Fractals: A Very Short Introduction
Kenneth Falconer

Fractals: A Very Short Introduction looks at the roots of the ‘fractal revolution’ that occurred in mathematics in the 20th century. It presents the ‘new geometry’ of fractals, explains the basic concepts, and explores the wide range of applications in science, and in aspects of economics. Many are familiar with the beauty and ubiquity of fractal forms within nature. Unlike the study of smooth forms, fractal geometry describes more familiar shapes and patterns, such as the complex contours of coastlines, the outlines of clouds, and the branching of trees. This is essential introductory reading for students of mathematics and science, and those interested in popular science and mathematics.

Symmetry: A Very Short Introduction
Ian Stewart

Symmetry: A Very Short Introduction provides an introduction to the formal theory of symmetry: group theory. Now a branch of abstract algebra, this subject first arose in the theory of equations. Symmetry is an immensely important concept in mathematics and throughout the sciences, and its applications range across the entire subject. Symmetry governs the structure of crystals, innumerable types of pattern formation, how systems change their state as parameters vary; and fundamental physics is governed by symmetries in the laws of nature. It is highly visual, with applications that include animal markings, locomotion, evolutionary biology, elastic buckling, waves, the shape of the Earth, and the form of galaxies.