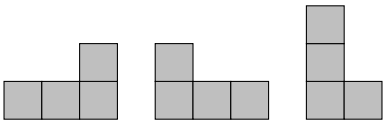
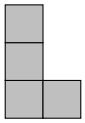
Playing with Polyanimals

You will pick 2 different *polyanimal* species of area 8 (a polyanimal is a shape made by connecting equal-sized squares edge-to-edge). Your polyanimals must be different from everyone else in the class! Two polyanimal species are considered the same if one can be obtained from the other using translations, reflections, or rotations.

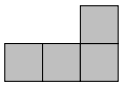


The same polyanimal of area 4

Ensure that your polyanimal is lazy: it should be at least as wide as it is tall.



A polyanimal of area 4
that isn't lazy enough



A lazy polyanimal
of area 4 — perfect!

There are 2 parts to this project:

(1) Create a large model of your polyanimal. It should be coloured/decorated, but the base polyanimal should still be easily identifiable.

(2) Create a "fact file" about your polyanimal. It must include:

- The name for your polyanimal species (e.g. bear, peacock, alligator)
- Its height
- Its perimeter

You may choose to include more information, such as

- Information about symmetry (both mirror and rotational)
- Information about tessellation (is it possible to tessellate? If so, how? If not, how tight can the polyanimals be packed?)
- Information about *directedness* (under some orientation, does there exist a square from which you can reach every other square using only up and right movements?)

Use your imagination!