

Countries and medal tally

AIMS

Students represent and draw conclusions from data.

Students describe how likely an event is, based on data.

Students evaluate appropriateness of methods used to represent data and draw conclusions.

Students discuss the value of participation and importance of winning.

Students discuss the notion of fairness in competition

LINKS

SOSE (Investigation, Communication and Participation, Resources), Health & PE(Knowledge and Understandings), Maths (Working Mathematically, Chance and Data)

MATERIALS

2004 Olympic teams data table, paper, pens, rulers

LEARNING EXPERIENCE

Ask students to predict which countries will win the most medals in the Olympics this year. Why do they think these countries will do so well? What sort of factors contribute to a medal winning team?

Distribute the attached table to students. Ask students to represent the data in whichever form will help them to best interpret it. (Graph, list etc) You may need to explain that GDP is a measure of a country's economy (the market value of all goods and services in a country in a particular time – e.g. a year.) and that here it is stated per person in the country.

What conclusions can students draw from the data? Is a country more likely to win medals if they have a larger Olympic team? A bigger population? A bigger economy? Do students even have enough information to answer these questions? What more information might they need for their answers to be reliable? Are there other factors that would need to be investigated? If students do draw conclusions, ask if they think that the Olympics are a fair competition. Are some countries advantaged?

Ask students to evaluate the way they represented the data. Did their representations assist or hinder them in making connections?

After thinking about these questions you might also like to ask if winning is the most important part of the Olympics. What might athletes gain just by competing at the Olympics? Do students think there is too much focus on winning medals?

VARIATIONS/EXTENSIONS

- Students could find information to fill in table on their own. – they could even choose their own countries (although not all data is available for all countries.)
Medal tally from 2004 Olympics http://en.wikipedia.org/wiki/2004_Summer_Olympics
List of competing countries from the 2004 Olympics
http://en.wikipedia.org/wiki/2004_Summer_Olympics#Participating_NOCs
List of countries by population -
http://en.wikipedia.org/wiki/List_of_countries_by_population

List of countries by GDP per capita

<https://www.cia.gov/library/publications/the-world-factbook/rankorder/2004rank.html>

- Students research any further information they think will assist in determining the likelihood of a country winning medals at the Olympics
- Discussion about the limitations of using GDP as a measure of the health of an economy. See http://en.wikipedia.org/wiki/Gross_domestic_product#Limitations_of_GDP_to_judge_the_health_of_an_economy for more information
- Run a debate, based on your conclusions, on the topic “The Olympics are an unfair competition”

2004 Summer Olympics

Country	Medals Won	Team Size (number of people)	Population (number of people, 2007)	GDP/capita (dollars per person)
US	102	536	304 481 000	45800
China	63	407	1324 686 000	5300
Australia	49	482	21 350 000	36300
Japan	37	315	127 690 000	33600
Brazil	10	247	187 108 615	9700
Columbia	2	51	44 090 118	6700
Venezuela	2	48	27 933 000	12200
Eritrea	1	4	4 851 000	800
Pakistan	0	26	163 690 000	2600