

# Research Activities

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## Chapter: Models of the Earth

Use the items below as a starting point for independent research projects.

1. Devise an experiment and make observations to demonstrate that Earth's surface is curved. Describe your observations and experiment in a report.
2. Obtain some photographs taken of Earth's surface from high altitudes and compare them with maps of the same area. If possible, obtain copies of ancient maps of the same area and compare them with the present-day maps. Write a report that describes the similarities and differences among the photographs, new maps, and ancient maps. Explain why some of the differences exist.
3. Stereophotographs of parts of Earth's surface are available from some science supply houses. Obtain stereophotographs and topographic maps of the same area. Study and compare the land features as they appear on each. Describe how both the photographs and the maps would be useful to hikers traveling in the area.
4. Make a collection of maps. Try to find various types of map projections from different centuries, as well as maps used for different purposes (for example, political, navigational, or topographic). Make a display, and report to your class on the features of each map.
5. Obtain a topographic map of your area. Describe how you could use various land features and the map to find your way around the mapped area.
6. Draw a map of your school grounds. If the grounds are hilly, show some of the topographical features on your map. Ask several classmates to also do this activity. Compare your map with those of your classmates. Discuss why any differences appeared on your maps.
7. Calculate the verbal scale needed to fit a map of the continental United States on a piece of paper 60 cm  $\times$  90 cm. Show your calculations.
8. What verbal scale is needed to fit a map of your state on a sheet of standard notebook paper (8 1/2  $\times$  11 in.)? Show your calculations.
9. Choose ten cities in the world. Make a chart listing the cities and their respective latitudes and longitudes. Display the chart in your classroom.