

# Program Curriculum



Below are sample “**Big Ideas**” from which classroom activities have been developed in each of the seven domains. The academic expectations from these activities are aligned with the Kentucky Department of Education Program of Studies and Core Content.

## Big Ideas for Arts and Humanities

- Create a Play about your Mars Adventure.

## Big Ideas for English Language Arts

- Give students a set of instructions which must be read and communicated for the completion of a reasonable complicated task.
- Write an article for the local newspaper describing what your class is working on to prepare for humans colonizing Mars.

## Big Ideas for Mathematics

- Create an estimate of how much it will cost for a group of explorers to live on Mars for a year.

## Big Ideas for Practical Living

- Develop a test or questionnaire to assist you in determining the best candidates for a team of Martian explorers.

## Big Ideas for Science

- Have students develop a process for getting frozen water from underneath the Martian surface and removing the Carbon Dioxide from it.
- Discuss Earth Materials such as Coal, Oxygen, Carbon Dioxide, etc.

## Big Ideas for Social Studies

- Study Kentucky Government and use it as a template for the first Martian Government.

## Big Ideas for Technology

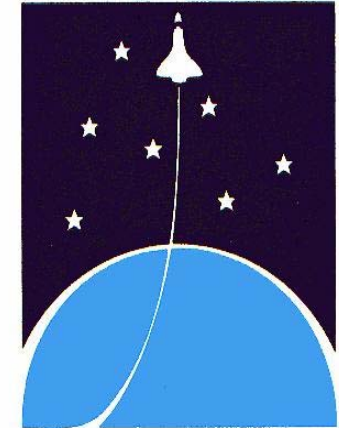
- Have students use computers to collect, organize, and communicate information and ideas in all seven domains.



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**The Challenger  
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Kentucky Presents....**

**Mars Invasion 2030!!**



# Mars Invasion 2030!!

Science Fiction movies and early astronomers convinced us all that Martians would soon be invading Earth. However, the opposite is actually true and we are currently invading Mars with probes, orbiters, rovers, and eventually explorers. In fact, there is a very real possibility that the first humans to set foot on Mars may do so by the year 2030, just the perfect age for your current 4th and 5th grade students to be aboard.



Sojourner

The Challenger Learning Center of Kentucky would like to introduce you to “Mars Invasion 2030” the new exhibit to open in the Interactive Science Center in August 2007.

The first explorers and settlers on Mars will undoubtedly need to create an environment for themselves that will allow them to survive on the planet for extended periods of time. Many of the things that we take for granted for our survival on Earth will suddenly become precious commodities as we realize we must mine and process the very water and oxygen we need to live.



## Our Curriculum

Our curriculum is based around the idea that these future Martian explorers need to start the planning process now in order to be ready by 2030. Every aspect of this planning process is directly applied to one or more of Kentucky’s seven Core Content domains. In the same way that the space race of the 50’s and 60’s determined American’s educational direction during that same period, we propose using this unfolding human adventure as a vehicle to add validity a sense of purpose, and excitement to Kentucky’s educational process.

The Mars Invasion 2030 curriculum will include activities for hearing and Visually Impaired students, Gifted and Talented students, and activities suited for use as Extended Activities at the Challenger Learning Center of Kentucky. Since mining is an integral part of our everyday life in Kentucky, and since much of the same technology used to mine coal and other resources on Earth will be similar if not identical to the technology required to sustain life on Mars, mining technology and engineering will also be a major focal point of the Mars Invasion 2030 curriculum.



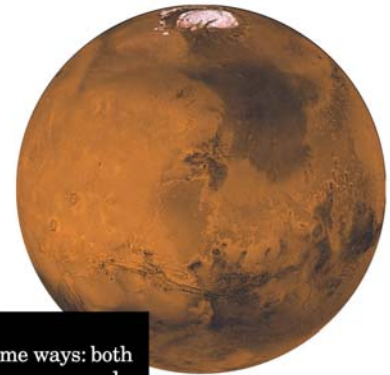
**IS ANYBODY OUT THERE?**

There’s probably no life on Mars now, but maybe there was before.

Life as we know it needs water. Mars has only ice today, but it probably had water once. Some scientists think a meteorite from Mars contains evidence of life—fossilized waste from an ancient, microscopic creature. Many other scientists disagree.

Earth has the necessary ingredients for life, like water and energy (from the sun). Many scientists believe if we find those ingredients on Mars or other planets, we’ll find life.

How will you feel if we find life somewhere else?



**Mars** is like Earth in some ways: both planets have volcanoes, canyons, and polar icecaps. But Mars is only half the size of Earth, it has no running water, and its atmosphere is poisonous to humans. Most scientists agree that nothing lives on Mars now, but some scientists believe Mars used to support life. To see Mars on a clear night, look for a reddish disk. It looks red because of all the rust on its rocky, dusty surface.