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3-D minerals. Auxiliary material for the Physical Geology classes

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Abstract

The paper presents a method for enhancing the learning process of mineral species by the students of the first year in Geology, at the Physical Geology classes. However, the method can be applied in many other fields that study physical objects. To be able to help students, the photogrammetry techniques were used, together with a game engine platform, in order to create a digital atlas containing 70 3D mineral samples. The atlas provides students with essential information for those minerals, along with the opportunity to study some of the mineral's optical properties, interact with the sample and perform measurements.

Keywords: 3-D minerals, physical geology, first year students, photogrammetry, Unity 3D.