# CUB SCOUT ACHIEVEMENT BADGE – CODES & SIGNALS

Make maritime signal flags to spell out your name. You can make the whole alphabet if you're really keen!

Resources

- Cardboard squares
- Coloured paper (Black, Blue, Red, White, Yellow)
- Scissors and/or circular cutter
- Paper glue
- String
- Scotch Tape
- Illustration of Maritime Signalling Flags and their associated alphabetic letter and numbers

Instructions

This activity can be presented at several levels. At the most basic level, you will need to prepare all materials, cardboard squares, paper shapes etc. and simply have the Cubs glue the relevant coloured shapes onto the cardboard squares. At the most advanced level, you may have the Cubs do everything. The basic activity alone, however, takes most Cubs 30–45 minutes.

1. Cut out the card squares to use as the flag bases (see Resource Preparation);

2. Cut out the individual elements of the required Signal Flags (see Resource Preparation);

3. Glue individual elements onto flag base;

4. Attach individual flags to a piece of string for display. Start from the top and run down the piece of string, with the flags flying to the right. Remember that the flags are 'read' from the top down, which may not necessarily be from left to right, as we normally read. Remember also that real Signalling Flags have patterns on both sides, not just one like ours.

   To attach the flags:

   - Cut a piece of string of length about (1000 + # flags x 100)mm long;
   - Stick a piece of Scotch tape along the back of the hoist of the flag, with about half the width of the sticky tape attached to the flag base, and the other half exposed (sticky side up, with the flag facing up);
   - Trim any excess tape which protrudes beyond the upper and lower edges of the flag;
   - Place the piece of sting on the sticky side of the exposed part of the Scotch tape, neatly along the hoist of the flag, then fold the Scotch tape over the string and stick it down on the front of the flag;

- Leave about 500mm of string free at the top, and about 20mm between each flag. If you cut your sting according to the formula above, you will then have about 500mm of string left after the last flag. Tie the ends of your piece of string to appropriate supports and admire your handywork!

Resource Preparation

White Card

6 SHT Pasteboard   510 mm x 640 mm $1.45   The Art Store

Cut the card into 80mm squares. One sheet of the size specified will yield 42 squares. The letters "A" and "B" have a broad swallow tail in the fly of the flag—the base for these flags is made from the basic 80mm square by cutting out a triangle, 10mm high, from one side.

Black Paper

Vivaldi (Black #?) 120 gsm   A4 $0.35/sheet   The Art Shop

- Cut 40mm x 40mm squares for the black elements of the letter "L";
- Use a compass cutter to cut 40mm circles for the black element of the letter "I";
- Cut 80mm squares diagonally in half, and these triangles in half again to make the black element of the letter "Z".

Blue Paper

Vivaldi (Blue #?) 120 gsm   A4 $0.35/sheet   The Art Shop

- Cut 80mm squares for the base of flags for the letters "M", "P" and "W";
- Cut 40mm x 40mm squares for the blue element of the letter "S";
- Cut 20mm x 20mm squares for the blue elements of the letter "N";
- Cut 80mm x 40mm rectangles for blue element of the letters "A", "D", "E" and "K";
- 80mm x 24mm rectangles for the blue elements of the letters "J" and "T";
- 80mm x 16mm rectangles for the blue elements of the letter "C";
- 80mm x 14mm rectangles for the blue elements of the letter "G";
- Cut 80mm squares diagonally in half, and these triangles in half again to make the blue element of the letter "Z";
- Print blue element template (Blue Elements.pdf)—cut out crosses for the letter "X".

Red Paper

Vivaldi (Red #35) 120 gsm   A4 $0.35/sheet   The Art Shop

- Cut 80mm squares for the base of flags for the letters "B" and "R";
- Cut 56mm x 56mm squares for red element of the letter "F";
- Cut 40mm x 40mm squares for the red elements of the letter "U";
- Cut 26mm x 26mm squares for the red element of the letter "W";
- Cut 80mm x 40mm rectangles for red element of the letters "E" and "H";
- 80mm x 24mm rectangles for the red element of the letter "T";
- 80mm x 16mm rectangles for red element of the letter "C";

- Cut 80mm squares diagonally in half to make the red element for the letter "O", and these triangles in half again to make the red element of the letter "Z";

- Print red element template (Red Elements.pdf)—cut out crosses for the letter "V" and stripes for the letter "Y".

