Fox Hunting - Radio Direction Finding

Sections

Joey Scouts | Cub Scouts | Scouts | Venturer Scouts | Rover Scouts

Scouts VICTORIA

Last updated: March 11, 2023, 10:51 p.m.

Challenge Areas

COMMUNITY | CREATIVE | OUTDOOR | PERSONAL GROWTH

Scout Method Elements

COMMUNITY INVOLVEMENT | LEARNING BY DOING | NATURE AND THE OUTDOORS | PROMISE AND LAW | PERSONAL PROGRESSION | PATROL SYSTEM

SYMBOLIC FRAMEWORK | YOUTH LEADING, ADULTS SUPPORTING

SPICES Growth Areas

CHARACTER | EMOTIONAL | INTELLECTUAL | PHYSICAL | SOCIAL | SPIRITUAL

The Adventure

Go on your own search and rescue style adventure using radio 'sniffers' to find hidden 'foxes'.

Plan

1. Investigate how radio direction finding is used in different applications of navigation and search and rescue. Look at how we might use multiple bearings to find the location of a ship, plane, or a hiker's emergency beacon using radio.
2. There are two different pieces of equipment used for this activity: sniffers and foxes.
   a. The sniffer is an antenna used to work out the direction where the fox radio signal is coming from.
   b. The fox is a small device that emits a radio signal.
3. Hide the foxes around a park.

Do

1. Give different teams a different fox number to start with. You might choose to have some teams work in ascending order and some in descending order to avoid them all following each other around in a circle.
2. Turn the sniffer on and select the relevant fox number. Often this will be between 1 and 6.
3. Hold the sniffer vertically (such that the antennas are up and down). Slowly sweep around, listening for the change in sound. Be careful with the antennas and make sure your team members are not in the way before moving the antenna.
4. Walk in the direction of the stronger sound and every 25 steps or so, stop and re-evaluate your direction. Slowly sweep the sniffer around to confirm you are walking in the correct direction.
5. Once you find the fox, stamp your card with the punch provided to confirm you have found it.
6. Select the next number on your sniffer and repeat steps 3 to 5.

Review

1. Were your directions always accurate? Did you need to adjust the direction you were walking when you got closer to the fox? Why do you think this could have been?
2. How could we improve the accuracy of our search?

Safety

- Hold the sniffers so the antennas are vertical to mitigate the risk of poking people directly with the ends of the antenna elements. The antenna elements are thin and pose a risk to eyes, etc.
- Always be aware of your surroundings when using the antennas: look around you before moving the antenna around.
- Consider placement of the fox to minimise risk to the youth members searching for it. For example, consider placing it behind a tree rather than in the middle of a bush.

Variations

- In this activity we were evaluating our direction 'on the go' as we walked, and we were and working from one point. You could use a map and compass and take bearings from multiple locations outside a 'search area' to triangulate the location of the fox before entering the search zone.
- Have a leader carry one of the foxes in their pocket as a mobile fox.
- Set up a detailed search and rescue scenario. Have the patrol rescue an object from the fox location.