



# Project

## A class survey

### Objectives

- read a class survey and a pie chart showing the results of that survey.
- answer the questions in that class survey.
- conduct a class survey and draw a pie chart to show the results.

### Preparation

- Bring protractors and calculators for every student in the class.
- Bring a piece of paper for every student in the class.

#### Background

A **gadget** is a mechanical object or tool which performs a particular function in a clever way. The word is sometimes used negatively to describe objects notable more for their novelty than their practicality. However, the word is also used to describe technological objects such as smartphones. Such items are also called *devices*.

A **pie chart** is a means of graphically illustrating information, with sectors of a circle representing parts of the whole, with the largest sectors corresponding to the largest quantities. The first known pie chart was produced in 1801 by the Scottish businessman and engineer William Playfair, who used it to graphically illustrate the proportions of the Turkish Empire that were in Europe, Asia and Africa.

### Warm-up

- Books closed. In one hand, hold a piece of paper close to your chest, in the other a pen. Go up to a student (choose one of the stronger students in the class) and ask them questions as if you were conducting a survey, e.g. *Do you have a smartphone? What make is your smartphone?* Pretend that you making a note of their answers on the piece of paper you are holding.
- Write the phrase *do a survey* on the board. Elicit the meaning of the noun (a *survey* is an examination of the opinions, ideas or experiences of a group, which is made by asking a set of questions). Use L1 to do this if necessary.

#### Language note

The noun **survey** is usually used with the verbs *conduct* or *do*. *Conduct* is more formal than *do*.

### Look

- Ask students to open their books at page 123.
  - Explain that the questions represent a survey about favourite gadgets and that the pie chart shows the answers to the first question.
  - Ask the question. Elicit the answer from the class.

#### Answers

mobile phone

- Give students a couple of minutes to answer the questions.
  - Point out that the question *Who's it from?* refers to which company manufactured the gadget.
  - Students can compare answer in pairs.
  - Ask some students to report back to the class on their partner's answers.

### Prepare

- Tell students they are now going to organise their own survey.
  - Read out the topics in the list and elicit some vocabulary for each one.
  - Put students into small groups and give them a couple of minutes to choose a topic.
  - This activity will be more effective if the different groups in the class choose different topics, so make sure that groups do not all chose the same topic. You can avoid this by giving each group a topic yourself.
- Give students a few minutes to write four questions.
  - Monitor while groups write their questions. Encourage them to write the sort of questions the answers to which can easily be shown in a pie chart, e.g. *What's your favourite sport? How many languages do you speak?* Help with vocabulary as necessary.
- Ask students to stand up, walk around the classroom, and ask students from other groups the questions from their survey.
  - Make sure that students keep a record of the answers.
  - Give students 5–10 minutes to ask their survey questions.
  - When students return to their groups, they should pool their answers.

### Present

- Tell students that they are going to draw pie charts to show the results of their survey. They will need to produce a pie chart for each of the questions they asked.
  - If students do their pie charts by hand, give out the paper, protractors and calculators. They can use the information on this website to help them: <http://www.mathsisfun.com/data/pie-charts.html>
  - Alternatively, they can make their pie charts using this website: <http://www.meta-chart.com/pie>
  - Give students approximately 10 minutes to produce their pie charts.
  - Groups take it in turns to present their pie charts to the class.
  - To **extend** the work on this, you could ask the class if any of the results of the different surveys surprise them.