Australian Government

Assessment Requirements for SISOFLD007 Navigate in difficult tracked environments

Release: 1

Assessment Requirements for SISOFLD007 Navigate in difficult tracked environments

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- plan and document three efficient routes, each different, within difficult tracked environments
- navigate each of the above three planned routes
- across the three navigation activities, collectively use these techniques to determine location:
  - using map, identifying natural features, constructed objects and determining distance travelled
  - using map and compass techniques including resections/tri-bearings
  - using GPS devices
  - using grid references, estimation and Romer devices
- across the three navigation activities, collectively use these navigation techniques:
  - using linear and point references
  - using terrain features: handrailing, collecting features, catch points
  - using compass techniques: aiming off, backbearing
  - using GPS: waypoints, routes
- on two occasions, determine when there is a deviation from a planned route, adjust and resume the planned route after fixing position using:
  - manual techniques on one occasion
  - a GPS device on one occasion
- determine two adjustments to routes in the field and navigate the changed routes using:
  - manual techniques on one occasion
  - a GPS device on one occasion.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- trusted sources of maps for the region or locality
- different technologies used to access maps

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- characteristics of different map types, their different uses, advantages and disadvantages, accuracy and sources of error:
  - paper based and digital
  - sketch maps and diagrams
  - guide book maps
  - charts
  - topographic
  - cadastral
- information found on maps including symbols and what they represent:
  - survey or edition date
  - map legend
  - scale and distance
  - grid lines and numbers
  - cardinal points and bearings
  - contour lines, altitude and water depth
  - topographic features
  - markers and beacons
  - gradient
  - roads, tracks and waterways
  - magnetic variation and annual change
- principal colours used on maps and what they represent
- other information and key features that can assist navigation in difficult tracked environments:
  - satellite imagery
  - aerial photographs
- features, functions and operation of global positioning systems (GPS):
  - when these might be used, advantages and disadvantages
  - reliability of signal, device and battery
  - system structure at fundamental level of understanding
  - how to identify and use datum grids
  - how to create, enter and transfer waypoints
  - how to create tracks, routes and grid references
  - accuracy and sources of errors
- these different types of compasses, their features and factors which affect accuracy:
  - baseplate/orienteering
  - sighting/mirror
  - lensatic/prismatic
- for difficult tracked environments, map and compass techniques used to:
  - calculate grid, magnetic and true north bearings
  - orientate map to surroundings

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    - maintain a designated course
    - identify unfamiliar features
    - make significant adjustments to routes
- techniques to determine location:
    - using map, identifying natural features, constructed objects and determining distance travelled
    - using map and compass techniques including resections/tri-bearings
    - using GPS devices
    - using grid references, estimation and Romer devices
- the following navigation techniques used to effectively navigate in difficult tracked environments; advantages and disadvantages:
    - using linear and point references
    - using terrain features: handrailing, collecting features, catch points
    - using compass techniques: aiming off
    - using GPS: waypoints, routes
- types of navigation aids found in the field and how these can assist with navigation:
    - track markers, signs and arrows
    - track and creek junctions and crossings
    - survey markers
    - beacons
    - cairns
    - natural features and constructed objects
- contents of navigation data sheets and their purpose:
    - grid reference points
    - grid and magnetic bearings
    - distances
    - estimated travelling times
    - height gain or loss
    - gradient
    - identifiable features
    - escape routes
- factors that affect the adjustment of routes during activities.

Assessment Conditions

Navigation skills must be demonstrated in a setting where outdoor recreation activities are delivered in difficult tracked environments. The environment must feature the following:

- tracks, natural and constructed features are marked on maps but these could be unreliable
- tracks are generally distinct but some parts of the track are indistinct
- tracks have signage at the track head, with route markers but limited signage en route.

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If in an alpine region and snow is present, assessment can only be completed if the track remains discernible.

The following resources must be available to replicate industry conditions of operation:

- first aid equipment
- communication equipment for emergency response.

Assessment must ensure use of:

- maps relevant to the activity type
- compasses and protractors
- global positioning system (GPS) devices
- activity plans
- template navigation data sheets.

Assessors must satisfy the Standards for Registered Training Organisations requirements for assessors, and:

- have a collective period of at least three years' experience with an organisation providing recreational programs where they have applied the skills and knowledge covered in this unit of competency; the three years' experience can incorporate full and or part time experience.

Links

Companion Volume Implementation Guides - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1ca50016-24d2-4161-a044-d3faa200268b

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