

JOTA - JOTI ACTIVITIES

Communication themed activities for Join In the air and
Jamboree on the Internet event





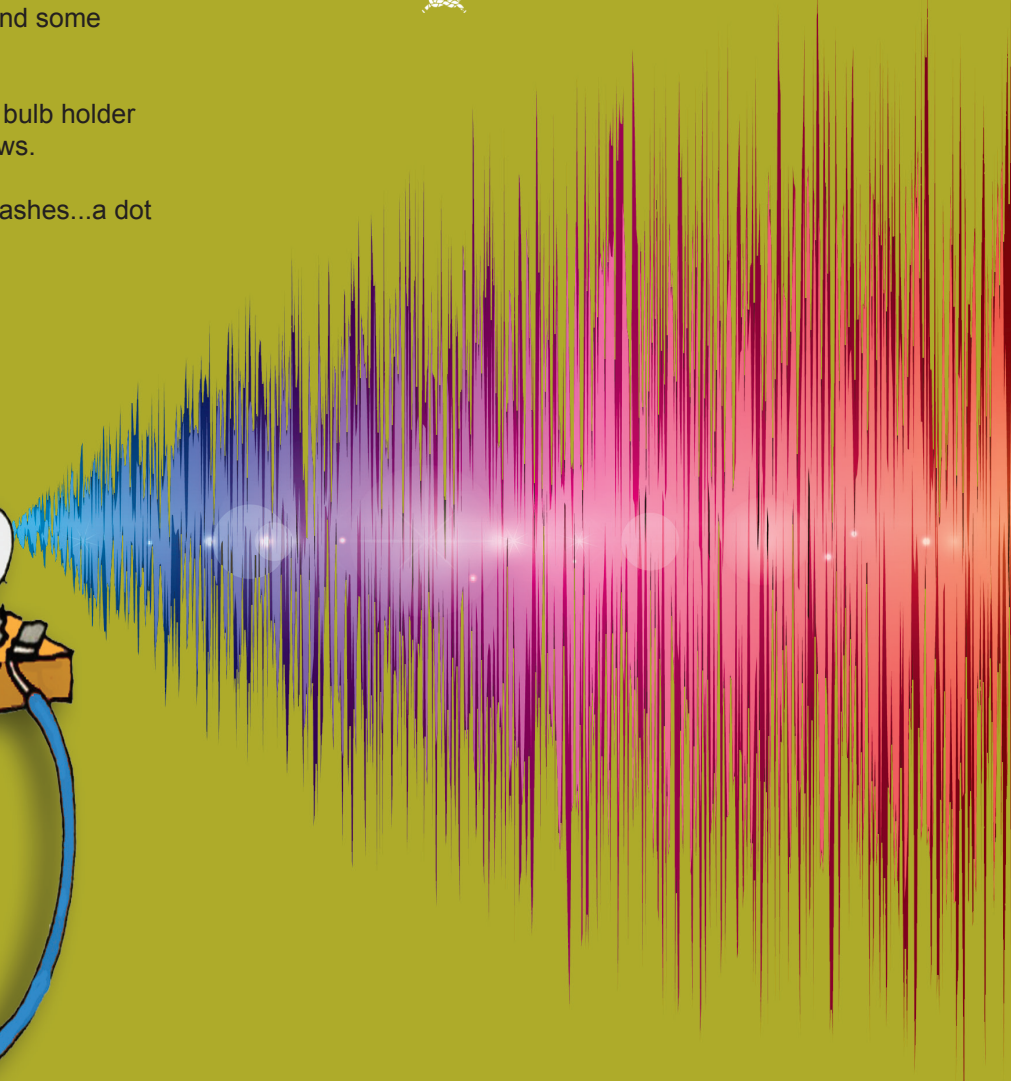
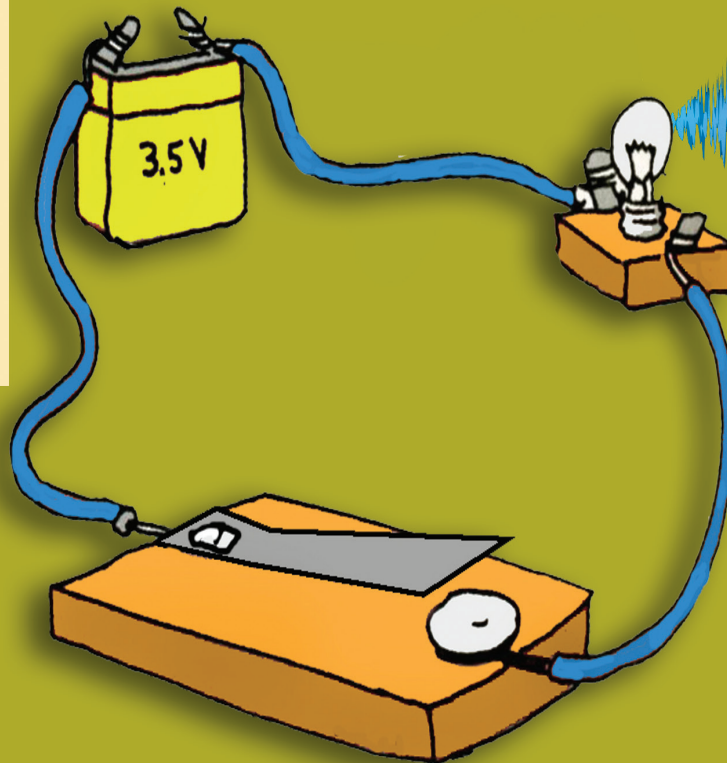
A	• -	N	• •
B	- • • •	O	- - - -
C	- • - •	P	• - - •
D	- • • •	Q	- - • •
E	•	R	• • •
F	• • - •	S	• • •
G	- • • •	T	-
H	• • • •	U	• • -
I	• •	V	• • • -
J	• - - -	W	• - -
K	- • -	X	- • • •
L	• - • •	Y	• - - •
M	- -	Z	- • •

