



The Magic Manual

Section 9

Communication

**A guide for fabricators
and users to stations from the
Magic Mathworks Travelling Circus**

9. COMMUNICATION

These stations tax the communicators' vocabulary of shape and position and test their awareness of the need for a reference frame when specifying position.

The more advanced the students, the greater the challenges they can set each other.

9.2 compounds the problem of communication by introducing an intermediary.

9.1 OVER THE PHONE

9.1.1

- p** The communicators work in 2 dimensions.

Younger children can use the colour-coded polygons and refer, for example, to "the green shape". Older ones may prefer to use the black tiles, so forcing themselves to name or, failing that, describe the shapes: "the dodecagon"/"the 12-sided shape", and so on.

9.1.2

- p** Interlocking cubes are substituted for the polygonal tiles so that, unless the describer chooses to build a planar shape, the task becomes 3-dimensional.

9.1.3

- p** Polydron takes the place of Multilink so that it may not be enough to specify position along 3 perpendicular axes.

9.2 THE FEELY BOX

9.2.1

- p** The materials, and therefore the range of possible shapes, are as **9.1.2**. The task can be simplified by making 'A' and 'B' one and the same person. Even then, in contrast to **9.1.2**, the describer is deprived of sight.

9.2.2

- p** In the same sense, this corresponds to **9.1.3**.

[illegible]

[illegible]




	NUMBER	TITLE
GROUP	9	COMMUNICATION
STATION	9.1.1	OVER THE PHONE 1
TOPIC	The vocabulary of shape and position; the need for a reference frame when specifying position	

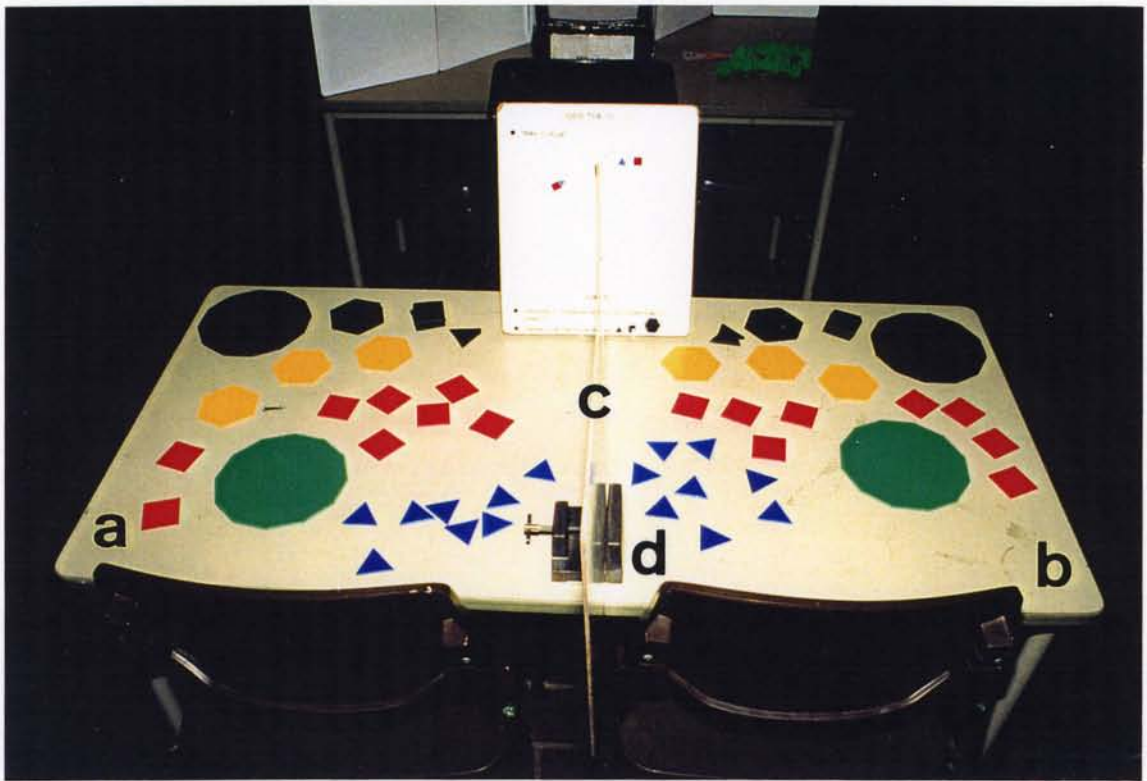
OVER THE PHONE 1

- Make a design.



