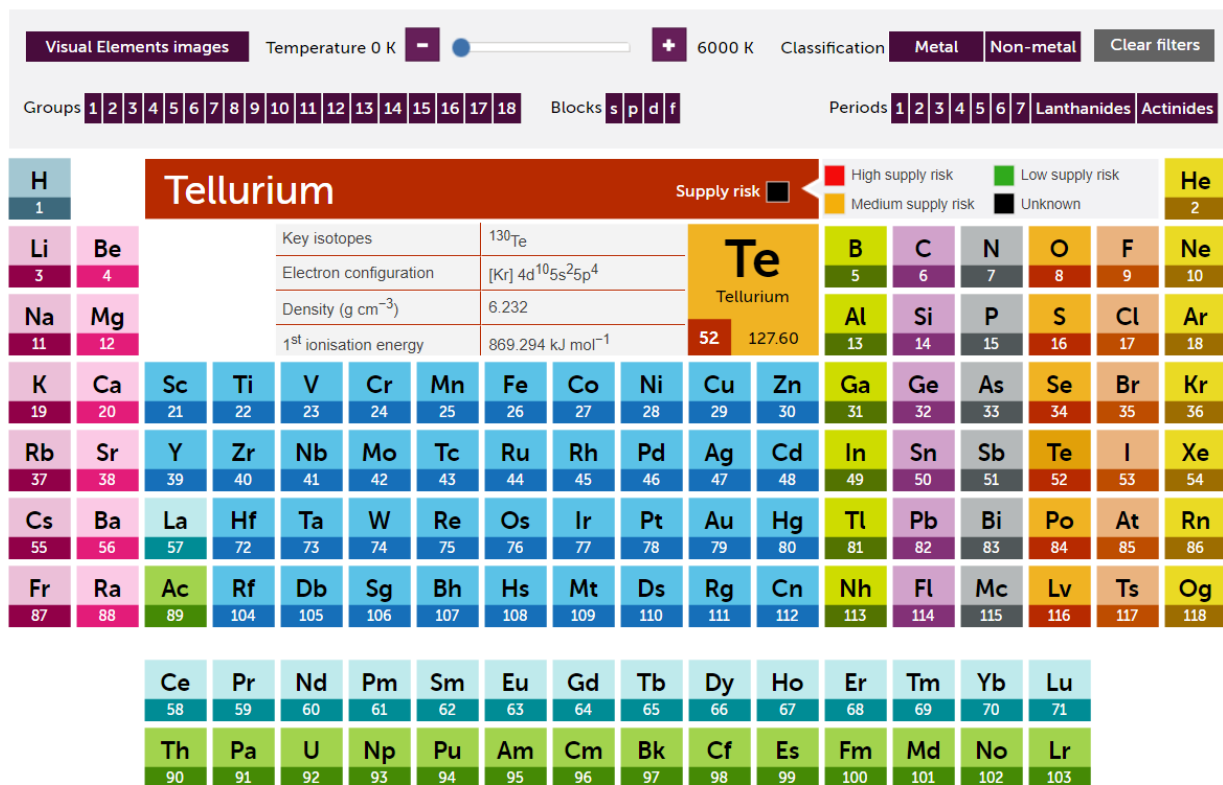
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# Introducing the periodic table

Use these lesson ideas to develop  
your students' knowledge of and  
familiarity with the periodic table

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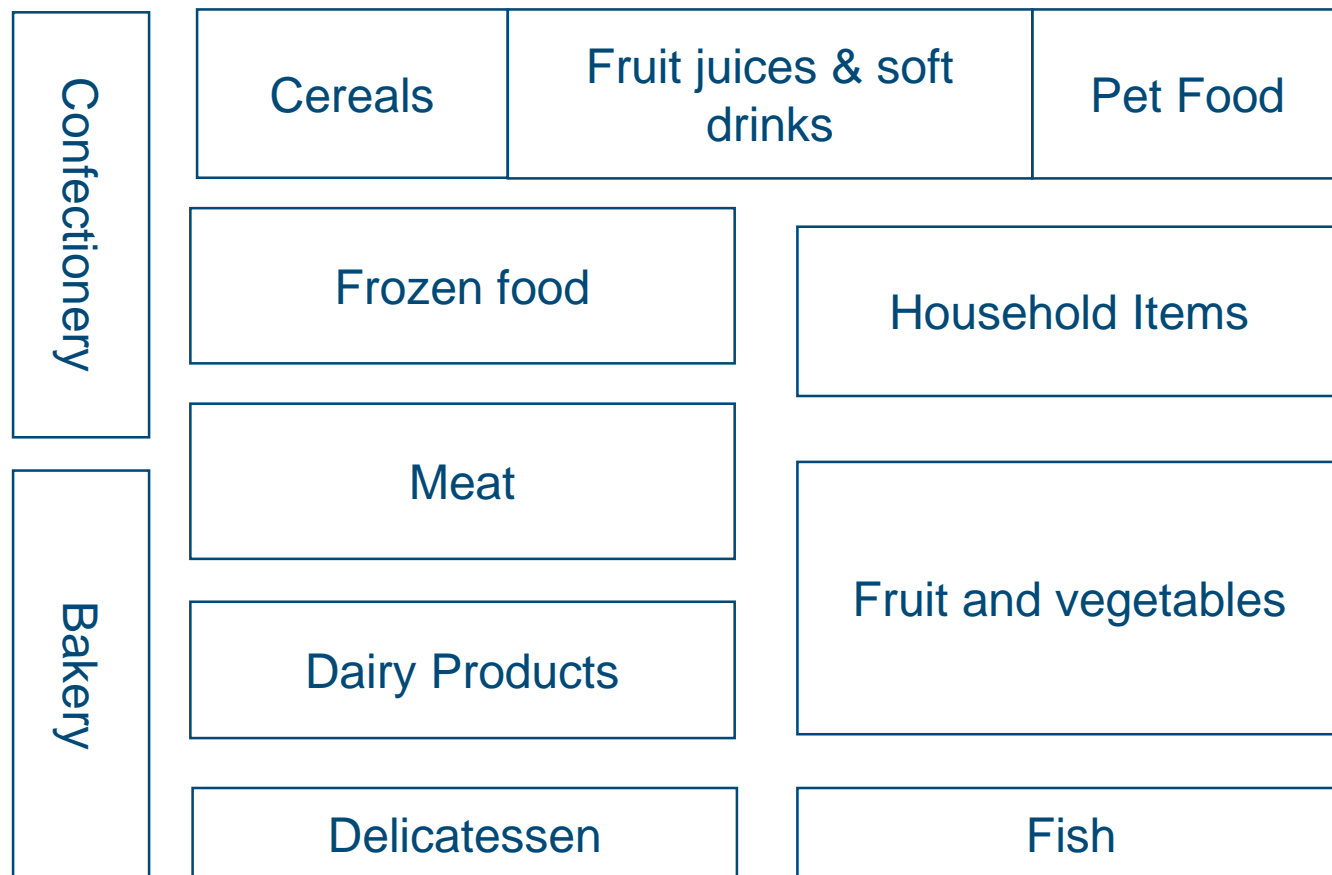
# Periodic Table