1	• - - - -	6	• • • • •
2	• • - - -	7	- • • • •
3	• • • - -	8	- - • • •
4	• • • • -	9	- - - • •
5	• • • • •	0	- - - - -

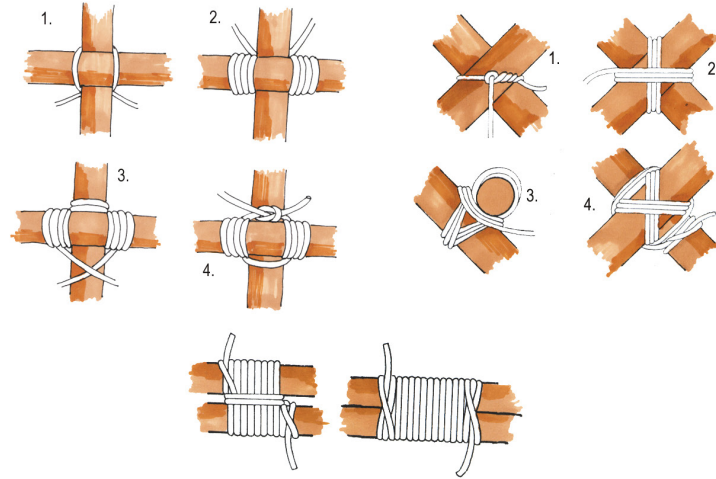
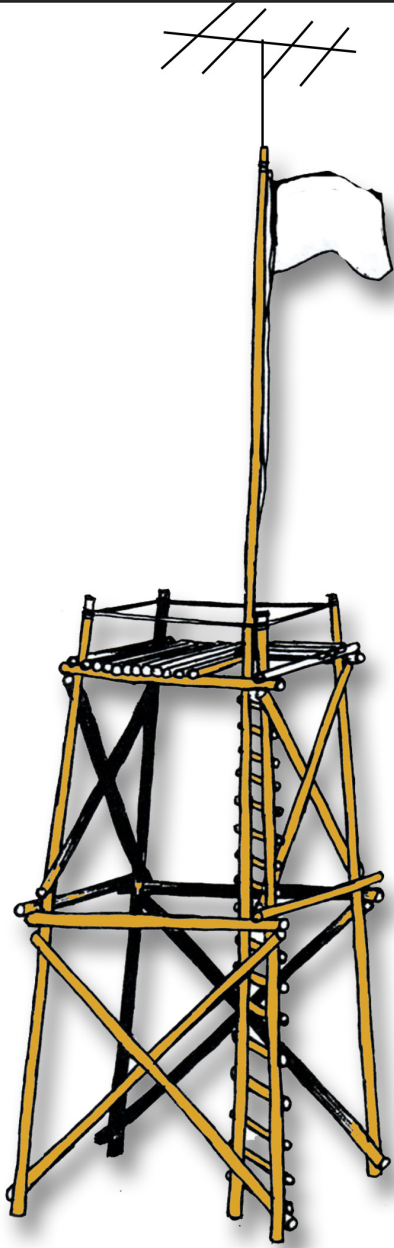
Create two Morse signallers as shown and send some messages to your friends

You will need some wood, wire, battery, small bulb holder and bulb, strip of copper or tin and some screws.

Morse is transmitted by a series of dots and dashes...a dot is a quick flash and a dash a longer flash.

