
ICOM 2007

KIEV

20th August 2007



GENERALISATION
of Orienteering maps



Why Generalise?







*The reality of the world has to be
shown on this globe.*

You cannot show everything.

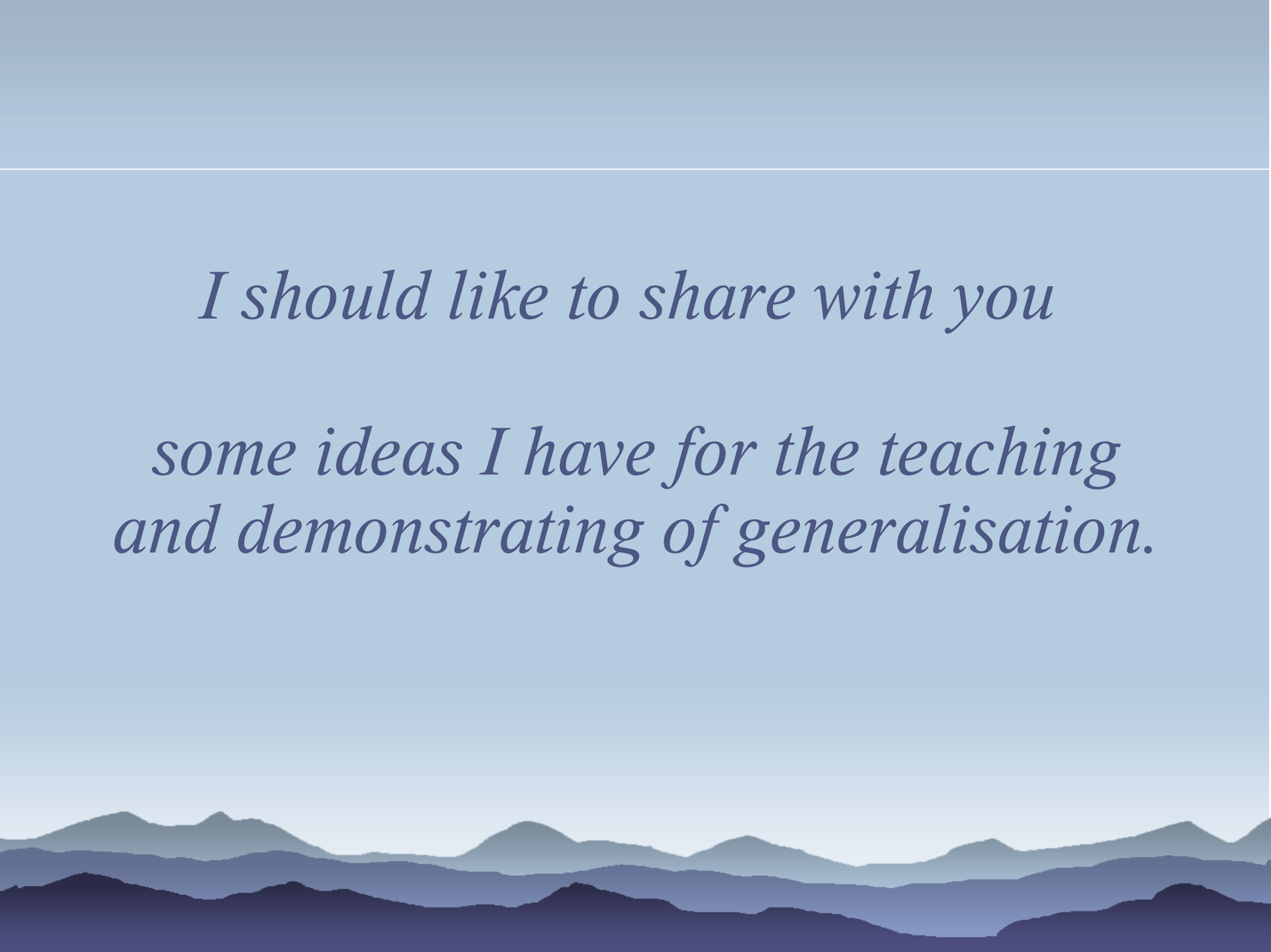
It needs to be generalised.



