Mission to Stars: a contextualized Project-Based Learning on Universe and Astronomic Research.

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Students’ knowledge about astronomy is often limited to the Solar System and their knowledge about the structure of the Universe and astronomic research beyond the Kuiper belt is scarce. We have developed and applied an In-quiry Project-Based Learning activity where 12 years-old students are asked to design a Spatial Research Mission. In this activity, students design experiments, select targets and calculate astronomic distances, and construct a 3D model of an Orbital Telescope for their mission, selecting the necessary detectors, programming by informatics its routines and calculating the budget. The activity aims to develop scientific skills and attitudes, make students understand how astronomic research is undertaken, and to know the main elements (Exoplanets, Galaxies, Supernovas...), and the basic geography of the known Universe.