SCREEN

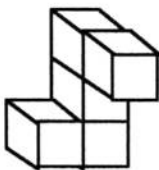
- Describe to someone behind the screen how to build it.
- Harder: use the black shapes  !  !  !



	NUMBER	TITLE
GROUP	9	COMMUNICATION
STATION	9.1.2-3	OVER THE PHONE 2-3
TOPIC	The vocabulary of shape and position; the need for a reference frame when specifying position	

OVER THE PHONE 2, 3

● Build a model.



SCREEN

- Describe to someone behind the screen how to build it.
- Harder: use the interlocking polygons.



e **g**

caption for **9.1.2-3**

h **f**



PICTURE KEY	DESCRIPTION	TRADE NAME	U.K. SOURCE
	For 9.1.1:		
a, b	identical sets of polygonal tiles (as 4.1.1 a)		
c	2 caption boards as described, their longer edges vertical, joined with tape, clamped in:		
d	slotted base	STA-395-W	Griffin Education (address above)
	For 9.1.2-3:		
c, d	as above		
e, f	2 cm interlocking cubes	Multilink SY 007/9	NES Arnold Ltd (address above)
g, h	assortment of interlocking polygonal tiles	Polydron Frameworks	Polydron International Ltd (address above)
e - h	same in containers, e.g. Addis Unit 1		Addis Housewares Ltd (address above)

	NUMBER	TITLE
GROUP	9	COMMUNICATION
STATION	9.2.1-2	THE FEELY BOX 1, 2
TOPIC	As 9.1.1	

THE FEELY BOX

"...the blind leading the blind..."

● Meet:

► A, B and C.