You cannot show everything.



*I should like to share with you
some ideas I have for the teaching
and demonstrating of generalisation.*



*It is not intended to teach
cartographic and surveying
techniques.*

Cartography and Surveying

- ♦ Most Federations will have access to books and documents in their own language to help teach cartography and surveying techniques.
- ♦ Many will have copies of the IOF Specifications in their own language.
- ♦ The IOF publishes a CD of the “IOF map Committee Instructors kit”

*I would like you to consider the
7 “S’s” of generalisation*

- ◆Scale and Symbols
- ◆Speed
- ◆Size
- ◆Space
- ◆Simplification
- ◆Selection
- ◆Shape of ground



Perhaps it should be 8

*but I want you to consider
Symbols and Scale together*



☰ *The 7 S's of mapping*

- ◆ **Scale and Symbols**

- ◆ Speed

- ◆ Size

- ◆ Space

- ◆ Simplification

- ◆ Selection

- ◆ Shape of ground

Symbols and Scale

You will all be familiar with this



International Specification for Orienteering Maps



INTERNATIONAL ORIENTEERING FEDERATION 2000

Radiokatu 20, FI-00093 SILU, Finland – <http://www.orienteering.org>

MAP COMMITTEE

Inside you will find scales

3 MAP SPECIFICATION FOR FOOT-ORIENTEERING

3.1 Scale

The scale for an orienteering map is 1:15 000. Terrain that cannot be fieldworked at a scale of 1:7 500 and legibly presented at a scale of 1:15 000, is not suitable for international foot-orienteering.

Maps at 1:10 000 may be produced for relay and short distance competitions. The scale 1:10 000 is recommended for older age groups (age classes 45 and above) where reading fine lines and small symbols may cause problems or for younger age groups (age classes 16 and below) where the capacity of reading complex maps is not fully developed.

Maps at 1:10 000 must be drawn with lines, line screens and symbol dimensions 50% greater than those used for 1:15 000 maps.

Where practical the same dot screens as used at 1:15 000 will give the most legible map and are therefore to be preferred.

In education there is usually a progression of scales from 1:2 500 to 1:5 000 to 1:10 000. Maps at very large scales such as 1:2 500 will clearly contain additional detail such as playground equipment. Line dimensions for these maps should also be enlarged by 50%.

Other scales may be produced for other forms of orienteering.

For practical reasons a map should not be larger than is necessary for the orienteering competition. Maps larger than A3 should be avoided.

*The scale for foot orienteering maps
is 1:15000*

*It is recommended that the scale of the base
map for survey should be 1:7,500*



*The dimensions of symbols are given
for 1:15000 maps*



105 Contour value

Contour values may be included to aid assessment of large height differences. They are inserted in the index contours in positions where other detail is not obscured. The figures should be orientated so that the top of the figure is on the higher side of the contour.

Colour: brown.



106 Earth bank

A steep earth bank is an abrupt change in ground level which can be clearly distinguished from its surroundings, e.g. gravel or sand pits, road and railway cuttings or embankments. The tags should show the full extent of the slope, but may be omitted if two banks are close together. Impassable banks should be drawn with symbol 201 (impassable cliff). The line width of very high earth banks may be 0.25 mm.

Colour: brown.



107 Earth wall

Distinct earth wall. Minimum height is 1 m.

Colour: brown.



108 Small earth wall

A small or partly ruined earth wall shall be shown with a dashed line. Minimum height is 0.5 m.

Colour: brown.



109 Erosion gully

An erosion gully or trench which is too small to be shown by symbol 106 is shown by a single line. The line width reflects the size of the gully. Minimum depth 1 m. The end of the line is pointed.

Colour: brown.



110 Small erosion gully

A small erosion gully or trench. Minimum depth 0.5 m.

Colour: brown.



111 Knoll

Knolls are shown with contour lines. A prominent knoll falling between contour lines may still be represented by a contour line if the deviation from the actual contour level is less than 25%. Smaller or flatter knolls should be shown with form lines.

Colour: brown.



112 Small knoll

A small obvious mound or rocky knoll which cannot be drawn to scale with a contour (diameter of mound less than ca. 5 m). The height of the knoll should be a minimum of 1 m from the surrounding ground. The symbol may not touch a contour line.

