



Cap sur l'école inclusive
en Europe



Pedagogical Sheet

Taming tactile reading of simple geometric figures through drawing Cycle 2 (1st to 3rd grades)

Section of the module / E

Finding

Visually impaired pupils are all, apart perhaps of a few exceptions and at different frequencies, readers and not designers of diagrams. They discover a document that was produced and coded by designers-transmitters and play only rarely or not at all the role of receiver-reader of the provided document.

Learning how to trace a geometric drawing with a specific material is complex and requires attention, method and concentration: but this is also the case for non-disabled pupils.

This drawing is not an artistic drawing even if codes exist in both cases. We use a specific vocabulary, precise in its meaning and the use of which is mandatory for all. The material used is also special and requires an essential discovery and learning.

Example

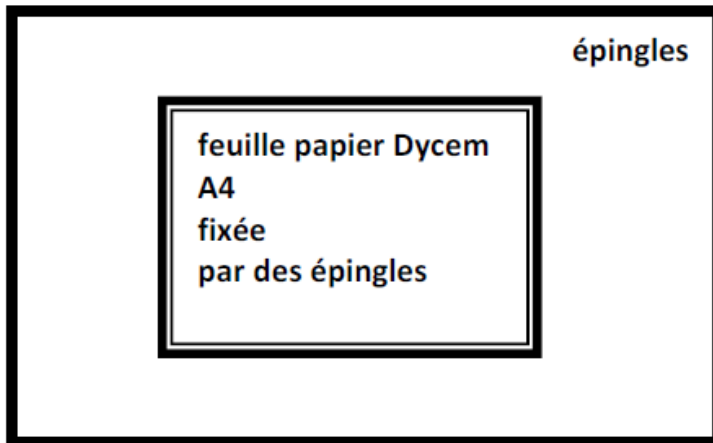
The essential prerequisites:

- discovering the material:
- a drawing board (the pins need to be stitched by the pupil and remain in place), Dycem paper (transparent non-slip material, A4 size) attached by a pin to the 4 corners
- ruler, square, compass, punch (or pen or dry point pencil)
- no drawing wheel: in order to control tactilely one's drawing, it is necessary to flip the Dycem paper sheet.

This is another learning to be considered separately because it requires other skills linked to identification, like mirrored figures for example.

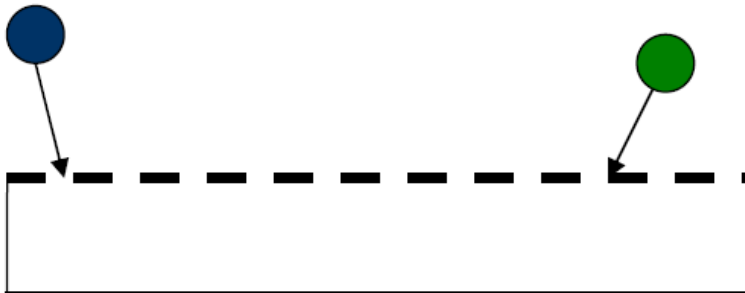
- large-head pins

- Organizing the workstation



ruler, punch, square

- Place the ruler, making sure all the traces can be drawn on the Dycem paper sheet
- The instruction: draw a triangle ABC right-angled at A with side AB = 8 cm and side AC = 9 cm
- Construction step by step:



I – Draw 8 cm-long segment AC

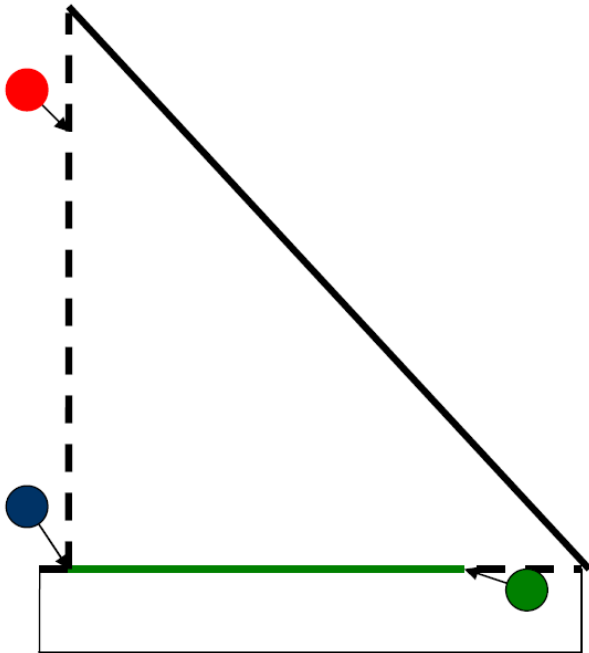


- Stitch a pin into a notch: this will be point A (top of the right corner). No need to start from point 0 of the ruler since a reference point will be kept, marking the beginning of the drawing
- With another pin count the notches on the ruler, stitch the 2nd pin in notch 8: this will be point C
- With a punch trace the AC segment by pushing the punch against pin A and then draw up until coming up against pin C
- The 8 cm-long AC side of the right triangle is drawn (green line)
- Leave the blue and green pins and the ruler in place