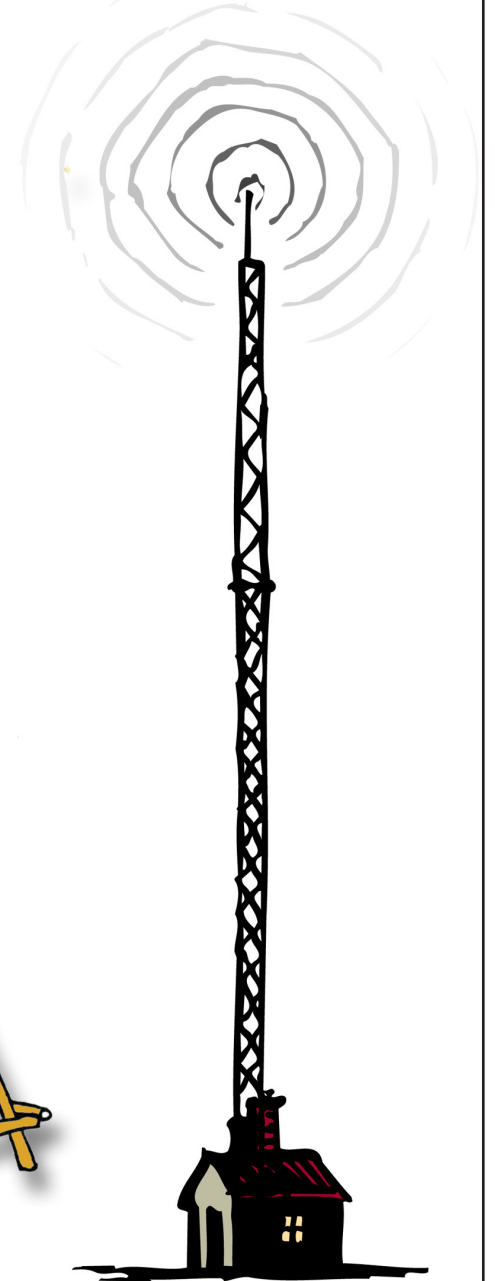
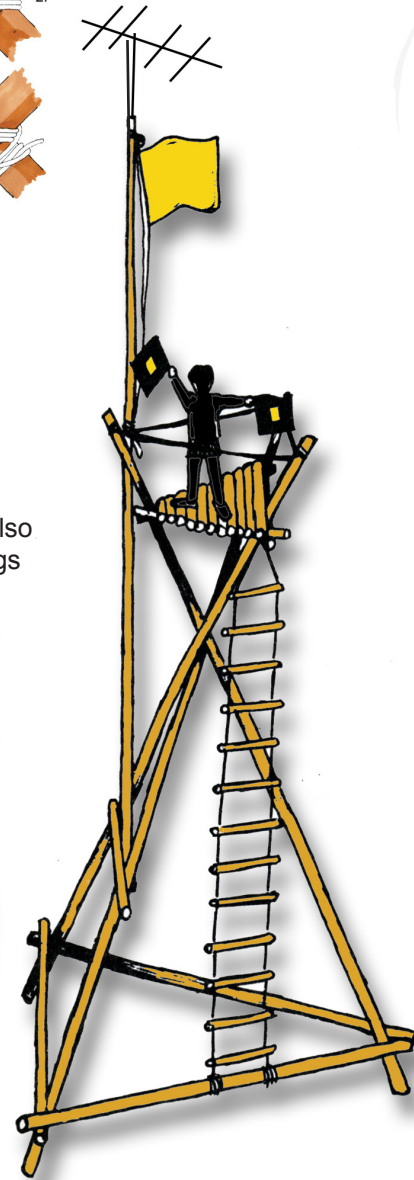
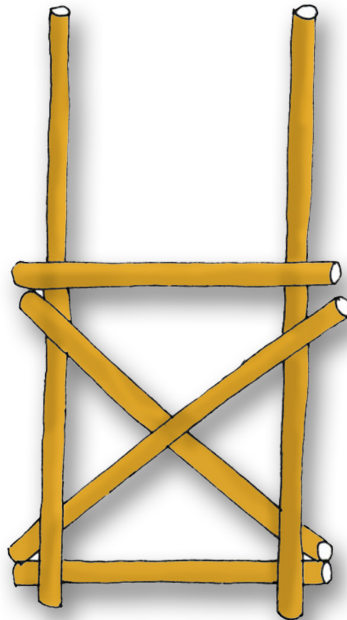


Morse Signalling



When transmitting a radio signals you need to get your aerial as high up as you can.

A pioneering tower is a good way of doing this and can also be used as a platform for signalling using semaphore flags

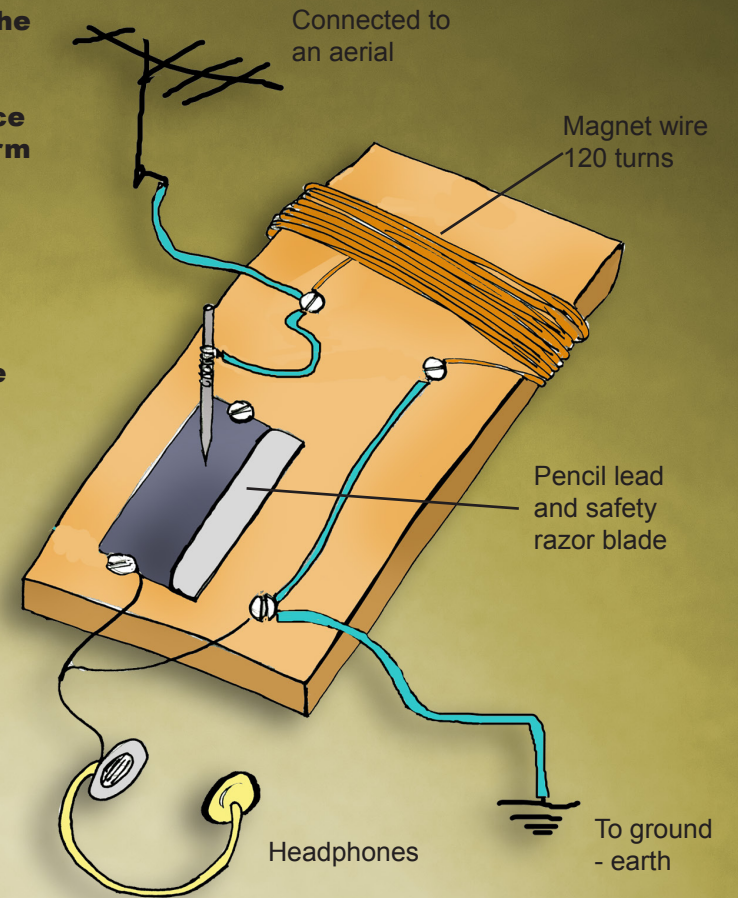


Aerial Tower



The foxhole radio was very popular during the second world war to keep up with news. it has no power source as it gets it signal form radio waves.