Colour: brown.



113 Elongated knoll

A small obvious elongated knoll which cannot be drawn to scale with a contour (length less than 12 m and width less than 4 m). The height of the knoll should be a minimum of 1 m from the surrounding ground. Knolls larger than this must be shown by contours. The symbol may not be drawn in free form or such that two elongated knoll symbols overlap. The symbol may not touch a contour line.

Colour: brown.

Symbols and Scale

DO NOT CHANGE THESE



☰ *The 7 S's of mapping*

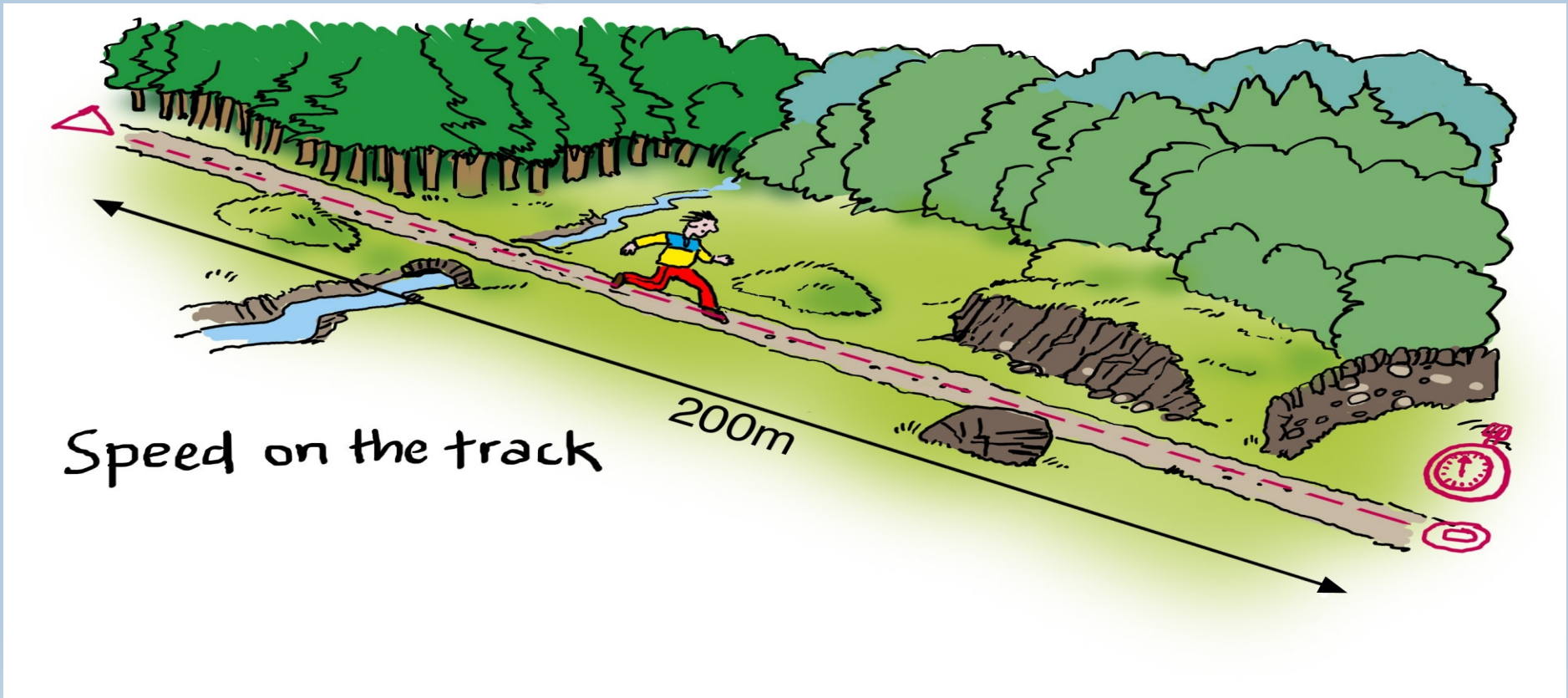
- ◆ Scale and Symbols
- ◆ **Speed**
- ◆ Size
- ◆ Space
- ◆ Simplification
- ◆ Selection
- ◆ Shape of ground

Orienteering is a running sport

*An elite athlete will run about 1km in 5
minutes
this is*

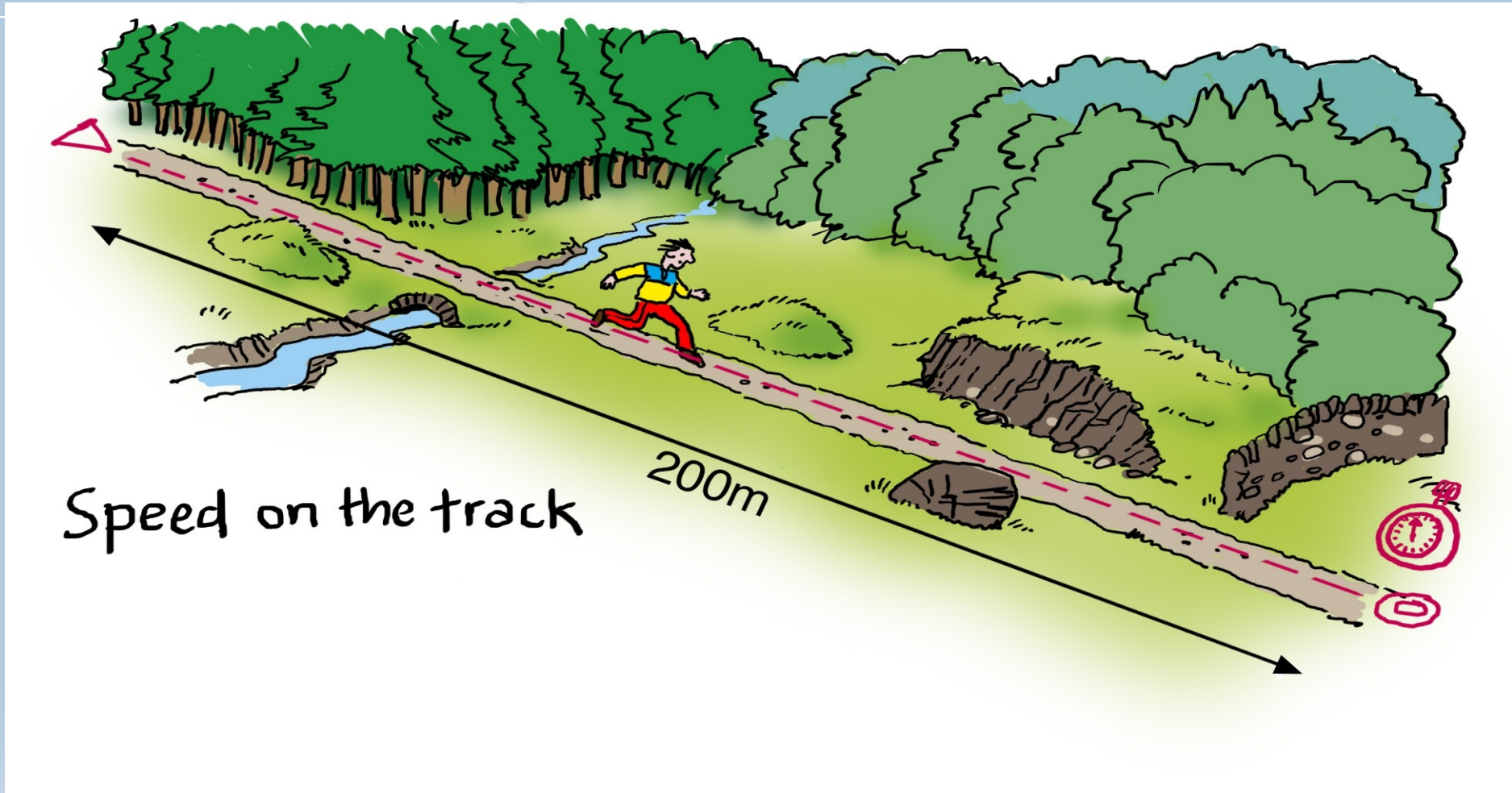
1 minute for 200m

Try this



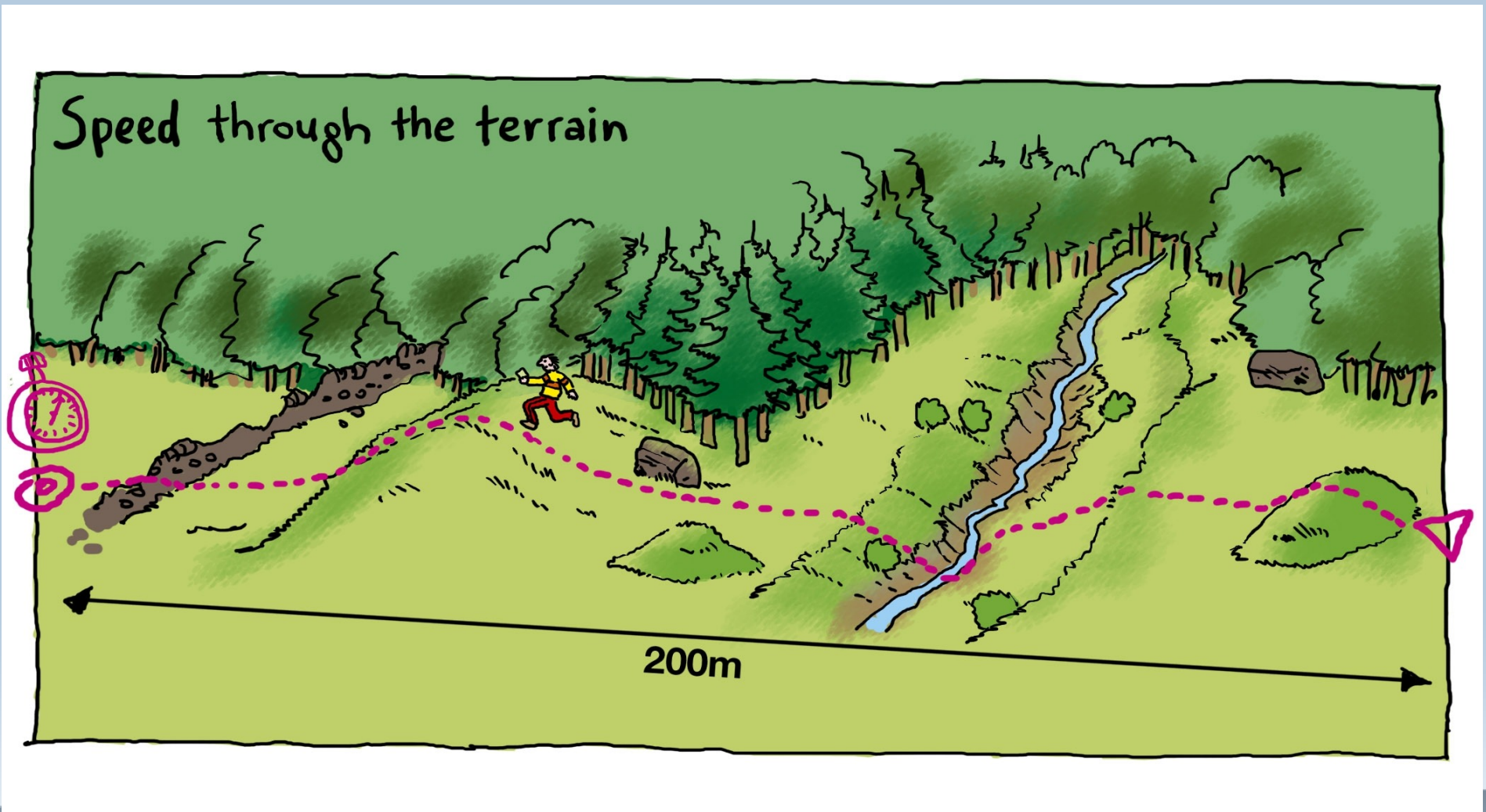
What detail can you remember?