II – Draw 9 cm-long segment AB



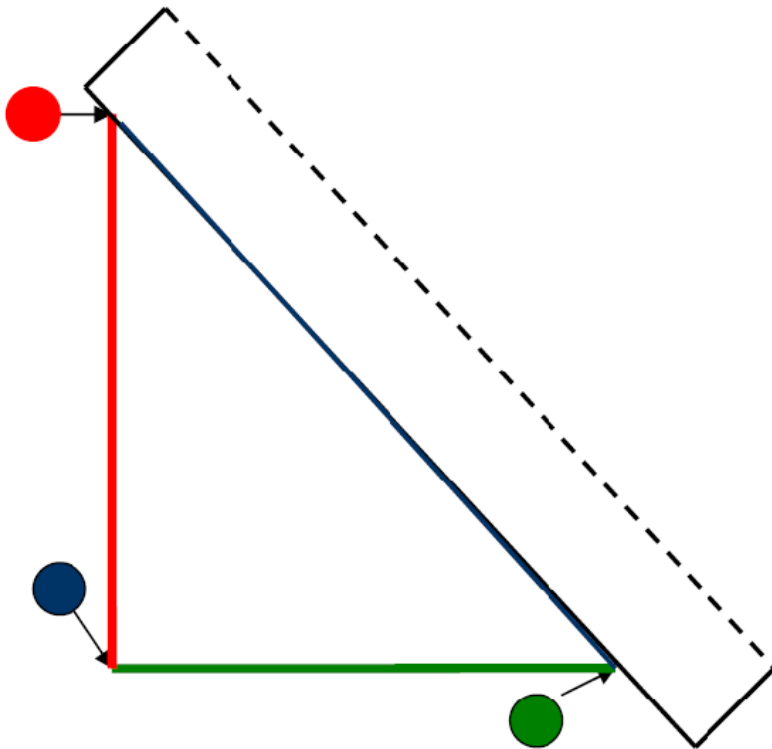
- Place the square against the left-over ruler and slide it until coming up against pin A
- With another pin count the 9 notches: fix the pin to feature point B
- With a punch trace the segment by pushing the tip of the punch against pin A and then draw up until coming up against pin B
- The 9 cm-long AB side of the right triangle is drawn (red line)
- Leave the blue, green and red pins in place
- Remove the square and the ruler

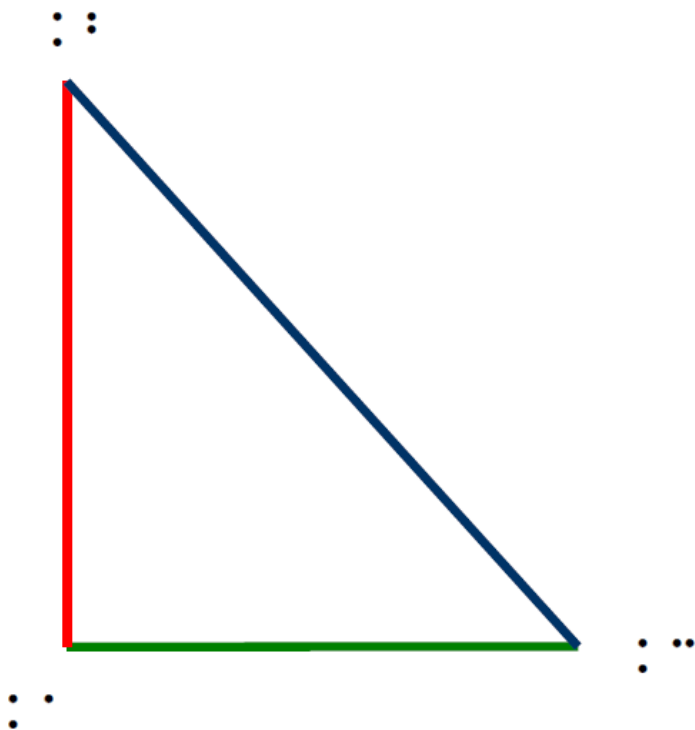


III- Draw segment BC

B ● **C** ●

- Place the ruler (side without notch) against pins B and C
- With the punch trace the BC segment (blue line) by pushing against pins B and C
- The triangle right-angled in A is drawn: labels or stickers with braille letters can be stuck on each vertex.





References:

- « Enseigner à des élèves aveugles ou malvoyants » (« *Teaching blind or visually impaired pupils* »). Nathalie Lewi-Dumont INSHEA CANOPÉ
- Annie Lamant : President of GPEAA (Group of Teachers and Educators of the Blind and the Visually Impaired, specialized teacher. Intervention during pedagogical meetings.
- « Guide de l'acheteur public de produits graphiques en relief à l'usage des personnes déficientes visuelles » (« *Public Buyer's Guide to Graphic Relief Products for the Visually Impaired* ») Imprimerie des Journaux Officiels 2000