A Learning Tool that Can Explain the Principle of Equation of Time

Park, Jun Hyeok (School: Daejeon Science High School)
Ju, SangHyun (School: Daejeon Science High School)
Lim, Sehun (School: Daejeon Dongsin Science High School)

In some schools, students learn about the Equation of Time in Earth science class. However, it is hard to understand the Equation of time clearly. So, we decided to design and make learning tools. And we expect that our learning tools can help to understand the Equation of Time clearly. We planned to progress this research by following series of processes. Firstly, we planned to observe the apparent solar time by observe analemma. However, we couldn't observe analemma by the COVID-19 issue. Secondly, we certainly understood the apparent solar time, true solar time, and Equation of time. Third, we debated and share ideas on how to design learning tools. Fourth, we drew up a blueprint of learning tools based on our ideas. And we visualized Equation of Time using Styrofoam ball and wire. Lastly, we explained our learning tools to other students, and we feedbacked our tools. Our tool represented the monthly Equation of Time so that it can help understand the Equation of Time. We think this model can be improved using an electric motor to represent the Equation of Time continuously.

Awards Won: