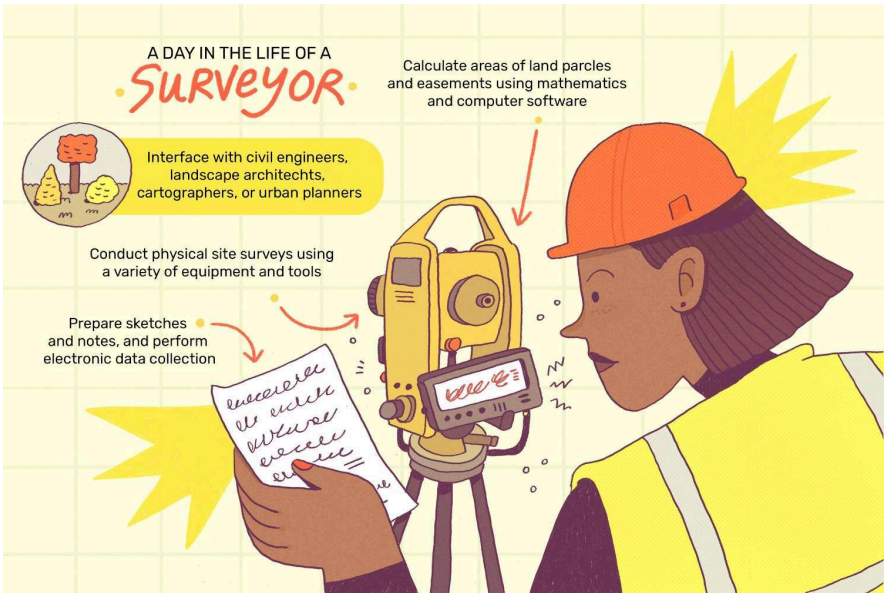
	Servicio Nacional de Aprendizaje – SENA **Centro de Industria y la Construcción – Regional Tolima**	**INGLES**

COMPETENCIA ASOCIADA	Comprender textos en inglés en forma escrita y auditiva.
RESULTADOS DE APRENDIZAJE	• Comunicarse en tareas sencillas y habituales que requieren un intercambio simple y directo de información cotidiana y técnica. • Comprender frases y vocabulario habitual sobre temas de interés personal y temas técnicos.
INSTRUCTOR	

ACTIVIDAD

- INTRODUCCION

El manejo del lenguaje técnico en inglés es importante para los aprendices no solo por sus habilidades académicas, sino también para incrementar la prospectiva de sus perfiles ocupacionales. La mayoría de los textos especializados, manuales, tutoriales actualizados se encuentran en inglés.



- OBJETIVOS DEL TALLER

Utilizar el vocabulario técnico aprendido e investigar mediante las herramientas tecnológicas con el fin de afianzar los conocimientos acerca de TOPOGRAPHY.

- METODOLOGIA DE LA ACTIVIDAD

- Revisar vocabulario técnico visto en clase con base a TOPOGRAPHY.
- De manera autónoma y eficaz aprenderán sobre el uso de herramientas utilizadas en cada campo de la construcción, características y vocabulario relacionado con los mismos.
- Desarrollar las siguientes actividades con base a sus conocimientos, también pueden investigar mediante las herramientas tecnológicas para desarrollar las actividades un poco más complejas.

TOPOGRAPHY



What is topography?

Text 1:

Topography is a discipline that deals with studying and graphically representing the physical and geographical features of a specific area. Topographers use tools such as the theodolite and level to measure the height, distance, and slope of terrains and create detailed topographic maps. These maps are very useful for planning and designing construction projects, roads, and other infrastructure.

Text 2:

Topography is an important aspect of geography that helps to describe and understand the shape and features of the Earth's surface. It includes the study of natural features such as mountains, valleys, rivers, and coastlines, as well as man-made features like buildings, roads, and bridges. Topographic maps are used extensively by geographers, cartographers, and other professionals to represent the Earth's surface in detail.

Text 3:

Topography plays a crucial role in many fields, including geology, engineering, and environmental science. By analyzing the shape and features of the Earth's surface, topographers can gain insights into the geological history of a region, identify potential hazards such as landslides or floods, and plan and design infrastructure projects that are both efficient and sustainable. Topographic data is also used by scientists to model and predict changes in the Earth's surface over time.