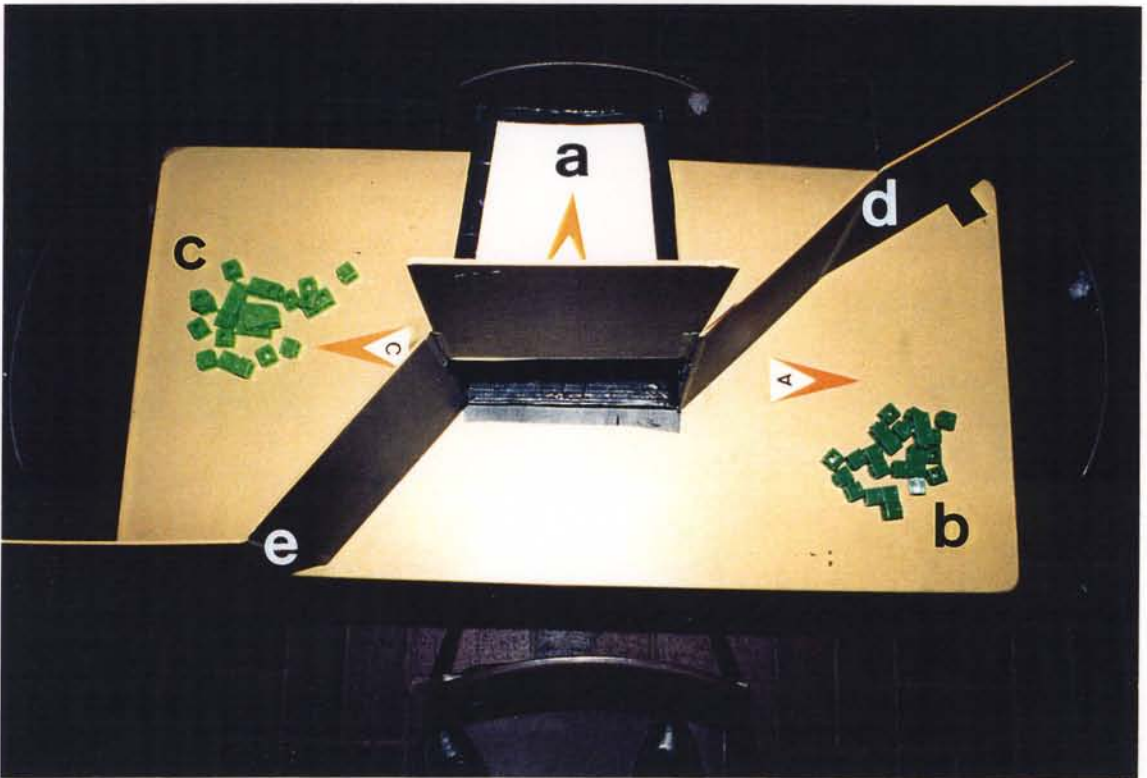
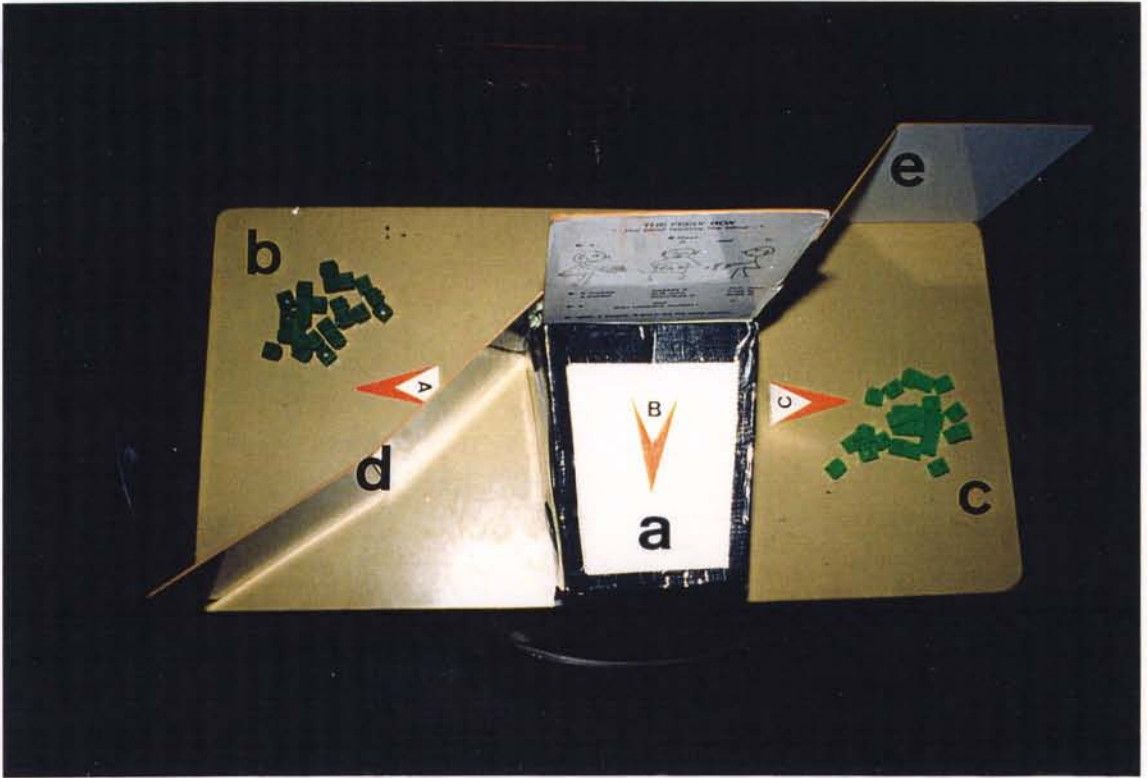
► A makes a model, passes it to B, who describes it ...to C, who tries to build it.

