

## Activity C3 GPS Search & Rescue - Find Bubba!

### Introduction:

GPS Search and Rescue is an exciting field exercise in which teams of "Wilderness Rescue Rangers" race to the rescue of "Bubba", an injured hunter/hiker/etc. Your studentss utilize their knowledge of GPS, magnetic compass, and topographic maps in their search. Teamwork and planning are vital to success in this multi-skill event!

**Time Involved:** variable.

### Materials Needed:

GPS receivers, magnetic compasses, and topographic maps of the search area - at least one set per rescue team. Two-way radios would also be needed for large-scale search operations. Construct a somewhat life-sized rescue dummy ("Bubba") such as a scarecrow with a blaze orange hat. Build a lightweight model, since you'll need to haul it to the rescue location. Or you could use a real live person to serve as "Bubba".

### Getting Started:

Select a good location to place "Bubba", secluded but not hidden, then mark and record his coordinates. Each team will need a topographic map of the area, a magnetic compass, and a GPS receiver. Portable two-way radios are also recommended. Site selection is very important. Match the size and scale of field terrain to the age and experience level of your learners. You want to challenge the rescue teams ... but keep it safe! For adults and older teens, you might want to set up a scenario over several square miles in which the teams might select from a variety of transportation modes (hiking, cars, canoes, horseback, etc.) to complete the rescue.

Also see "*Preparing GPS Receivers for Group Activities*". Be sure that the GPS receivers' map datum match that of the topographic map.

### Do the Activity:

Gather your teams of "Wilderness Rescue Rangers". Explain the scenario and provide the coordinates. Here's an example:

"Our dispatcher just received a radio distress call from an injured hunter in the State Forest. Said his name was Bubba. He fell out of a tree and broke his leg. Fortunately, he didn't break his GPS receiver or his two-way radio. He reported his coordinates as xxx before he passed out. First team to save him gets a free summer vacation week at Holiday Lake 4-H Center. Go get him!"

After entering the coordinates in their GPS receiver(s), each team should take time to plot Bubba's location on the topo map and then devise a rescue plan ... what route, transportation mode(s), equipment needed, etc. Time spent in planning usually results in time and energy savings on the trail.

The first team on the scene has the honor of bringing Bubba back to headquarters, dead or alive. Before leaving the rescue site however, they should either wait for the other teams to arrive or leave a message that have retrieved Bubba ... you wouldn't want rescue teams wandering around for hours searching for him. If two-way radios are available, they would be valuable for communication among the teams and for contacting headquarters.

Additional challenges:

GPS Search and Rescue lends itself to all sorts of challenging variations. One suggestion, taking an idea from hunter education training, is to have Bubba crawl away from his reported location, leaving a blood trail (red food color and glycerin in squeeze bottle) for rescuers to follow.

Another idea is expand on the rescue part of GPS Search and Rescue. Using a real human Bubba, have the team simulate the first aid treatment for the designated injury and then figure how to actually transport Bubba back to headquarters (the simulated "emergency room"). Other variations are limited only by our imaginations ... and risk management guidelines.

### **Background Information:**

Although our search for Bubba is all in fun, real-life search and rescue (often abbreviated as SAR) is serious business. GPS is widely used in SAR operations. To find out more about SAR and the organizations that are involved, visit the websites listed below:

National Association for Search & Rescue	<a href="http://www.nasar.org/nasar/">http://www.nasar.org/nasar/</a>
Search and Rescue Association	<a href="http://www.sara.org/">http://www.sara.org/</a>
Canine Search and Recovery	<a href="http://www.csar.org/">http://www.csar.org/</a>
Civil Air Patrol	<a href="http://www.cap.gov/">http://www.cap.gov/</a>
U.S. Coast Guard SAR	<a href="http://www.uscg.mil/hq/g-o/g-opr/sar.htm">http://www.uscg.mil/hq/g-o/g-opr/sar.htm</a>

*Note: Comments and suggestions regarding this activity and other components of the Virginia 4-H GPS curriculum are appreciated. Please contact Mike Clifford at: [mjc4h@vt.edu](mailto:mjc4h@vt.edu) / 804-561-5411 / 11131 Amelia Springs Rd., Jetersville, VA 23083*