Presenting the non-metals

Education in Chemistry
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Use this resource to support lower achievers to explore the properties of non-metals.

Properties of non-metals

Below is a list of non-metal elements. For each element, colour in the squares according to the following code:

Red = property is typical of a non-metal

Blue = property is typical of a metal

Element	Melting Point (°C)	Appearance	Electrical conductivity
Carbon (graphite)	Sublimes at high temp (3600)	Shiny grey solid	Very good
Oxygen	-219	Colourless gas	No
Hydrogen	-259	Colourless gas	No
Sulfur	115	Yellow solid	No
Nitrogen	-210	Colourless gas	No
Fluorine	-220	Colourless gas	No
Chlorine	-102	Pale yellow gas	No
Phosphorus	44	Red or white solid	No
Bromine	-7	Red brown liquid	No
Iodine	114	Shiny grey solid	No
Selenium	221	Shiny grey solid	Fair
Silicon	1414	Shiny grey solid	Fair
Helium	n/a no solid form at standard pressure	Colourless gas	No
Argon	-189	Colourless gas	No
Neon	-249	Colourless gas	No
Xenon	-112	Colourless gas	No
Radon	-71	Colourless gas	No
Krypton	-157	Colourless gas	No

1. Which elements have some properties of both metals and non-metals? *Carbon, selenium and silicon.*
2. Is there a clear trend with their location in the Periodic Table? Explain your answer.
   Selenium and silicon are near to the dividing line between metals and non-metals. Carbon is not, but the data given is only for one form of carbon. There are other forms that may display more 'non-metal-like' properties.