

Developing Astronomy and Planetary Science Projects Using the IBSE (Inquiry Based Science Education) Format

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Abstract

I will present details of two online teacher-free IBSE activities created for the National Schools' Observatory (NSO)¹ based at Liverpool John Moores University.

The NSO has provided free use of the 2-metre robotic Liverpool Telescope (LT) located on La Palma in the Canary Islands, since 2004. It supports teachers with resources that allow them to teach STEM skills through the inspiring mediums of astronomy and planetary science.

As part of this remit, we have created extended project style resources based on population studies of exoplanets² and creating colour-magnitude diagrams of open clusters³, both of which contain background information and real astronomical data as well as instructions on how to analyse results. Each activity provides a forum allowing students to compare and contrast their results with each other, completing the IBSE cycle by facilitating reflection.

I will outline our plans to create several further resources and am able to reflect on the successes and difficulties encountered so far.

1. <https://www.schoolsobservatory.org>
2. <https://www.schoolsobservatory.org/discover/projects/exoplanets/main>
3. <https://www.schoolsobservatory.org/discover/projects/clusters/main>