

## OPEN-ENDED ITEM

17. Meteor Crater is a rimmed, bowl-shaped feature that lies in the desert of northern Arizona. The crater measures 1,200 meters (m) in diameter, with the crater floor lying 180 m beneath the rim. The rim rises about 60 m above the surrounding desert. In the early twentieth century, most scientists theorized that the crater formed as a result of volcanic activity (volcanism theory). However, Daniel Barringer proposed that a powerful meteor impact formed the crater (impact theory).

**Part A:** Explain why the impact theory is classified as a theory rather than an opinion.

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**Part B:** Barringer's impact theory was eventually accepted by a majority of scientists. Describe what is needed for a new theory to become widely accepted by the scientific community.

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**AFTER YOU HAVE CHECKED YOUR WORK, CLOSE YOUR ANSWER BOOKLET AND TEST BOOKLET SO YOUR TEACHER WILL KNOW YOU ARE FINISHED.**