The safety razor and lead from the pencil act like a switch by moving the pencil lead across the blade you can hear radio broadcasts



Fox-hole Radio





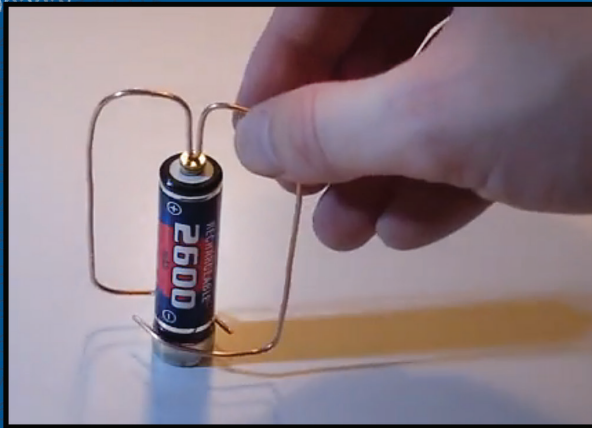
These amazing bots are easy to make with some simple part.

You need a small battery, the head of a tooth brush, a wobble motor and some sticky pads

Click on the Video and Web Icon for inspiration and instructions.

Wobble Bots

4879424657
8987453322
22469
45021
98741
24694
24694
23521
32034
94611
87432
46021
81941
52561
63451
48794



Make the simplest motor in the world

You will need a battery, some wire and a small magnet.

Click on video icon to see youtube videos



Simplest motor in the world



24697095235256
75256789874
5326345624682
46487947898745
53263456224657
25678987453322
34562246982925
48794246982927

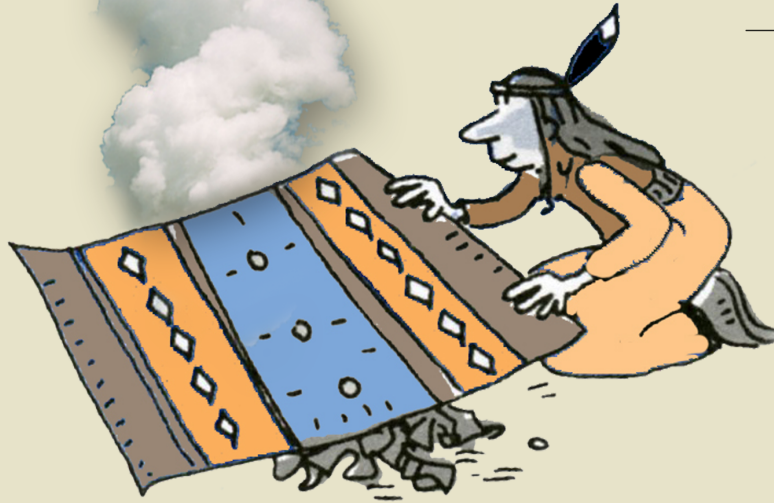


The smoke signal is one of the oldest forms of long-distance communication. It is a form of visual communication used over long distance.

In general smoke signals are used to transmit arrival, signal danger, or gather people to a common area.

In Ancient China, soldiers stationed along the Great Wall would alert each other of impending enemy attack by signalling from tower to tower. In this way, they were able to transmit a message a very long distance.

Create a smoky fire with damp grass and try to send a signal to someone far away.

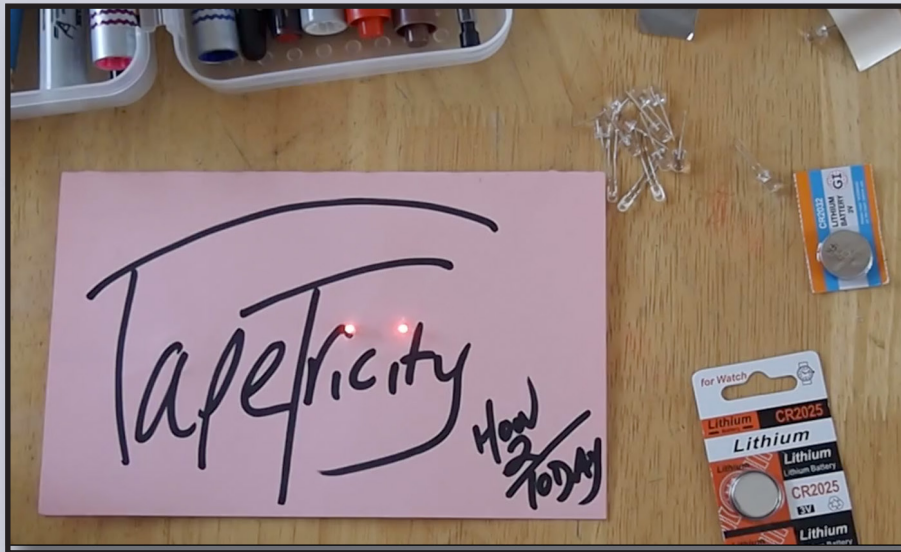


Smoke Signalling



Tape electrics is a way of creating low voltage electrical circuits with aluminium tape instead of wire.

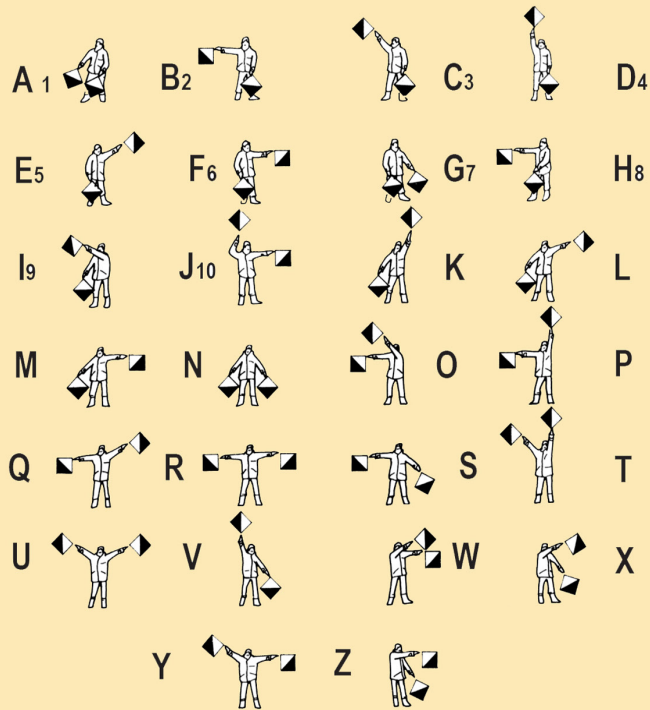
This is a great way to make all types of unusual stuff with blinking diode lights



Tape Electrics



Semaphore (as seen by the receiver)



Semaphore Grid

By using the semaphore grid it is easy to send a message without having to remember all the symbols – you just need to remember the symbols for the first five letters. It is always a good idea to write out your message before you start.

