

# Angle Estimation Experiment

## Teacher notes

### Aim

To estimate the size of an angle (within 20% accuracy).

### Objective

Pupils guess how big an angle is and compare if it is easier to estimate an angle from a flat or a three dimensional circle.

They will be given 15 guesses.  
Pupils can then retrieve their data.

### Carrying out the online experiment

Click on the experiment icon to start.  
Login to the online experiment by entering the LEA and school code. (These are available from your school or can be requested from us.) **'Submit'**. **'Next'**.

*(Note- If you experience any difficulty accessing the experiment pop up pages it could mean they are being blocked. If this is the case, you will need to have the ExperimentsAtSchool site put on your school's list of permitted websites. See your ICT technician or email us for further information.)*

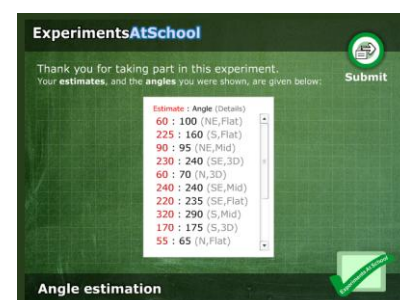
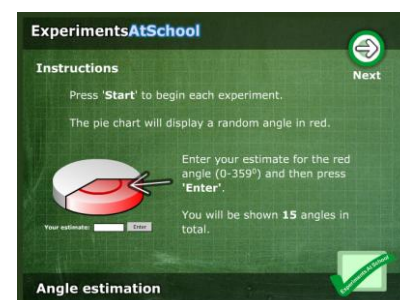
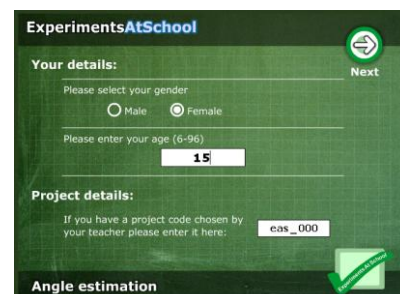
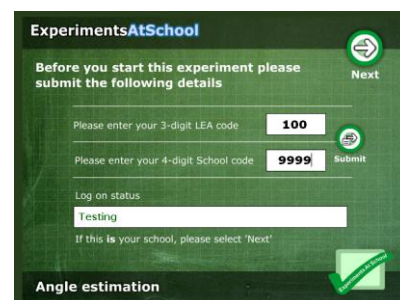
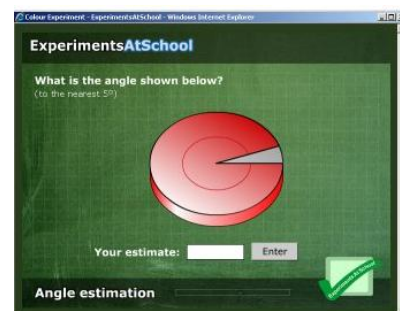
Click on **'Standard experiment'**. Enter your age, whether you are male or female and a project code. This project code is for you to give to your pupils so you can retrieve your classes' data.

Clicking on **'Next'** will take you to the instructions to start the experiment.

Click on **'Next'** and then **'Start'** to start the experiment.

When you have completed the 15 attempts your results will appear on the screen.

Clicking on **'Submit'** will complete the experiment.



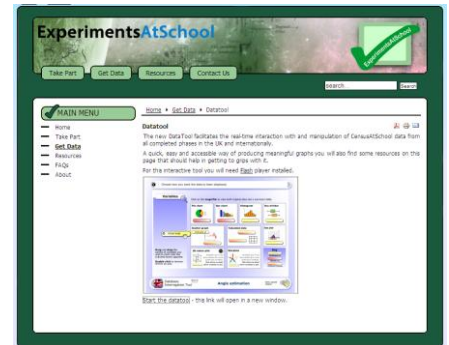
# Angle Estimation Experiment

After finishing the experiment pupils can use the Data Interrogation Tool to analyse random samples of data from all schools who have taken part in this experiment.

From the home page of *ExperimentsAtSchool* click on '**Get Data**' '**Data Tool**' '**Start the Data Tool**'.

Click on the '**ExperimentsAtSchool**' icon.

Also see *ExperimentsAtSchool* Data Tool worksheet in Resources.



## Possible investigations

*Is it easy to estimate an angle?*

*Do you improve with practise?*

Repeat the experiment a number of times and compare the results.

*Is it easier to estimate bigger or smaller angles?*

Compare data for accuracy above and below a certain number of degrees e.g. above and below 180 degrees.

*Is it easier to estimate angles from a flat or a three dimensional circle?*

Compare data for accuracy between the flat and the three dimensional circle.

*Are females better at estimating angle size than males?*

Compare the data from females and males.

*Are older pupils better than younger pupils at estimating angle size?*

Compare data from experiments done by pupils of different ages.

## Curriculum Links

This online activity can also be used for other purposes covered in other parts of the curriculum.

For example, Key Stage 2, Ma3, Shape, space and measures;

4) Pupils should be taught to:

recognise angles as greater or less than a right angle or half-turn, estimate their size and order them;