Speed on the track

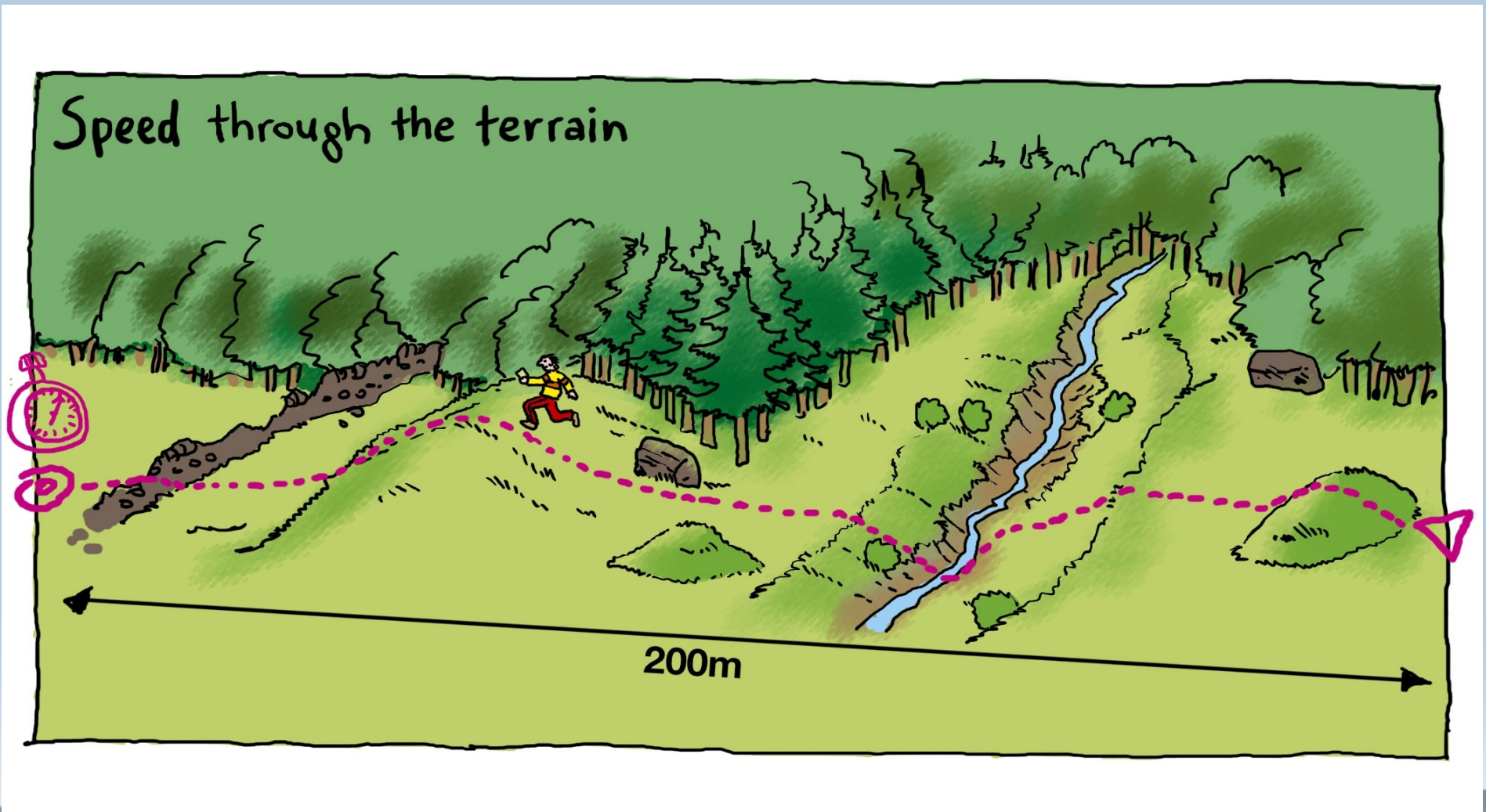
Now try the same through the terrain.



What detail can you remember?



Speed through the terrain.



Most mappers

*will walk around the area surveying
(field checking) at a much slower pace.*

*Be aware that you will see more detail
than the fast moving competitor*



Generalisation

There are many learned books about
Generalisation.

It should be much easier for orienteering maps as
they only use one scale and a prescribed set of
symbols.

