



# Investigation 1

## How do I measure up?

Our body measurements can be fascinating.

Did you know that your arm span could be the same as your height?

Make a collection of your own body measurements and investigate the relationships between them.

Create a life-sized graph and see how many interesting comparisons you can make.

Could your leg be twice as long as your arm? How does the length of your ear compare with the length of your little finger?



### Topics

Before you start the Investigation you need to know...

**MG1** Measurement with metres .....p100

**MG2** Measurement with centimetres.....p102

**MG3** Grams and kilograms.....p104

**SP3** Column graphs.....p136

**SP5** Interpreting graphs.....p140

## Understanding the Investigation

### I Read and plan.

Make sure you understand the meanings of: *armspan*, *relationships*, *circumference*, *personality*, *comparisons*, *double*, *life-sized*, *fascinating* and *compare*.

Read and discuss the rubric.

Download your Investigation plan. This will help you with the organisation and understanding of the Investigation.

### Teacher note

- Comprehensive lesson notes, suggestions and resources are available in *iMaths 3 Teacher Book*.
- The Tear-out and Investigation plan for this Investigation can be downloaded from [imathsonline.com.au](http://imathsonline.com.au).

# Materials



Internet access



Tear-out 1



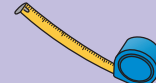
Coloured pencils



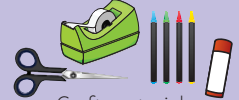
Calculator



Digital camera



Tape measure



Craft materials

## 2 Get ready to measure.

Look at **Tear-out 1, My data** (p179). This is where you will record your personal measurements. Paste a photo of yourself on your page.

As a class, brainstorm parts of your body that would be suitable to measure.

On your *My data* page, make a list of the parts of your body that you will measure.

## Using maths

### 3 Measure and record your details.

Find a partner. With your partner, discuss how you could make accurate measurements of parts of your body. String, tape measures, rulers and rolls of paper could be used.

Ask your partner to take your measurements. Write them on your *My data* page.

### 4 Make a column graph.

Use butcher's paper and string, or strips of paper to make a life-sized column graph of your measurements.

Name your graph. Label each axis and column and write measurements on the vertical axis.

Can you see any interesting relationships between the measurements?

Is any measurement half or double another?

## Reasoning and reporting

### 5 Make interesting comparisons.

Write some interesting sentences comparing your measurements. For example: *The circumference of my head is almost three times my handspan.*

Hand in your *My data* page and explain how you made your measurements as accurate as possible.

Decorate your column graph. Display it to the class and describe your findings.

**imathskids.com.au** 

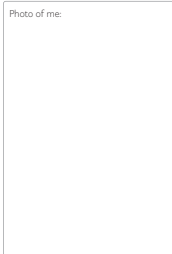
Go to **imathskids.com.au** – the Investigation 1 area contains the Investigation plan, websites and Tear-out that you need to complete this Investigation.

Tear-out 1  
Investigation 1: How do I measure up?

*My data*

My name: \_\_\_\_\_

My age: \_\_\_\_\_

Photo of me: 

Parts of my body to be measured	Metric measurement

ISBN 978 1 74135 178 1 iMaths 3 Student Book 179

## Inquiry

What would you look like if your head, arms and feet doubled in size? To find out, have someone take a full-length digital photo of you, making sure your whole body is in the frame. Print the photo and use a ruler to measure the length of your arms and feet, and the size of your head. Double these measurements. Use your original photo to trace your neck, body and legs (normal-sized), then draw in your head, arms and feet using your new measurements. How do you look?