

1980

## Borrowing Moon Rocks

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2. While sitting at a desk, using the equipment provided, have the model moon move in such a way that all shapes appear exactly as illustrated in the pictures provided. Make a drawing of the system that best accounts for each phase of the moon in relation to you and the light bulb.
3. Experiment with various earth-moon distances to find where the different phases appear best. Do the phases appear better when the moon is closer to the earth or closer to the sun?
4. On your drawing show the direction of the moon's motion with arrows. Does this motion indicate rotation or revolution?
5. Indicate on your drawing in what position the sun could be blocked out (solar eclipse).
6. Indicate on your drawing in what position the moon could be blocked out (lunar eclipse).
7. Why doesn't an eclipse occur every month?
8. In addition to ease in study, why was the instruction given for you to sit at a desk while performing this lab?

### Conclusion

Awareness of Piagetian philosophy concerning the mental development of children has changed my teaching of astronomy drastically. The teaching process is much slower than in traditional methods where students receive step-by-step instruction. More teacher patience is required since time is allowed for concept development to become an operational rather than a rote experience. Many of these changes bother students because they are more on their own and have to think for themselves, but isn't this one of the ultimate goals of education?

### Literature Cited

1. Allen, T. 1977. Implications of Piaget for everyday laboratory experiences for children. *Iowa Science Teachers Journal* 14(2):32-35.

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### Borrowing Moon Rocks

Samples of the Moon's surface (rocks brought back by Apollo mission astronauts) may be borrowed for classroom use from NASA at no charge. Before being entrusted with the rocks, however, teachers must attend a three-hour NASA briefing session.

Six lunar rock samples make up part of a kit that also includes slides, literature, audio tape and a film. The rock samples are enclosed in plastic discs, and can be studied using ordinary 10X-20X microscopes.

The kit is designed for grades 5-12. For more information, write: James Poindexter, Mail Code AP-4, Johnson Space Center, Houston, Texas 77058.