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Experience with a yearlong middle school astronomy experiment[1]
GORDON AUBRECHT, Ohio State University — This report involves the astronomy focus in eighth grade science and development of our own astronomy unit that would address major parts of Ohio standards. Our intent in this astronomy experiment was to address this problem directly by instituting an investigation that would occur over the school year. We chose not to tell students about Sun and Moon motions and prove our assertions through observations; rather, we asked students to observe and infer these motions. As often happens, only part of what we planned was implemented the first year. Few Moon observations were ever made by students, who were expected to do this at home; in some classes, this improved the second year of the project. The Sun observations were carried out over the school year because they were done at school and because some of our teachers were committed to doing them. Sun shadows were observed several times a month by students and the tip of the Sun shadow was indicated by a blob of paint on the surface of a wood platform the first year. The second year, the observations were made using a golf tee mounted on posterboard as a gnomon. Each observation day resulted in up to 12 blobs, depending on how many classes participated. We present the results of the two yearlong investigations and speculate on whether this could be a useful way to address students' general misconception of science as a series of 45-minute experiments.

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