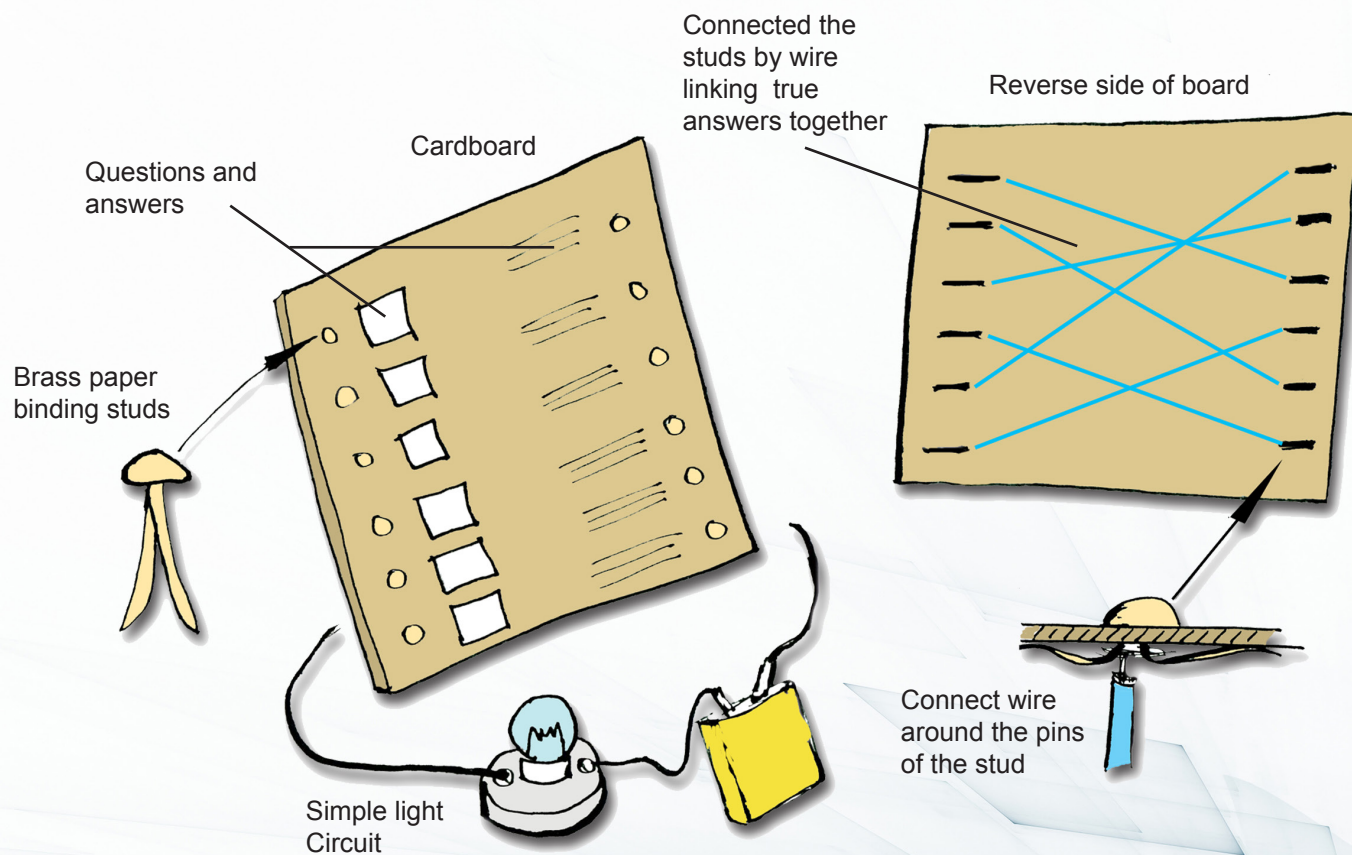
Example - the letter N is 4 and 3

Semaphore Grid

	1	2	3	4	5
1	A	B	C	D	E
2	F	G	H	I	JZ
3	K	L	M	N	O
4	P	Q	R	S	T
5	U	V	W	X	Y



Semaphore



True or False Boards are a fun way of creating learning material. The questions and answers are set up in two lines and mixed up so that they don't line up beside each other.

A brass paper binder is placed beside each question and answer. The Scout then uses a simple light circuit to find out the correct answers by placing one side of the circuit on a question pin and trying to discover the answer - the light goes on when he/she is correct.

True or False Board



Spin over your head

Connecting string should be 1200 long



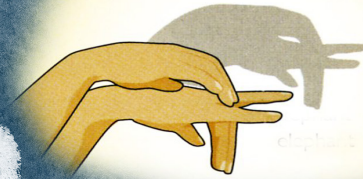
The bullroarer is an ancient method of signalling used by many people, often in tribal ceremonials.

