Painting Youcubed

Students build and draw three-dimensional cubes made up of small unit cubes. Student study patterns by analyzing the number of sides painted of each unit cube, which made up the larger painted cube.

**Number of Players:**  Any

**Material:**
- Grid or isometric dot paper
- Centimeter cubes or similar
- Colored pens or markers

**Task Instruction**
Imagine that we paint a 4 x 4 x 4 cube blue on every side. How many of the small cubes have 3 blue faces? How many have 2 blue faces? How many have 1 blue face? How many have not been painted at all? How many faces would be painted in a cube of any size? Think visually!