1. **According to the text select if the following statements are true or false:**

Text 1:

a) Topography is the study of geographical and physical features of an area. _____
b) Topographers use theodolite and level to measure the color and texture of terrains. _____
c) Topographic maps are not useful for designing construction projects. _____

Text 2:

a) Topography only includes the study of natural features. _____
b) Topographic maps are used by geographers and cartographers but not by other professionals. _____
c) Topographic data is not useful for modeling and predicting changes in the Earth's surface. _____

Text 3:

a) Topography is not important for any field other than geography. _____
b) Topographic analysis cannot help identify potential hazards in a region. _____
c) Topographic data cannot be used to plan sustainable infrastructure projects. _____

2. In the texts underline the verbs with another color and look for its translation.

   Text 1: 7 verbs
   Text 2: 4 verbs
   Text 3: 8 verbs

3. Create a crossword with the following glossary :

Topography: the study of geographical and physical features of an area
Theodolite: a surveying instrument used to measure angles in the horizontal and vertical planes.
Level: a surveying instrument used to measure the height and slope of terrain
Terrains: an area of land or its physical features
Topographic maps: detailed maps that show the physical features of an area
Infrastructure: the basic physical and organizational structures and facilities needed for the operation of a society or enterprise
Geographers: people who study the Earth's physical and cultural features
Cartographers: people who make maps
Hazard: a potential source of harm or danger
Sustainable: able to be maintained at a certain rate or level without depleting natural resources or causing ecological damage
Geological: relating to the study of the Earth's physical structure and substance
Environmental science: the study of the natural world and how it is influenced by human activity
Predict: to estimate or forecast a future event or trend
Analyze: to examine something in detail in order to understand it better
Design: to plan and create something in a specific way.



Tick on the correct functions of a surveyor:

- Carry out surveys of land, buildings or other sites to determine their precise boundaries, measurements, and features.
- Operate heavy machinery such as bulldozers and cranes on construction sites.
- Use specialized equipment such as total stations, GPS receivers, and digital levels to collect accurate data and measurements.
- Write legal contracts and agreements related to property ownership and land use.
- Analyze survey data and produce maps, plans, and reports using computer-aided design (CAD) software and other tools.
- Create marketing campaigns to promote a brand of surveying equipment.
- Create detailed site plans and profiles, as well as section drawings and cross-sections.
- Provide counseling services to clients related to their land and property disputes.
- Provide advice and guidance to architects, engineers, and construction teams on the design and layout of buildings and infrastructure.
- Develop and implement social media strategies for a surveying company.
- Conduct inspections of construction sites to ensure that the work being carried out conforms to design specifications and local regulations.
- Perform accounting and financial analysis for surveying projects.

- Prepare cost estimates for construction projects based on the data collected during surveys.

- Teach a course on surveying at a university or college.

- Provide expert testimony in court cases involving property boundaries, land disputes, and other legal issues.

- Manage and supervise teams of surveyors and other technical staff.

- Develop and maintain relationships with clients and stakeholders, including government agencies, private companies, and individuals.

Surveying Equipment and Functions

Name of Equipments	Function
Range Poles	Range Poles, or Ranging Rods as they are sometimes called, is a surveying instrument that's used for marking the position of surveying stations and sightings of those stations as well as for ranging straight lines.
Surveyor's Vest	A surveyor's vest is designed to keep workers safe in areas where there's a great deal of road or rail traffic, especially when they're working in low-visibility conditions.

PICTURE

Field Books	Surveyors use Field Books to record both survey data and notes as surveys were carried out.
Flagging	Flagging is used in surveying to mark grade levels, utility lines, survey stakes and other boundary markers.
Surveying Chains	The chain is used to measure the distance on the ground. It gives much more accurate measurement as compared to tape.
Surveying Arrow	Arrows are used for marking and are made up of hardened, and tempered steel wire of good quality.
Pegs	Pegs are mostly made of timber. They are also used to mark out the locations on the ground at terminal points or the end of the survey line.

Plumb Bob	It is used to transfer the points to the ground on a slope while chaining. It is also used to make the ranging poles vertical.
Surveyor's Compass	The surveyor's compass is an instrument for determining the horizontal direction of a line with reference to the direction of a magnetic needle.
Theodolite	It is the most precise instrument for the measurement of horizontal and vertical angles.
Measuring Tapes	Tapes are used in surveying to take linear measurements.

Total Station	Total stations are the primary survey instrument used in mining surveying. A total station is used to record the absolute location of the tunnel walls, ceilings (backs), and floors as the drifts of an underground mine are driven.
Optical Square	An optical square is a hand instrument used by surveyors to lay off right angles that are multiples of 90° or of 45°. Used for placing points on a line, offset measurements, setting our curves or determining horizontal plans.