Think of the periodic table as the classification of elements, according to their different properties.



# Supermarket floor plan



# At the supermarket

Where would you find...

- a) Carrots?
- b) Scones?
- c) Chicken?
- d) Washing-up liquid?

Give a reason for your answer.



# Fill in the periodic table

1																		18
	2											13	14	15	16	17		
		3	4	5	6	7	8	9	10	11	12							



# Complete the sentences

Most metals \_\_\_\_\_

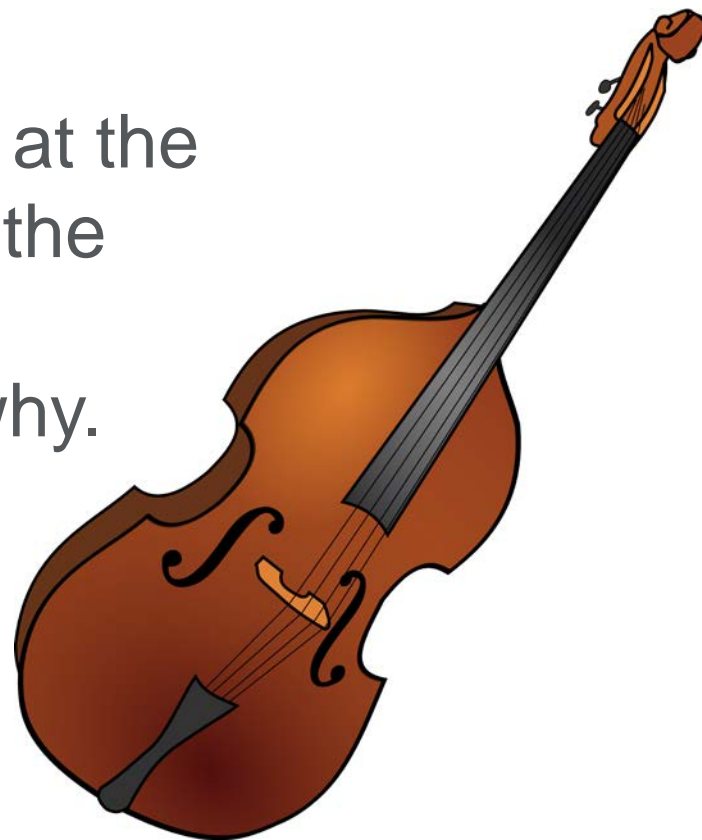
Non-metals \_\_\_\_\_

Metals are found \_\_\_\_\_ of the periodic table whereas non-metals are found \_\_\_\_\_.



# A group of strings

In an orchestra, the violins sit at the front. The double bass sits at the back. Violas and cellos sit in between. Suggest a reason why.





# A group of elements

A column of elements found in the periodic table is known as a 'group of elements'.

The elements in a group show patterns in their physical properties and show a pattern in reactivity or react in a similar way.





# A group of metals

The alkali metals are found in group 1 of the periodic table.

Complete the table as your teacher demonstrates some properties of these metals.

Metal	Symbol	Appearance	Reaction with water
Lithium			
	Na		
Potassium			

# Physical properties of the group 1 metals

Look at the table of data.

Identify:

- Patterns and trends in the data.
- Anomalous results.

Metal	Atomic number	Melting point (°C)	Density (g cm <sup>-3</sup> )
Lithium	3	180.5	0.534
Sodium	11	97.8	0.970
Potassium	19	63.5	0.89
Rhubidium	37	39.3	1.53



# Conclusion

Describe how the physical properties of the metals change as you go down group 1.

Describe how the chemical reaction with water changes as you go down group 1.



# Plenary questions

1. Why do chemists find the periodic table so useful?
2. What is a group?
3. Nitrogen is a non-metal. Where is it found in the periodic table?
4. Name an alkali metal.
5. Write down the symbol for iron.
6. Describe how the reactivity of group 1 metals changes as you go down the group.