

## Create your own telluric screw

### ***Education in Chemistry***

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**In 1862 – seven years before Dmitri Mendeleev, French mineralogist Émile Béguyer de Chancourtois developed a system to arrange all the then-known elements according to their relative atomic masses. He called his system *vis tellurique* or, in English, the telluric screw.**

In this activity you will repeat the process Béguyer went through and develop your own telluric screw.

1. The numbers shown are what we now call relative atomic masses. Write the symbols of the first 20 elements (H to Ca) under the appropriate relative atomic mass.
2. Cut out the rows, including the grey tabs. Stick the three rows together using tabs 1 and 2 to form one long row from relative atomic mass 1 to relative atomic mass 40.
3. Gently crease along the line between each relative atomic mass.
4. Curl the strip to create a helix with a circumference of 16 atomic mass units, ie the element with a relative atomic mass of 17 lies below the element with a relative atomic mass of 1. Use tabs 3 and 4 to secure the helix in place.
5. What do you notice about the elements directly below each other on the helix? Are there any elements that don't fit the pattern?

Extension activity: think about what circumference (in atomic mass units) future turns of the helix will need in order for similar elements to lie beneath each other.

