

Teacher's Guide for:

"Larry Cat in Space"

Brief Show Synopsis:

"Larry Cat In Space" is a playful and imaginative presentation about an inquisitive cat who takes a trip to the Moon. Through Larry's eyes, we meet his human family, a group of enthusiastic sky-watchers. One of his family members is Diana, who goes to work on the Moon as a lunar geologist. Larry misses Diana, so he figures out a way to get to the Moon and live with her. He smuggles himself on board the space plane, which takes him to space station Freedom. From there, he is taken aboard the Lunar shuttle, and he eventually ends up on the Moon, surprising Diana, meeting the rest of the Moon base inhabitants, and learning about life in the Moon's environment.

"Larry Cat In Space" is not a pedagogical presentation of a set of Moon facts. It does not attempt to explain the whys and wherefores of lunar phases. It's not a primer of lunar geology. It is not designed to teach your students everything they need to know about the Moon. These are important areas of study that you will wish to introduce to your students in detail. In preparing this program, we assume the most students will already know something about the Moon, or are about to embark on a program of related work. The show simply serves to enrich your students' knowledge--to provide a vehicle that applies elementary knowledge in an entertaining way.

Now that we've told you what "Larry Cat In Space" does and doesn't do, here is a description of the many topics it touches upon, and what observant students can learn from it.

Throughout the show, Larry gives us a cats-eye-view of the Moon, backyard astronomy, space travel, and what it takes to live on another world. Through Larry's viewpoint, we can experience the sense of wonder and amazement awe all have when we take our first look at the stars, and the Moon, and try to understand what we're seeing.

"Larry Cat In Space" projects us into the very near future, when humans will be living and working on the Moon. Yet, the humans living on both the Earth and the Moon will still be sky watchers. And, they'll have pets to keep them company.

Like all cats, Larry is a keen observer of events and objects in his universe. Just as humans do, he notes that the Moon changes shape over many nights and sometimes shows up during the day. To illustrate this, different phases of the Moon appear during the show.

Larry remarks on the fact that his humans are avid sky watchers. He observes them as enthusiastically as they study the night sky. This offers positive reinforcement of sky watching, and encourages everyone to look up.

He knows that humans use telescopes to look at the Moon (in addition to naked-eye viewing of the Moon), and even tries to use the telescope himself. He hears them talk about the appearance of the Moon. He tries to understand their talk--even to the extent of puzzling over just what craters are, and why the humans are so interested in them.

As an enthusiastic observer of human behavior, Larry notes that humans keep track of time somewhat differently than cats do. He describes how people divide time into units like days, weeks, minutes and hours. He contrasts that with a humorous account of how cats spend their days--and nights.

The infrastructure of space travel is an important concept, and something that some of our students will experience in their lifetimes. In particular, the trip to the Moon is done differently than the Apollo Moon missions, which used a direct flight approach, and a single launch from a Saturn V vehicle. As of this writing, there are no more Saturn V's; Moon trips will be done using the shuttle/space station approach we describe. We also depict the space plane as a viable mode of transportation--which we hope it will be, when it advances from the proposal stage to actuality. It's already on 45-cent US Airmail postage stamps, so that's as good a start as any.

For the first part of his trip, Larry can't see where he's going, since he's enclosed in a truck full of clothes. He has to rely on his hearing and his sense of smell to figure out where he is. On the space plane, he experiences the heavy G-forces of take-off for the first time, and describes the experience. Once en route to space station Freedom, he has nothing to do but listen to the sounds of space flight. On board Freedom, he listens to the strange environment of a rotation station, but has no idea where he is. Only when he is onboard the lunar shuttle does Larry experience full weightlessness for the first time.

Larry sees the Earth from the lunar shuttle, but doesn't recognize it, of course--but he does think it's lovely. When he sees the Moon, he realizes just what his humans had been seeing--the cratered world as it looks from space.

Like many other lunar visitors, Larry has to adapt to the lunar gravity--which is one-sixth that of Earth's. His experience is amusing, and he revels in it. It serves to show students just how things will be different when they first walk on the Moon.

Larry's descriptions of Moon life show that people can and will make the Moon their home. In this show, humans live in a mostly-underground base called Imbrium Village, near Archimedes crater. The site is easily found on most lunar maps; Apollo 15 landed near the edge of Mare Imbrium. Underground homes in the Moon will provide the best protection against solar radiation, and at the same time allow base planners to insulate the living and working quarters.

This show conforms to the following state science standards: 12.F.1a, 12.F.3a