OVERVIEW

Surveyors are precision-minded professionals who conduct research and measure and collect data on specific areas of the Earth’s surface. They may specialize in different tasks, such as producing maps, determining exact property lines to create legal documents and settle disputes, and helping to plan construction and engineering projects such as drilling mines, building roads and bridges, and laying pipelines. Surveyors are able to use sophisticated tools to collect and present data, including Global Positioning Systems (GPS) and Global Information Systems (GIS). They pull together information from research and measurements to generate detailed maps and reports for their clients.

EVALUATE YOUR INTEREST

☐ I am a precision-minded person who takes pride in getting measurements exactly right.

☐ I am fascinated by the characteristics of different places.

☐ I enjoy reading and even creating maps.

☐ I am able to visualize what places might look like after they are modified.

☐ I can recognize how complex mathematics applications apply to the real world.

☐ I can pull together and make sense of information from many different sources.

☐ I love being outdoors in all types of weather and enjoy taking long walks or hikes.
**CAREER CONNECTION**

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<th>How does this career affect me?</th>
<th>What are some other similar careers?</th>
<th>How does this career affect the world?</th>
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<td>One of the most important roles of local, state, and federal governments is to protect individuals’ right to private property. Surveyors help governments protect this right by conducting measurements and research that leads to the establishment of clear property boundaries and the drafting of official documents that certify land ownership. The petroleum and natural gas that we use to drive our vehicles, heat our homes, and fuel electric power plants comes from deposits below the Earth’s surface. Surveyors help fuel suppliers identify well locations and plan the routing of oil and natural gas pipelines that bring energy sources to our communities.</td>
<td><strong>Surveying and Mapping Technicians</strong> collect data to create maps of places on the Earth’s surface. <strong>Cartographers and Photogrammetrists</strong> conduct measurements and gather and analyze geographic information to create and update maps and other sources for information for education, land planning, and other purposes. <strong>Landscape Architects</strong> design and build parks, gardens, and other outdoor attractions. <strong>Civil Engineers</strong> design and supervise the construction of infrastructure systems, including roads, power lines, pipelines, and sewage systems. <strong>Geographers</strong> study the earth and its distribution of physical and human features. They address the question, “How does where we live affect how we live?”</td>
<td>Surveyors are guardians of the right to private property, a defining component of market-based economies. They help governments protect this right by determining precise property boundaries for settling land disputes and drafting government-issued land deeds and leases. They also measure and analyze places on the Earth’s surface to ensure that construction projects are completed with precision. Finally, they help to identify resource deposits, for example prior to the drilling of oil and natural gas wells, and help plan pipelines that bring energy sources to communities.</td>
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**TAKE ACTION**

- Conduct precise measurements to create a scaled and detailed map of a place that is familiar to you, such as your yard, a public park, or your school’s campus. In doing so, think about how you might redesign the space you selected for the inclusion of a new garden, an ornamental pond, additional athletic fields, or a new building.

- Think about a much-discussed infrastructure or construction need in your community, such as a new bridge or road, a new swimming pool or recreational facility, or a new school building. Consult maps and visit locations in the community to compile information about where this need might be constructed. Formulate a proposal for adding the facility to the location you selected.

- Attend public meetings of the local zoning board or land use commission. Collect information about why various land use proposals are approved or rejected.

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[www.STEMCareersCoalition.org](http://www.STEMCareersCoalition.org)