► A and C then compare models !

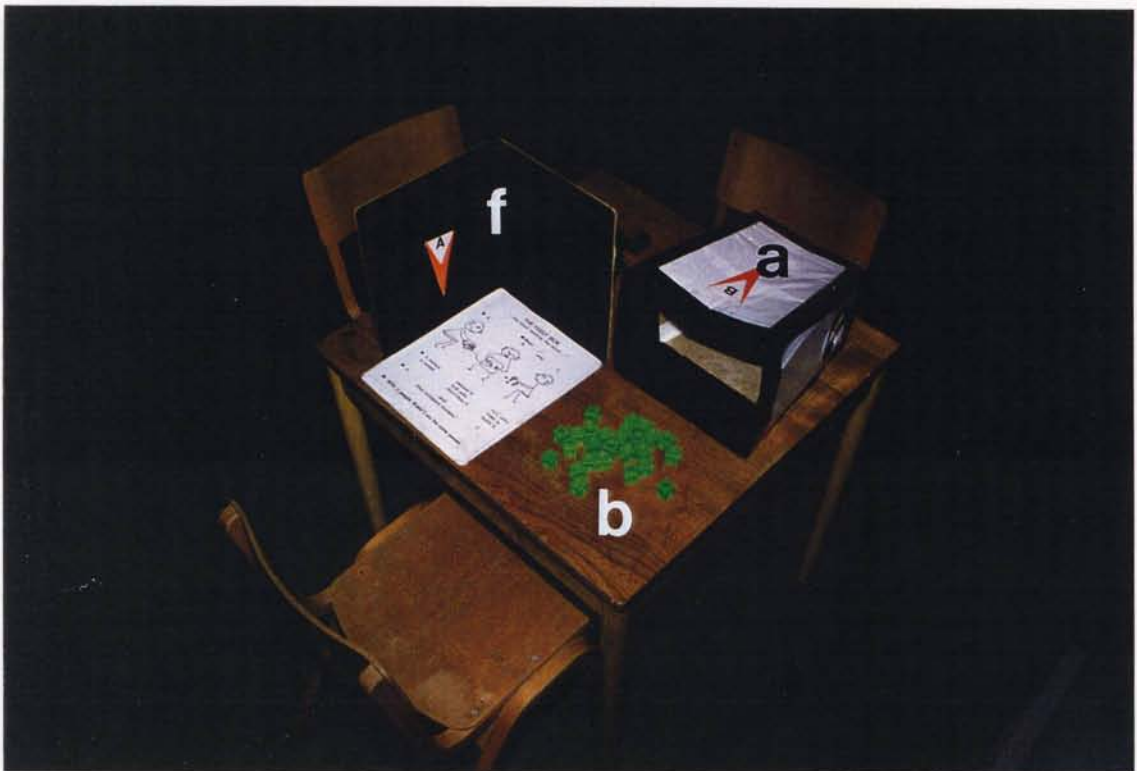
► With 2 people, B and C are the same person .



1.



2.



PICTURE KEY	DESCRIPTION	TRADE NAME	U.K. SOURCE
<p>1.,2.</p> <p>a</p> <p>d, e, f</p> <p>b, c</p>	<p>arrangements suited to 2 different sizes and shapes of table - others possible</p> <p>feely box, edges reinforced with tape and the whole covered with Transpaseal</p> <p>screens as 9.1.</p> <p>For 9.2.1: 2 cm interlocking cubes (cf. 9.1.2)</p> <p>For 9.2.2: substitute interlocking polygonal tiles (cf. 9.1.3)</p>	<p>DIME feely box (kit)</p> <p>Multilink SY 007/9</p> <p>Polydron Frameworks</p>	<p>Tarquin Publications (address above)</p> <p>NES Arnold Ltd (address above)</p> <p>Polydron International Ltd (address above)</p>