Revising basic angle properties with TI-Nspire™ Navigator™

Teacher – Nevil Hopley, George Watson's College, Scotland

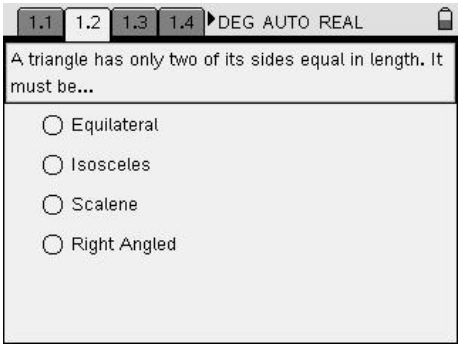
Case Study

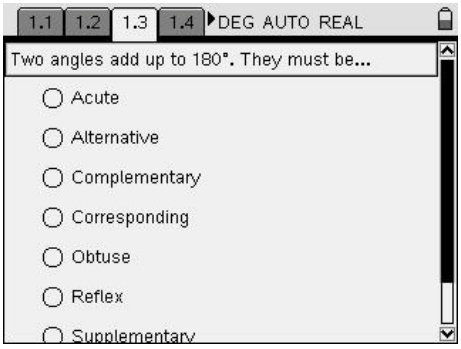
Supporting statistical experiments with TI-Nspire™ Navigator™

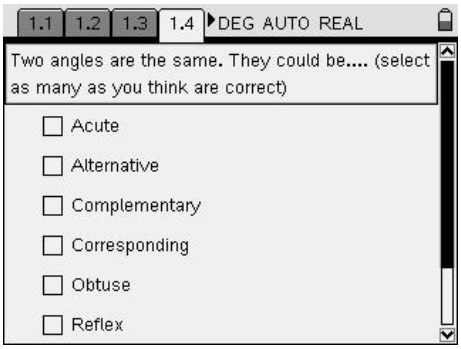
Teacher	Nevil Hopley
Location	George Watson's College, Scotland
Class	11-12 year olds following the compulsory secondary mathematics curriculum
Technology	TI-Nspire™ Navigator™

Setting: George Watson's College is a mixed independent school and I have been using the TI-Nspire™ Navigator™ since October 2008 with most of my classes. In this lesson I used the File transfer, Screen Capture and Class Analysis features.

The lesson: This lesson was a revision lesson on aspects of the topic of angles – both the vocabulary and the relationship between known and unknown angles on a diagram. The TI-Nspire file – which I developed and distributed to the students using File transfer at the beginning of the lesson - contained three quiz questions which assessed my students' knowledge of the associated vocabulary and whether they could use this vocabulary accurately when explaining the relationships between angles in a given geometric figure.

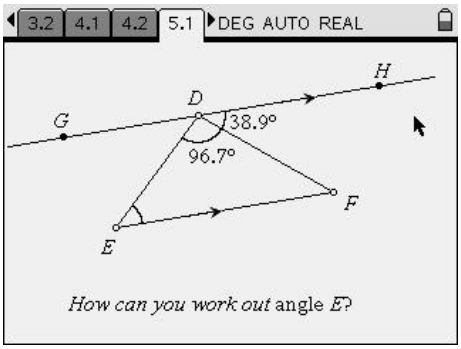


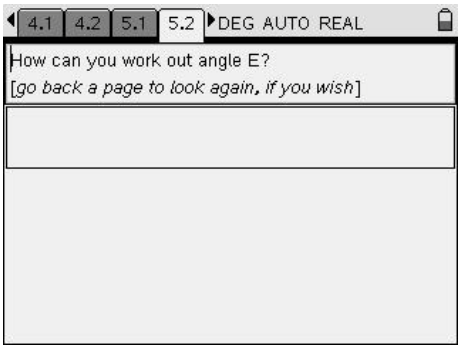




I used Screen capture to monitor when all of my students had completed the three quiz questions and then, whilst they had begun the second set of tasks contained in the TI-Nspire™ file, I collected back the files using File transfer. By adding them to the Class portfolio, I was able to analyse the students' responses in Class Analysis. This directly informed me about which students might need support from me to enable them to progress with the main lesson activity.

The second set of tasks presented the students with a dynamic geometric figure, which explicitly asked them to look at it carefully before moving the points. They had to try to decide what the relationship(s) between the angles might be.
For example one problem was:





Students' mathematical learning

I thought that this lesson activity gave my students an opportunity to interpret mathematics by devising and describing in words the general relationships between angles. Some of the weaker students preferred to describe things in terms of the numbers shown on their diagram in its static

form. However, as I was able to identify who these people were using Screen Capture, I was able to individually guide them towards trying to describe the relationship in more general terms using words, or angle labelling conventions, rather than just numbers.

Conclusion

Using Screen Capture enabled me to effectively target individual support to those in the class who needed it most.