

Game: prisoners

Your patrol was captured and you've been confined in separate cells. Will you still be able to communicate?

Learning targets: Learn basic science concepts related to radio waves - Practice with Morse code signalling - learning to be silent and skilled in listening.

Material:

- Paper and pen
- Morse Code chart/identification diagram.
- AM/FM radio receivers (commonly used to listen to broadcasting transmissions), one for each patrol.

Time and preferred place: 1 h - 1 h 30 min.. The game is meant to be indoor, in a building with at least as many rooms as the patrols.

Description: Radio waves are generated by high frequency oscillations of electric voltage or current. The easiest way to produce them, and the first in history to be used, is generating electric sparks. The radiofrequency interferences caused by sparks can be easily picked up by close receivers, especially in amplitude modulation (AM) reception mode; to listen to these signals, the radio should be tuned to a frequency where no broadcasting stations are transmitting. In everyday life, sparks are generated by switches, in the instants in which they are opened or closed. In nature, long range disturbances are generated by storm lightning, so that listening to these signals can be used, also at a scout/guide camp, to foresee the approaching of a storm.

Before the game or in a previous activity this technique should be taught to Scouts/Guides, with the possibility for them to practice.

At the beginning of the game, patrols are kidnapped by scout/guide leaders, disguised as terrorists or criminals. Each patrol is blindfolded (so they cannot understand where they and the other patrols are being moved) and put in a separate room; blindfolded people may be taken outside for a while, so that they are more confused and can't understand that each patrol is put in close rooms. What they can find in the room is: paper, pen (to write their last prayers!!!) and an AM/FM radio. On the walls there are light switches. Patrols can then communicate with each other in Morse code, using the switches and the radio in AM mode. While making dots is straightforward, dashes can be made with rapidly repeated on-off movements of the switch, or by keeping the switch in an intermediate position which causes continuous sparks (people can hear them "fry" inside the switch). The target of the communications can be chosen among different options:

- They have to understand where they are and where the other patrols are (particularly effective if Scouts/Guides are in a building they usually don't go in, or if windows are closed so that people cannot see outside).
- At the beginning of the game, a scout/guide leader gives each patrol a secret message to be delivered to a secret agent (with a given, short secret name), which is being hunted by criminals. When the patrols are blocked in the rooms, the patrols have to deliver their message to the agent by radio, or ask help to the agent by radio.
- At the beginning of the game, a scout/guide leader gives the patrols the mission to free a secret agent (with a given, short secret name). The agent was captured by criminals and can only talk via radio. In this case, the patrols have to listen to the spy's messages and possibly ask questions to understand where he/she is.
- Following the previous point and varying the game's rules, patrols are free to move in the building. Inside the rooms they are safe, but in the corridors they can be hunted and captured by the criminals.

Whatever option is chosen, the key point is that PATROLS MUST BE SILENT, whatever they do!

Note that radio signals generated by switches are short ranged, in a building they could pass through a couple of adjacent rooms (vertically or horizontally); as consequence, checking the strength of the received signals can be used to locate where the transmitting switch is.

