

# Ideas for Investigations using *SportAtSchool* Data

## Notes for teachers

This resource is designed to give learners ideas on possible investigations using the *SportAtSchool* data.

For this resource to be most effective your learners need to have completed the *SportAtSchool* online questionnaire ([www.sportatschool.org.uk/get-started](http://www.sportatschool.org.uk/get-started)) and you then need to request your school's data from the *CensusAtSchool* team (Get Data/Request Your School's Data and follow the instructions, [www.sportatschool.org.uk/getdata/requestdatamain.](http://www.sportatschool.org.uk/getdata/requestdatamain.))

Before giving the *SportAtSchool* data to the learners you may wish to tidy up your school's *SportAtSchool* spreadsheet by deleting variables not needed eg data stamp, school name, LEA and school code and others. It is a good idea to leave anomalies in the data to give learners the opportunity to clean raw data.

The '*SportAtSchool* Planning Worksheet' uses the Problem Solving Cycle to help learners plan and work through their investigations.

The Excel spreadsheet '*SportAtSchool* Summary and Random Samples' contains the counts and percentages for the results for your school compared to all schools that took part in *SportAtSchool* up to January 2012. It also contains a random sample (of size 30) for each age group (from 10 to 16 years inclusive) taken from this *SportAtSchool* data. These results can be used for comparison with your school's data.

Also, you can take random samples of up to 200 responses from the 25 *CensusAtSchool* databases using the Random Data Selector (RDS).

Open [www.sportatschool.org.uk](http://www.sportatschool.org.uk) Select Get Data/Random Data Selector/Click here to access Random Data Selector.

Enter your email address, name of your school, answer the security question at the bottom and **Submit**.

**Select UK**



**Phase 10/Submit**

Phase:

**Sample size/100/Submit**

Sample Size:

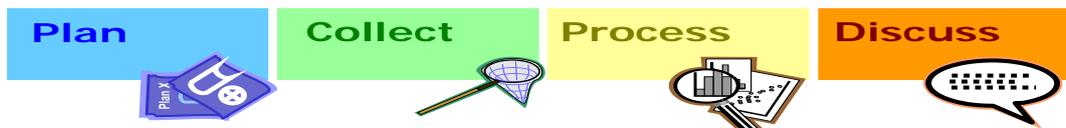
**Get Data/Open**

The data you receive will be a csv file. This will open in Excel and can then be saved as an Excel file.

# Ideas for Investigations using *SportAtSchool* Data

## Introduction

The most important feature of any statistical investigation is that it is carried out for a valid reason and has real meaning. Data should always be collected for a purpose and the main goal is to get information from the data in order to illuminate or give some answers or conclusions to the original problem or question. An investigation should always follow through the problem solving cycle.



## Some ideas to help your learners plan their investigations

**Part 1: PLAN** What is the question you want answers to? Is there a problem you want to find out some information about? How can statistics help you to find out the answer? Do you already have an idea of what it is you may discover? What do you expect the outcome and conclusions to be?

**Part 2: COLLECT** Exactly what data do you need to help you answer your question? Where will you go to find it? What variables will you use – are there useful extras that might be interesting to investigate? eg gender, age, height. How much data will you need? Does it need to be a random sample?

**Part 3: PROCESS** How are you going to organise your data? What kinds of tables and graphs will best present your data? How can you ensure you are concentrating on things that are important for your investigation?

**Part 4: DISCUSS** What does your data tell you? Does it answer your question? Does it answer other questions? How are you going to present your conclusions? Does your data present other questions to you? Can you use your results to make predictions? Does it raise any concerns? Where should the investigation go next?

**Part 5: EVALUATION** Were there weaknesses in your methods? Did these affect the quality of the results & conclusions? What would you do differently next time?

### Ideas for statistical investigations

For all the investigations on the following page learners may like to compare their class's data with the '*SportAtSchool* Summary and Random Samples' results or take a random sample from the RDS.

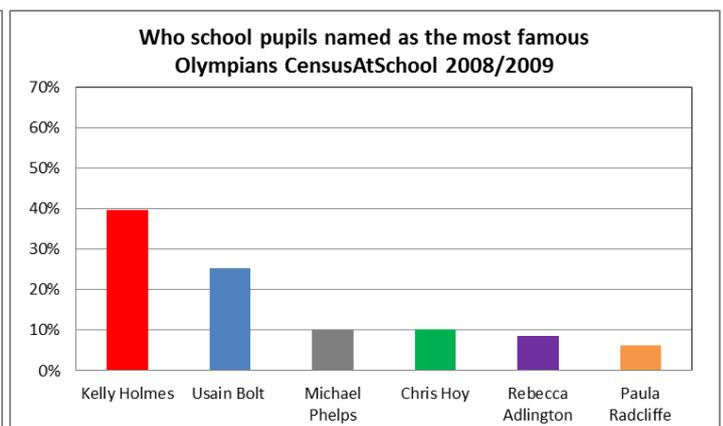
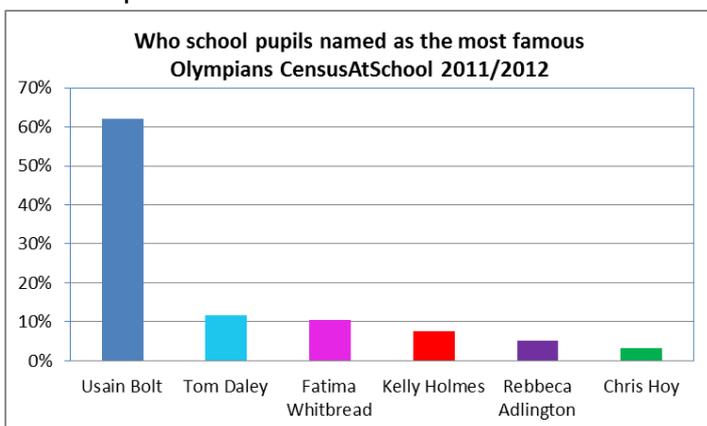
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## Height

- Is your class, on average, taller, shorter or the same as other UK children? (Use histograms to look at the distribution of heights. Boxplots could be used for comparisons.)
- Are UK children taller, shorter or the same height than South African children? (Take a random sample from South Africa *CensusAtSchool* data using the RDS for comparison.)
- Are UK children taller, shorter or the same height as Australian children? (Take a random sample from Australian *CensusAtSchool* data using the RDS for comparison.)
- Is there a relationship between height and open arm span? (Learners will need to plot a scatter diagram. Comment on outliers – errors real outliers? Learners may find this easier to plot with their class's data. How could this graph be useful?)

## Famous Olympians

- Who did your class name most often as a famous Olympian? (Use bar charts to display the results.)
- How does the result from your class compare to the results for the children who responded to the *SportAtSchool* questionnaire in 2012?
- The same question was asked in the *CensusAtSchool* questionnaire in 2008/2009. The results are shown below. Can you explain the changes between the results for this question from 2008/2009 to 2011/2012?



## Do Most Children Eat Breakfast?

- How many of your class eat breakfast?
- Do more boys than girls eat breakfast in your class?
- What do the children in your class have for breakfast?

## Other ideas

- Can more boys swim than girls?
- Do more boys take part in competitive sport than girls?
- Do children take part in competitive sport in school more than out of school?