It consists of a piece of wood that is carved into an aerodynamic wing shape at least 30cm long attached to a string that is spun over the head to create a buzzing noise.

They are easy to make and decorate with your most interesting designs



Bullroarer

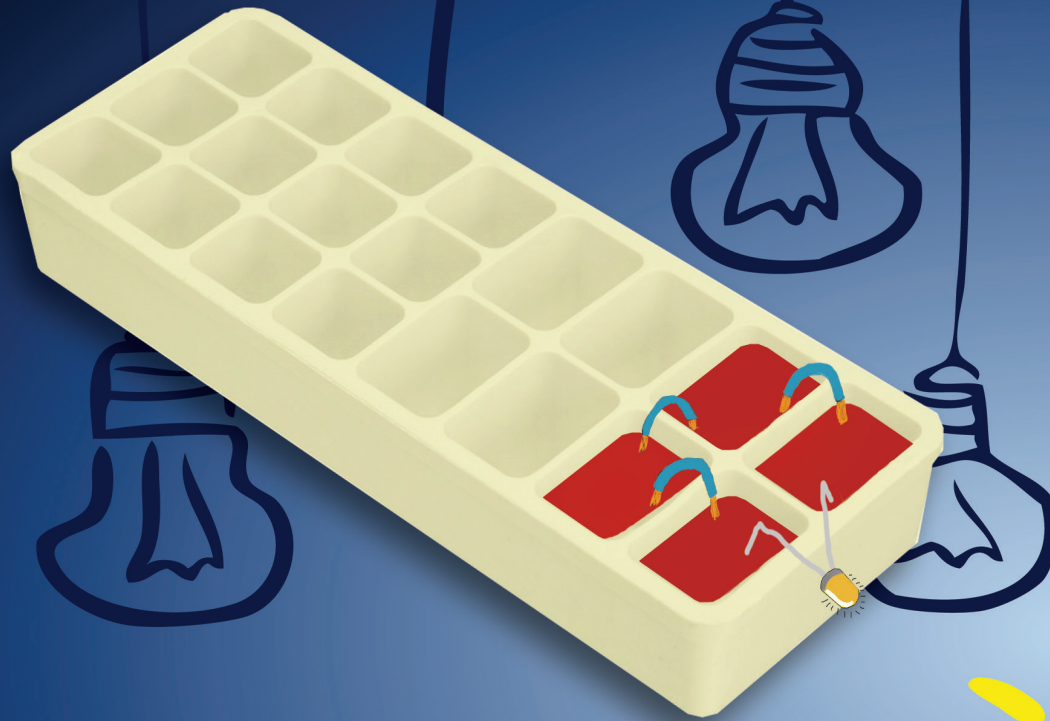


Cave painting is an ancient storytelling technique using symbols and drawings.

Create your own cave paintings using shadow-graphs to create shapes of animals that can be drawn or painted around

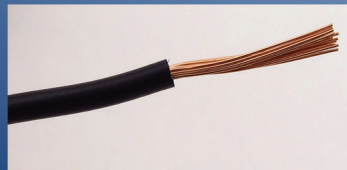


Cave Painting



Create a simple battery using an ice cube tray, some vinegar, wire and a diode bulb.

Click on Video Icon to be amazed



Vinegar Battery



CD Disk



A mirror or a CD disk can be used to signal in an emergency or as a fun activity on camp.

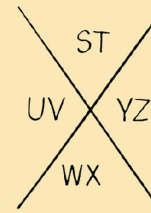
Two fingers are used (as shown) to aim the signal and by flashing the disk it is possible to send a message using Morse Code.

Mirror Signalling

Frame Code

The frame code uses a grid system to determine the position of letters. The message is then written graphically as shown. The dot indicates the second letter in the frame.

AB	CD	EF
GH	IJ	KL
MN	OP	QR



┌ A ● | B

└ ● | ▽ DOT

Code Wheel

A Code wheel is used to create secret messages by replacing one letter for another.

The first letter in the message is the letter that matches with A on the outer circle so it can be encoded

MEET AT THE CLOCK

PHFFJ PJ JAF NTVNC

The Romans invented the stick code. This was created by winding a leather strip around a stick of a special thickness. The message was then written on the leather and when unravelled would appear to be random letters

It could only be decoded if you has a similar sized stick.



Secret Codes





Walkie talkies are a great way of communicating with friends.

The phonetic alphabet provides a means to clarify messages and avoid confusion - if there is a crackling noise on the line. It also adds an authentic tone to your messages.

It is also possible to use a walkie talkie feature on your smart phone by downloading an app.



Phonetic Alphabet

A Alfa - -	B Bravo - - -	C Charlie - - -	D Delta - -	E Echo -	F Foxtrot - - -
G Golf - - -	H Hotel - - -	I India - -	J Juliet - - -	K Kilo - -	L Lima - - -
M Mike - -	N November - -	O Oscar - - -	P Papa - - -	Q Quebec - - -	R Romeo - - -
S Sierra - - -	T Tango -	U Uniform - -	V Victor - - -	W Whiskey - - -	X Xray - - -
Y Yankee - - -	Z Zulu - - -	1 One - - - -	2 Two - - - -	3 Three - - - -	4 Four - - - -
5 Five - - - -	6 Six - - - -	7 Seven - - - -	8 Eight - - - -	9 Nine - - - -	0 Zero - - - -

