

Pb

What is the only letter that doesn't appear
in the Periodic Table?

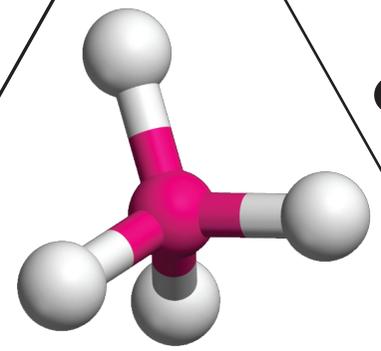


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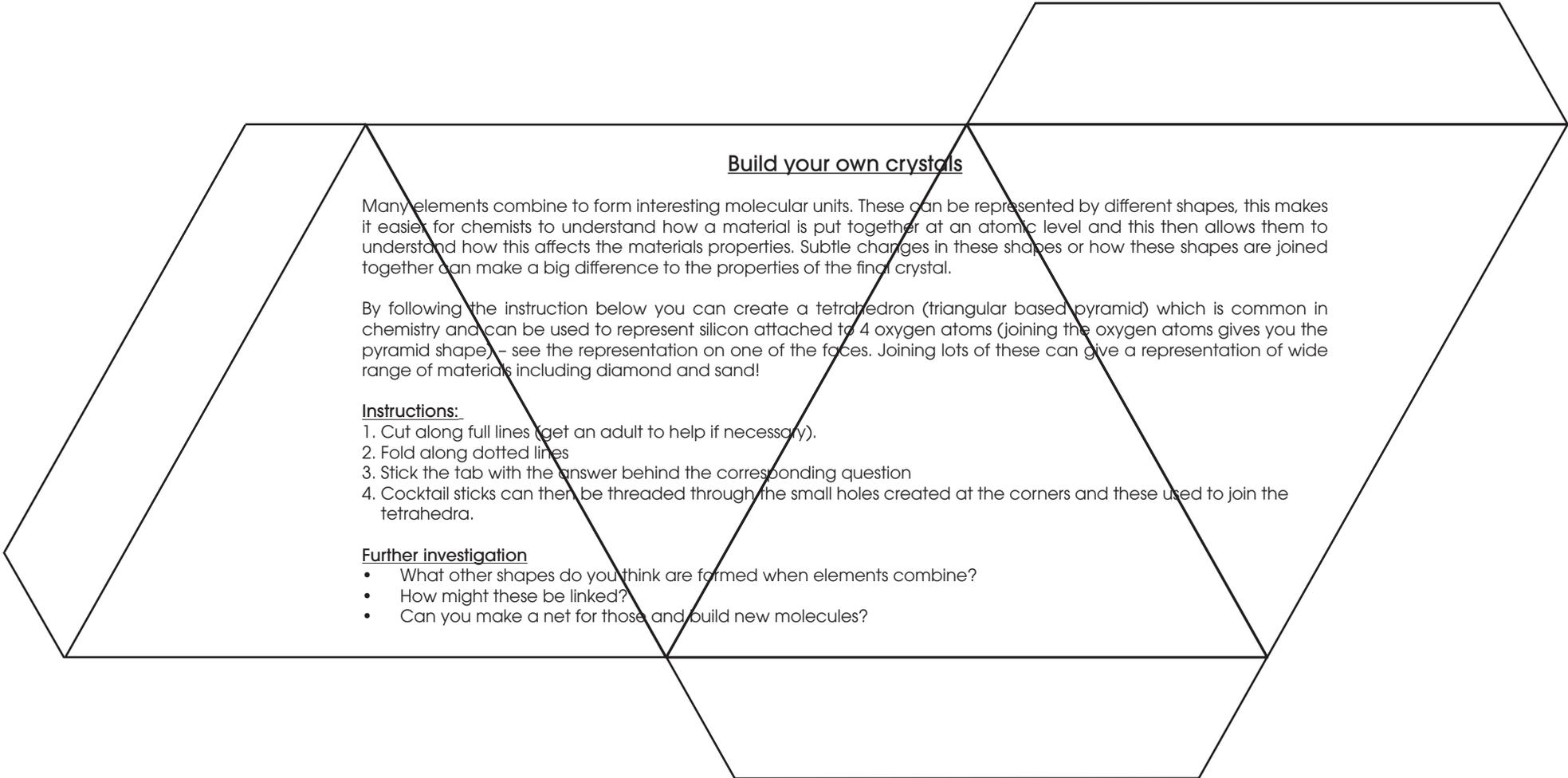
What is the chemical symbol for lead?

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How many Protons are there in Helium?

2



Build your own crystals

Many elements combine to form interesting molecular units. These can be represented by different shapes, this makes it easier for chemists to understand how a material is put together at an atomic level and this then allows them to understand how this affects the materials properties. Subtle changes in these shapes or how these shapes are joined together can make a big difference to the properties of the final crystal.

By following the instruction below you can create a tetrahedron (triangular based pyramid) which is common in chemistry and can be used to represent silicon attached to 4 oxygen atoms (joining the oxygen atoms gives you the pyramid shape) – see the representation on one of the faces. Joining lots of these can give a representation of wide range of materials including diamond and sand!

Instructions:

1. Cut along full lines (get an adult to help if necessary).
2. Fold along dotted lines
3. Stick the tab with the answer behind the corresponding question
4. Cocktail sticks can then be threaded through the small holes created at the corners and these used to join the tetrahedra.

Further investigation

- What other shapes do you think are formed when elements combine?
- How might these be linked?
- Can you make a net for those and build new molecules?