

## Career

# Cartographer

When you think of a map, do you think of a piece of paper with colored areas and lines? Surprisingly, some maps now consist of thousands, or even millions, of numbers stored on computer tapes. Obviously *cartography*, or map-making, is changing.



Several technical advances have led to changes in mapping. Space satellites carrying scanners produce extremely detailed images of the entire world at regular intervals. Besides conventional photographs, these scanners also record images using infrared and other wavelengths beyond the range of visible light. After processing by computer, such images provide many more kinds of information than the traditional political boundaries and topographic features of conventional maps. For example, they can map soil types and land use, dis-



tinguishing among farm fields, forests, and urban areas. In fact, they can even differentiate a corn field from a soybean field, or a freshly plowed field from a field with a mature crop.



In the false-color map shown below of Oregon and Washington, vegetation appears as red, dry regions are blue, water is black, and snow on the Cascade Mountains and the Olympic Mountains is white.

Both new images and conventional map data are being digitized, that is, converted to numerical codes and stored on computer tape. As new images are received, changes in physical features are coded and recorded. Map users can thus be provided with maps that are constantly being revised and kept up to date.