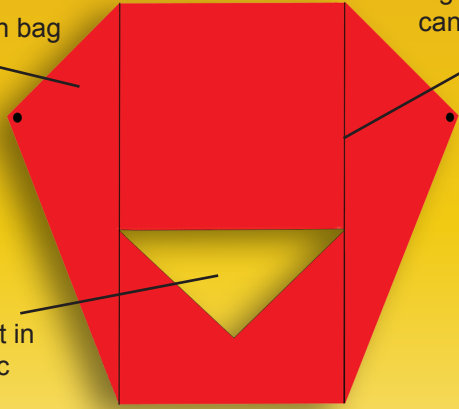
Walkie Talkies



Plastic trash bag

Light Bamboo canes

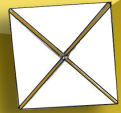
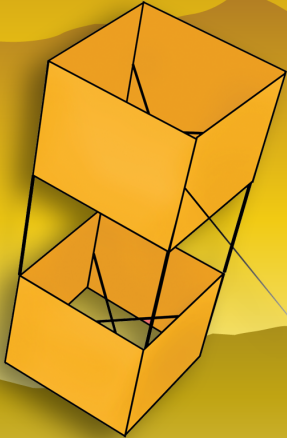
Hole cut in plastic



Kites are fun to make and use but they can also be used for lifting.

They are used for lifting aerial wire and for aerial photography by attaching a small camera.

Click on web icons for instructions



The box kite has great lifting capabilities.

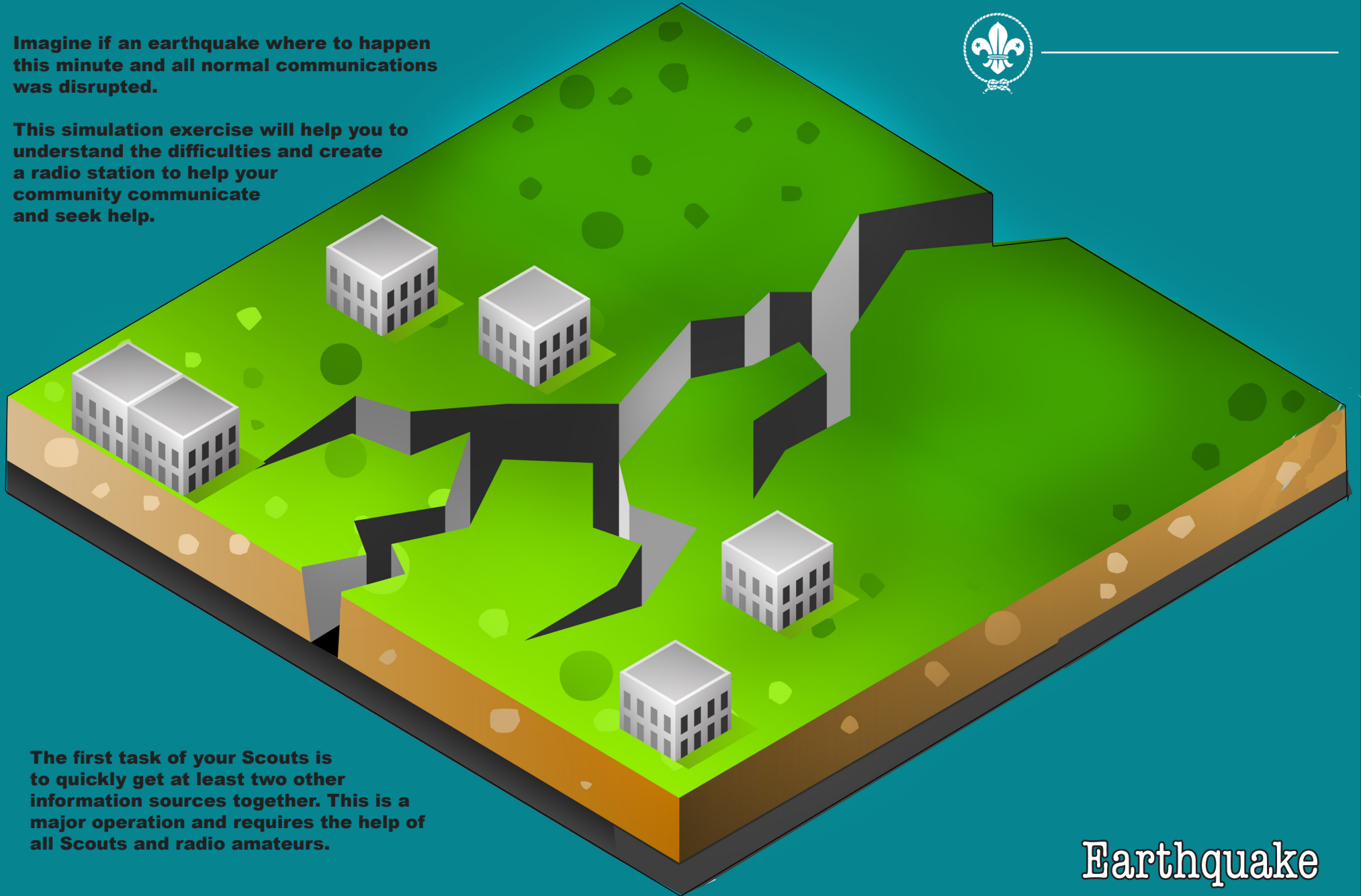


Kites



Imagine if an earthquake were to happen this minute and all normal communications was disrupted.

This simulation exercise will help you to understand the difficulties and create a radio station to help your community communicate and seek help.



