

# Explore the Possibilities

## Purpose

The purpose of these activities is to highlight major reasons for space exploration, and to understand reasons for manned and unmanned space flights.

Students will be able to

1. Understand major reasons for space exploration.
2. Compare and contrast the reasons for engaging in manned and unmanned space flights.
3. Identify some major characteristics of explorers.
4. Compare and contrast explorers of the world, in areas from land exploration to space exploration and others.
5. Create a map and note the importance of maps to explorers.

## Important Vocabulary (key terms in bold)

<b>explorer</b>	<b>space flight</b>	crew	experiment
<b>map</b>	globe	latitude	longitude
legend	scale	neatline	<b>orientation</b>
GPS	<b>cartography</b>	aerial	topographical

## Why Do We Explore?

Students discuss the reasons for space exploration. The main resource for this discussion can be found at the NASA SCIfiles website ([http://scifiles.larc.nasa.gov/educators/activities/2004\\_2005/athome/why\\_explore.html](http://scifiles.larc.nasa.gov/educators/activities/2004_2005/athome/why_explore.html)); included at this site are ideas for activities that allow for greater consideration of this topic.

## Explorers R Us

Students brainstorm characteristics that might help someone to be a good explorer. Then students identify those characteristics in each other: students anonymously write the characteristics that they think apply to each of their classmates onto index cards, each card having one student's name on it; the teacher collects, reviews, and distributes the cards to the students.

## Where ARE We, Anyway?

Students discuss the importance of maps to explorers. Then students decide on an area (e.g. city, school, bedroom, etc.) and create their own maps, individually or in small groups. (Note: Small groups should have larger and/or more detailed map projects.)

## Mapping the Universe

Students respond in writing to one of the following prompts:

1. *If I were a space cartographer...*
2. *Mapping the Universe*
3. *Space Explorer: My Life as an Astronaut*
4. *An Alien's Map*
5. *Extra! Extra! Explorer Sails through Space, Makes Exciting, New Discovery!*

## Especially Helpful Resources

These resources are especially helpful, with many lesson plans and activity ideas relating to explorers of the world.

1. <http://www.bham.wednet.edu/BIO/explore.htm>
2. <http://www.multcolib.org/homework/explorhc.html>
3. <http://www.cln.org/themes/explorers.html>
4. <http://geography.about.com/cs/cartography/index.htm?once=true&rnk=r1&terms=cartography>
5. [http://interactive2.usgs.gov/learningweb/teachers/lesson\\_plans.htm](http://interactive2.usgs.gov/learningweb/teachers/lesson_plans.htm)
6. <http://geography.about.com/od/studygeography/a/mapparts.htm>
7. <http://memory.loc.gov/ammem/gmdhtml/dsxphome.html>
8. <http://maps.jpl.nasa.gov/>
9. <http://anzwers.org/free/universe/>
10. Mapping the Earth Student Resource Book from DiscoverySchool