White Paper

| Vivaldi (White #?) 120 gsm | A4 | $0.35/sheet | The Art Shop |
| Bond copy paper 80 gsm | A4 | ~$6.00/ream | |

- Cut 40mm x 40mm squares for the white element of the letter "W";

- Cut 60mm x 60mm squares for the white element of the letter "P";

- Print white element template (White Elements.pdf) and cut out crosses for the letter "M".

Yellow Paper

| Vivaldi (Yellow #?) 120 gsm | A4 | $0.35/sheet | The Art Shop |

- Cut 80mm squares for the base of flags for the letters "D", "G", "I", "L", "Q" and "Y";

- Cut 80mm x 40mm rectangles for yellow element of the letter "K";

- Cut 80mm squares diagonally in half to make the yellow element for the letter "O", and these triangles in half again to make the yellow element of the letter "Z";

- Print yellow element template (Yellow Elements.pdf) and cut out crosses for the letter "R".

Compass Cutter

| Art & Craft by Colby | $9.95 | The Art Shop |

This is the preferred means of cutting circles in the present case. The more accurately the circle is cut, the better the disc will spin. If the disc is even slightly uneven, or if the centre of the disc is not located perfectly, it will vibrate badly when spinning and it will be difficult to make the disc spin consistently.

Paper Glue

| UHU *stic* Glue Stick | 8.2g | $9.99 (6 pack) | The Art Shop |

The smaller glue sticks (specified) are much easier for children to use to get a neat result that the larger items.

String

| Brickline No.8 | 100m | $? | Hardware Store |

Any string will do, but nylon bricklayer's line, or relatively fine string produces a neat result.

INTERNATIONAL SIGNAL CODE

	Alfa		November		One
	Bravo		Oscar		Two
	Charlie		Papa		Three
	Delta		Quebec		Four
	Echo		Romeo		Five
	Foxtrot		Sierra		Six
	Golf		Tango		Seven
	Hotel		Uniform		Eight
	India		Victor		Nine
	Juliet		Whiskey		Zero
	Kilo		Xray		
	Lima		Yankee		
	Mike		Zulu		
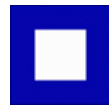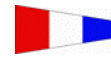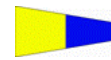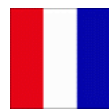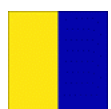
All signal code flags are square, although A and B are broadly swallowtailed. The colours are as follows:

A   vertically divided, white on hoist, blue on fly.

B   red

C   horizontally divided, blue-white-red-white-blue, ratio 1:1:1:1:1

D   horizontally divided, yellow-blue-yellow, ratio 1:2:1

E   horizontally divided, blue over red

F   white field, with red square rotated 45 o on to its corner, extending to the edges of the flag

G   vertically divided (from hoist) yellow-blue-yellow-blue-yellow-blue

H   vertically divided white on hoist and red on fly.

I   yellow field, small black circle in centre

J   horizontally equally divided blue-white-blue

K   vertically divided, yellow on hoist, blue on fly

L   quartered, first and fourth yellow, second and third black.

M   blue field, white saltire-style cross

N   chequered, four rows and four columns, alternating blue and white, beginning with blue in the upper hoist

O   diagonally divided, yellow in the lower hoist, red in the upper fly.

P   blue field, small white square centred on it

Q   yellow; the quarantine flag

R   red field, yellow cross

S   white field, small blue square centred on it

T   vertically equally divided, red-white-blue from hoist to fly

U   quartered, first and fourth red, second and third white

V   white field, red saltire-style cross

W   blue field, white square centred on it, small red square centred in the white

X   white field, blue cross

Y   diagonally striped, stripes rising from lower hoist to upper fly, yellow-red-yellow-red-yellow-red-yellow-red-yellow-red

Z   diagonally quartered, yellow in upper sector, black along hoist, red in lower sector, blue in fly sector.

Ship signal flags can also be grouped in pairs to make special signals. For example:

NC	I'm in danger	IR	Stay at large
ED	Your help signal was understood	JG	I'm astray
KP	Tow me to port	NA	Navigation prohibited
FO	I'm standing by you	KN	I can't tow you
PM	Follow me		