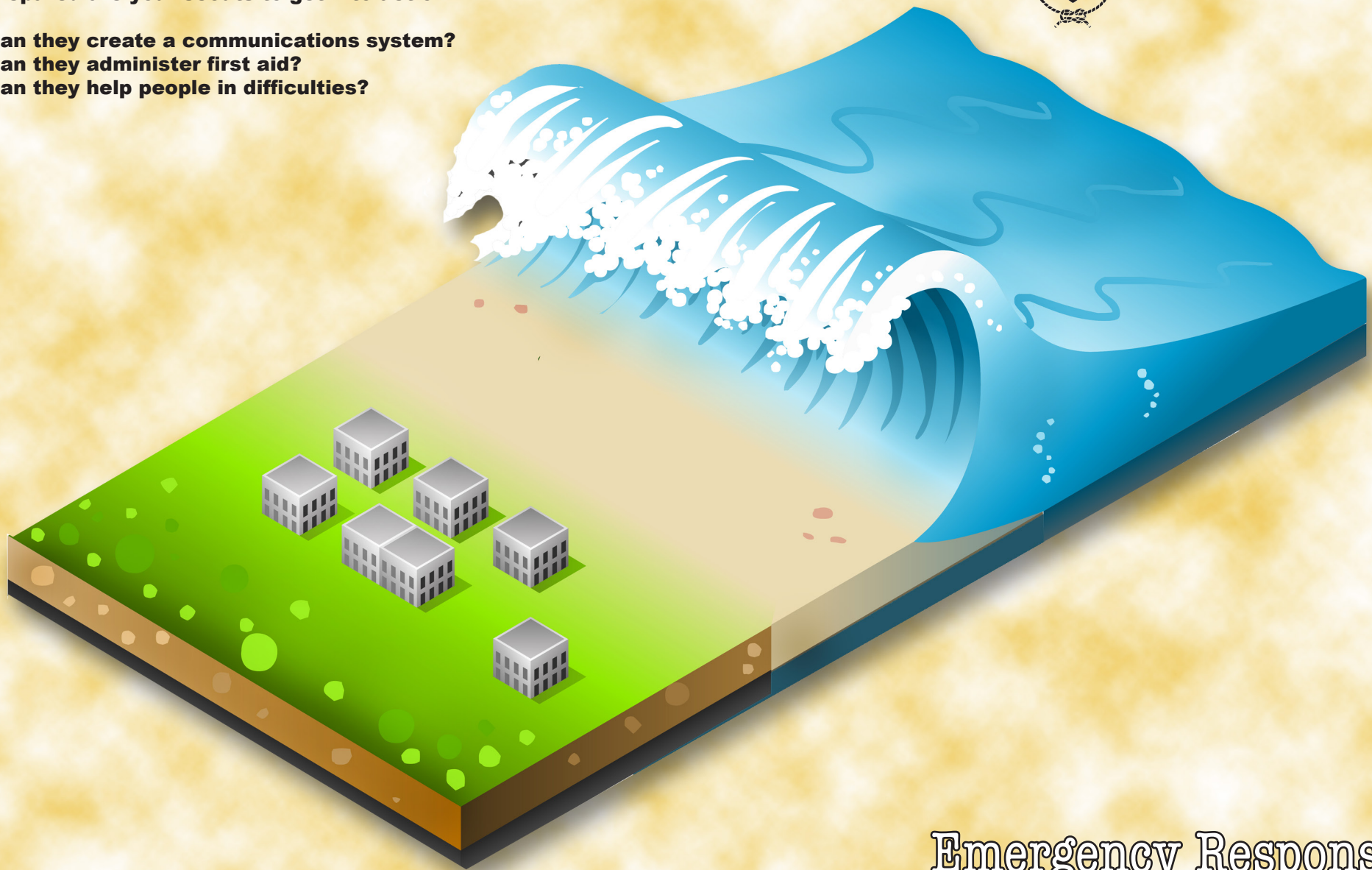
The first task of your Scouts is to quickly get at least two other information sources together. This is a major operation and requires the help of all Scouts and radio amateurs.

Earthquake



Emergencies can happen at any time - how prepared are your scouts to get into action.

**Can they create a communications system?
Can they administer first aid?
Can they help people in difficulties?**



Emergency Response

(/.\) **Embarrassed**

(=_=) **Annoyed**

\(*o*)/ **Cheering**

}i{ **Butterfly**

(: **Smiley Return**

\,,/((^_^)\,,/ **Rock on**

d^_^b **Listening to music**

)-0_0-(**Astonished**

(o_0) **Confused**

(~.~) **Sleepy**

/;-) **Scout**

:) **Smiley**

(^.^)/ **Waving Hello**

:-{ **It's raining**

B) **Sitting in the sun**

Communicate your emotions and facial expressions by using SMS text symbols.

Be creative create new and interesting symbol combinations to share with friends.

:-O **Amazed**

X-(**Mad**

:-X **Not saying anything**



Mood Text Messaging

Your spaceship has just crash-landed on the moon.

You are 200 miles (320 km) away from Moon Base 3.

It is midday (remember the lunar day lasts 14 Earth days). Your crew's survival depends on reaching the base.

15 items have been salvaged from the wrecked ship

You, in private, must firstly rank the items 1-15 in order of importance. When you are finished you should now join up with your Patrol/Team and agree a group listing.



Box of matches

Food concentrate

15m of nylon rope

Parachute silk

Solar powered portable heating unit

Two .45 calibre pistols

One case of powered milk

Two 45 kg tanks of oxygen

Self-inflating life raft

Magnetic compass

15 litres of water

Signal flares

**First Aid kit (containing spacesuit
injection needles)**

Solar powered FM receiver-transmitter

Stellar map (to aid navigation)

**This exercise is all about talking dialogue -
listening, discussing, solving conflict and reaching a
democratic solution.**

Talking Together