

Mathematics of Planet Earth

<http://mpe.dimacs.rutgers.edu/>

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Recently, I came across an open source mathematical website that grabbed my attention. It is worth exploring for either demonstrative or investigative purposes with mathematics students. Below is information directly from the website. Can you think of ways to integrate some of this excellent mathematical and scientific work into your curriculum?

Mathematics of Planet Earth (MPE) is an initiative of mathematical science organizations worldwide designed to highlight the ways in which the mathematical sciences can be useful in tackling our world's problems. The exhibition Mathematics of Planet Earth consists of modules submitted by the community. It started with a competition in 2012; winning modules from that competition were presented at the official opening event of the first MPE exhibition in Paris in March 2013.

The modules of the Mathematics of Planet Earth Open Source exhibition can be reproduced and adapted by science museums and schools around the world (<https://imaginary.org/exhibition/mathematics-of-planet-earth>) (scroll down to the bottom to see the "exhibits").

Users worldwide from science museums to schools can reproduce and utilize the modules. The exhibition has a virtual part as well as several material parts. Copies of the material parts can be recreated or travel around the world, and the virtual modules are available on the basis of creative commons licenses.

In one way or another, all exhibits are demonstrating the crucial role mathematics plays in planetary issues. The modules cover a wide variety of topics such as astronomy, fluid dynamics, the mathematics of volcanoes or glaciers and problems in cartography.

The virtual modules displayed in the exhibition come from an international competition organized by the initiative MPE, IMU, ICMI and IMAGINARY in 2013 and 2017. They are of four types: interactive modules, films, posters and instructions to realize a physical module. The three winners of the first competition received their prize at UNESCO during the

MPE Day in March 2013; the three winners of the second competition received their prize at the MPE exhibition at Imperial College London in October 2017. The exhibition is still under development. New ideas and modules are welcome. See the MPE project (<https://imaginary.org/content/new-mpe-exhibits>) for more information.

For more information on the Mathematics of Planet Earth initiative, please visit <http://mpe.dimacs.rutgers.edu/>.

