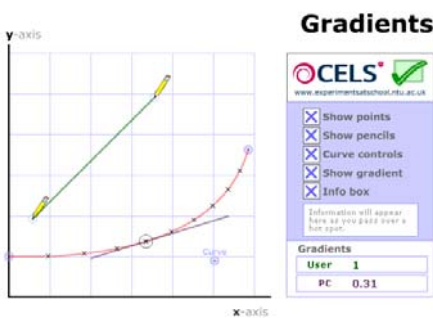


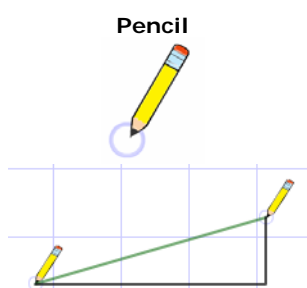
Gradient User's guide



This interactive Flash animation has been created as a tool to help show and discuss the measuring of gradients. It can be used without a keyboard and so is particularly suitable for interactive whiteboards.

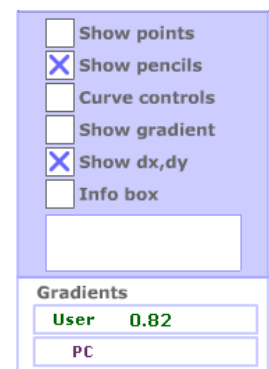
The main curve to be investigated can be manipulated with simple controls and 10 points on the curve highlighted.

A second interactive line can be drawn alongside the curve which allows possible gradients to be estimated. The actual gradient at each point on the curve can be shown (and calculated) to show how close the estimation is.

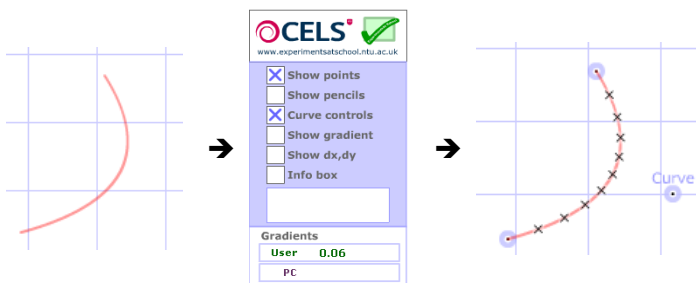


Lines are plotted between a pair of pencil points. To move the pencil, click inside the blue circle, and hold/drag in the usual manner. The green line (user's gradient) will be re-drawn between the two pencils after each change of pencil position.

The pencils can be switched 'on' or 'off' using the tick box menu on the right of the screen. The green gradient always remains visible.



A second optional set of lines (to show 'dx' and 'dy') can also be turned on/off. The value of dy/dx is automatically calculated and shown on the right hand side.

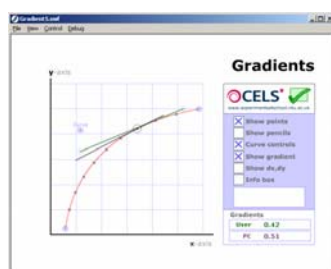
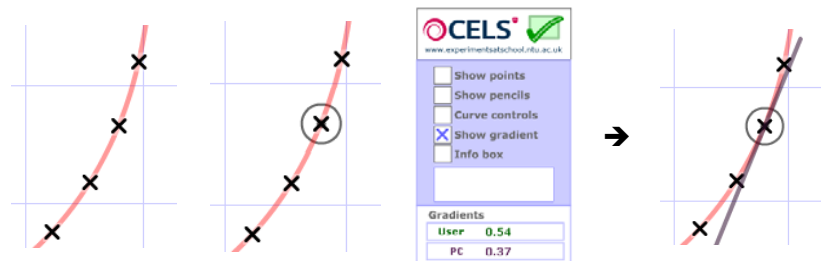


Curves are drawn using three points which appear as pale blue circles – the start and end points and a control point. The control point alters the curvature of the line.

The 10 (crosses) points along the line are selectable but will not alter the shape of the curve.

Clicking on a cross (point) on the curve will make it *active*. Click on it again to deactivate it.

Once active the gradient of the point can be shown (using the right hand menu).



An additional option of 'info box' can be ticked. When active as you roll over parts of the screen (hot spots), information will appear.

This is a beta version of gradients and we would welcome any comments or suggestions for improvements.

Please email your comments to "mark.crowley@ntu.ac.uk"