

Maps

Maps are probably the most common tool used to answer geographic questions. They provide a visual description or portrayal of the earth or parts of the earth. Maps can reflect a great variety of spatial scales. For instance, maps can represent a place such as a town, a country, or even as large as a continent.

Maps illustrate information about geographic areas, and every map has at least one purpose. For example, some maps show the natural features of a region such as rivers, lakes, or mountains. Maps may also show human features as well. Some common human characteristics found on maps include roads, railroad tracks, airports, or homes. Since maps can be used to represent a variety of information, it is important to ask, "What is the mapmaker trying to show me?" when first looking at a map. By orienting yourself to the map's purpose, it is easier to read and make sense of the information on the map.

Maps have both advantages and disadvantages. One big advantage of maps is that they are convenient to carry. Another advantage is that maps can be made to represent a variety of different features about a place. However, maps do have a major limitation. Can you think of what this may be?

Let's try an experiment. Locate a cup or a mug and place it on the floor beside your feet. Now stand over the cup. How would you draw what the cup looks like? Now put the cup on a table in front of you, viewing it at eye level. Think about how the cup looks now. If you draw the cup from this perspective, would your two drawings look different? It is likely that the drawings are different because you viewed the cup from two very different perspectives, and each drawing represents a different view of the cup. Since the cup is three-dimensional, it is impossible to represent it in two dimensions, such as a drawing, without losing some information.

This is the same problem people face in creating maps. Earth is round and three dimensional, but maps are flat and two-dimensional. The only way to represent the spherical, three-dimensional earth on a flat, two-dimensional map is by stretching or distorting certain areas. Different cartographers (map makers) have used different ways, or projections, to represent the earth (a round three dimensional object) on a map. In doing so, some information on the map becomes inaccurate. Geographers