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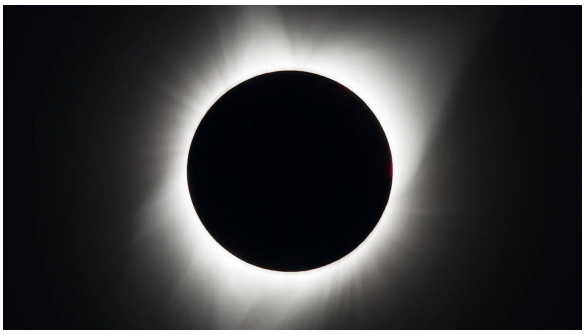
|  <br>TITLE | **A model for Solar Eclipse** |
| SUBJECTS | Science, Engineering, Art, Maths |
| CLASS<br>  | SECOND CLASS OF THE SECONDARY SCHOOL |
| DURATION | 8 hours |
| MATERIALS | - String (length 700 cm)<br>- 28cm diameter circular disc cut from card to represent the Sun<br>- 4cm diameter circular disc from card represent the Moon<br>- Tape measure or ruler |

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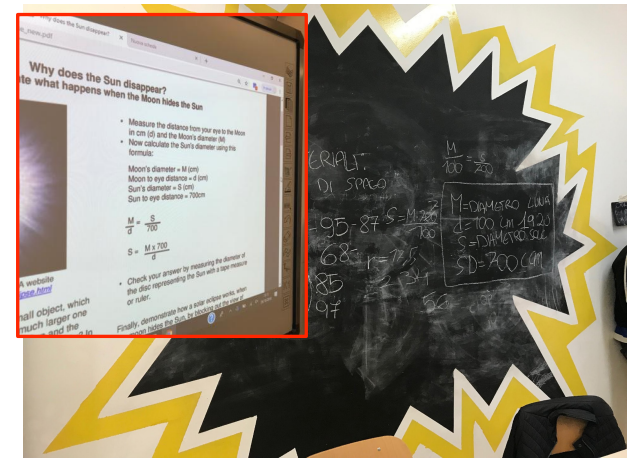
| OBJECTIVES<br>  <br><br>  <br>  <br>  <br> | With this activity students demonstrate how a small object, which is near (the Moon), can block out the view of a much larger one that is further away (the Sun). To do this they calculate the Sun's diameter using a formula based on the mathematical relation between a ratio of moon diameter and moon to eye distance on an hand and the ratio between Sun's diameter and sun to eye distance on the other hand, assuming the last as 700cm (a string length in the model).<br>Each student check the answer by measuring the eye moon distance when the disk representing the Sun disappeared. When they have adjusted the position of the Moon until the Sun is eclipsed, the eye-Moon distance will be 100cm.<br>- Science: astronomical phenomenon, Sun eclipse<br>- Engineering: build and manage materials to demonstrate scientific theory<br>- Art: different types of artistic products<br>- Mathematics: ratio and proportion |
| TOPICS | Students appreciate that the Sun and the Moon are of vastly different size, even if they seem to have a similar diameter when appear in the sky.<br>They explain the aclipse phenomenon explaining using mathematical tool how a small object can disappear due to particular conditions. |

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| ASSESSMENT | The assessment is focused on the ability of students to: construct a model step by step thinking about what it demonstrates, pay attention to measurements, managing, constructions of model itself and calculations of the different variables. |