

ISAAC NEWTON and the LAWS of MOTION

READER'S THEATER

Instructor's copy

Pick four students to perform aloud pages 8–11 from the book. Prior to a public performance, have students look through the pages and identify their character. Students can then use the scripts provided on this CD-ROM to practice their part. Suggested props: apple, feathers (to look like pens).

Main Script

Scene One: Isaac Newton and Humphrey Babington are walking together.

Narrator: When Newton was 18, Mrs. Clark's brother, Humphrey Babington, helped Newton enroll at Trinity College in Cambridge.

Babington: You'll have to work to help pay your expenses, Isaac. For a job, you will do menial tasks for students and teachers alike.

Newton: I am grateful for the chance to be here at Trinity.

Scene Two: Later, in Newton's room . . .

Classmate: Newton, are you finished polishing my buckles?

Newton: Not yet. *(Then thinking to himself)* I wish I could be left alone to read without having to do these foolish tasks.

Scene Three: Later, Newton still in his room . . .

Classmate: Isaac, are you coming to dinner?

Newton: I must finish this equation.

Classmate: You ought to eat.

Newton: Later.

Classmate *(a bit later)*: You missed dinner. Just come down to the pub for a while.

Newton: Sitting in that noisy pub will not further my studies.

Classmate: He studies 18 hours a day, seven days a week.

Other classmate: Does he ever eat or sleep?

Narrator: Newton often did forget to eat, and he only slept a few hours at a time.

Scene Four: Later . . .

Narrator: In the summer of 1665, the Great Plague hit Cambridge. The disease spread quickly by fleas that lived on rats. In England, the bubonic plague took many thousands of lives.

Classmate: Trinity is closing to reduce the spread of the plague. Where will you go, Isaac?

Newton: I suppose back to my family's farm at Woolsthorpe.

Scene Five: Later, at his family's farm . . .

Narrator: Trinity remained closed for two years. At Woolsthorpe, Newton spent his days wondering how the universe worked and inventing the mathematics to describe it.

Newton *(thinking to himself)*: What keeps the Moon in orbit around Earth? It must be a strong force to keep it moving so regularly. And this force must extend far from Earth. *(Newton looks up, watches an apple fall to the ground and thinks to himself)* Could the same force that brings down an apple from a tree also hold the Moon in orbit around Earth?

(Newton sits beneath the tree, takes out a journal and feather pen, dips the pen in ink, and begins to write.)

Gravity in space must behave the same way it does on Earth. Could gravity's force be strong enough to cause the Moon to orbit Earth in the amount of time that it does? And how does it work? After all, the Moon doesn't fall to Earth as the apple does.

Narrator: Newton spent months trying to answer these questions. The complete solutions didn't come to him until almost 20 years later, when he was a professor at Trinity.

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Classmate and Other Classmate

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Newton *(thinking to himself)*: What keeps the Moon in orbit around Earth? It must be a strong force to keep it moving so regularly. And this force must extend far from Earth. *(Newton looks up, watches an apple fall to the ground, and thinks to himself)*: Could the same force that brings down an apple from a tree also hold the Moon in orbit around Earth?

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Humphrey Babington

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Narrator

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