

Percentages Internet Research Activities

Answer the following questions by making a Powerpoint Slide for each answer. Include clip art and pictures to make the answers more meaningful.

Q 1 What is a “percentage point” ?

Q 2 What is “Baker Percentage” ?

Q 3a) What is a “percentile” ?

3b) Doctors often use infant and children's weight and height percentiles to check their growth compared to national averages. Find out what the median 50th percentile height is for a 14 year old girl using a chart from the internet.

Q 4) Find an **Online Percentage Calculator**. Do some calculations on it, take a Print Screen, and use Ctrl-V to paste it into a PowerPoint slide.

Australia's Population

Wikipedia supplies the %'s of Population living in State Capitals for Australia. (and also % pop by age) (and also ancestry %'s) http://en.wikipedia.org/wiki/Demographics_of_Australia

Type "demographics of australia" into Google, to find the Wikipedia page about Australia's Population, and then answer these questions:

Q5 a) Which three Australian states and territories have the lowest percent of their state's population living in the capital city of the state?

5b) Which city has the higher population percent: Melbourne or Adelaide?

5c) What % of Australia's population is 0-14 years old ?

5d) Which country has the highest population growth rate: USA, Canada, or Australia ?

5e) What percentage of Australians are of the following ancestories: Irish, Scottish, Italian, German ?

DRY HOT DESERTS

Q 6a) Which has the higher percentage of desert area: Africa or Australia ?
(Include the actual % values as part of your answer).

6b) What percentage of the African country "Niger" is covered by the Sahara Desert?

INTERESTING PERCENTAGES

- A jellyfish is 95 percent water.
- More than 50% of the people in the world have never made or received a telephone call.

Q 7) Search the Internet to find two or three other interesting percentages.

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PERCENTAGE FOR AFL Football Teams

The percentage determines the position on the ladder of two teams of equal winning games points.

Q 8) How is this percentage value calculated ?

Chemical Composition of Metals

BRASS:

Brass is a metal and can be used for a wide range of different uses such as making musical instruments, doorknobs, mailboxes, trophies, and ornaments.

US Navy sailors wear brass belt buckles because brass will not spark if scratched, as some other metals do.

Q 9) What is Brass made out of ? (eg. Which metals, and what are their percentages) .

BRONZE:

Humans have been working with for over 3,000 years in various parts of the world, using it for weapons, coins, church bells, tableware, and an assortment of other household purposes.

Q 10) What is Bronze made out of ?

GOLD in Jewellery and Dentistry

The following website: <http://www.csudh.edu/oliver/chemdata/alloys.htm> has a percentages table for how to make metal alloys, but uses chemical symbols, like Au=Gold, for the metals.

It has most metal alloys listed in it, including lots of different types of gold.

Pure Gold is too soft and bendable, and also scratches easily. Pure Gold has to be mixed with other metals before it is made into Jewellery. This mixing is called making an "Alloy" .

Depending on the percentages of the mixture, different types of gold are made.

For example:

14 carat gold = 58.33% Gold, 14% to 28% Copper, and 4% to 28% Silver

White Gold = 75 to 85% Gold, 8 to 10% Nickel, and 2 to 9% Zinc.

Q 11a) Find FIVE other types of gold and list their percentage compositions.

The chemical symbols for the metals are these:

Au=Gold, Ag=Silver, Cu=Copper, Co=Cobalt, Fe=Iron, Mn=Manganese Ni=Nickel, Pt=Platinum, Pd=Palladium, Zn=Zinc.

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Q 11b) Use the internet to find out the current price of pure gold.

Q 11c) Which is the more expensive gold alloy – “18carat Gold” or “Gray Gold” ?

Silver in Jewellery and Table Ware

Use the Alloys table at: <http://www.csudh.edu/oliver/chemdata/alloys.htm> or something similar to look up the percentages of the metals in each alloy.

Q 12 a) What is the difference between "Chinese Silver" and "German Silver" ?

12 b) What metal is mixed in with silver to make "Sterling Silver" which is used for jewellery and tableware?

12 c) Which type of Silver contains more pure silver metal in it: “Brittania Silver” or “Sterling Silver” ?

BODY FAT PERCENTAGE

A Skin Pull Caliper Test with a lookup table can enable you to determine your "Body Fat Percentage".

There is a good set of colored charts for Body Fat at this web location:

<http://www.calculatebodyfatpercentage.com/calculate-body-fat-percentage.gif>

Use this one, or else use Google Images to find a similar chart or graph of body fat percentages.

Q 13 a) What is the healthy body weight percentage for people in their 20's ?

13 b) Why is the healthy body fat percentage for women always higher than that for men ?

HEART RATE PERCENTAGES

There is actually a certain speed we are supposed to get our heart up to, for exercise to be beneficial.

This heart rate is often called our "Training Heart Rate", or "Target Heart Rate".

The basic mathematics behind this is that your Maximum Heart Rate (MHR) is 220 minus your age.

You then need to work out below this rate, at a "Target Heart Rate", that is a certain % of your MHR.

Q 14) Use Google to look up "Training Heart Rate" and find out the specific % values that can be used for effective exercising.

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HOW COUNTRIES SPEND THEIR MONEY:

Use the interactive map at the website:

<http://www.visualeconomics.com/how-countries-spend-their-money/>

to answer the following questions:

Q15 a) Name three countries who spend less than 5% of their money on Military.

15b) Name three countries who spend more than 17% of their money on Health.

15 c) Which country spends the most money on Health

15 d) Which countries spend more than 24% of their money on Education?

PERCENTAGE SUGAR and Calories

One of the big reasons why many Australian and American people are overweight, is due to the amount of sugar in common everyday foods and beverages.

www.sugarstacks.com is an excellent website that documents this situation.

For example, the sugar in Coca-Cola supplies 100% of the calories from this soft drink.

Eg. % Sugar = 140 calories of the total 140 calories, and so $140/140 \times 100\% = 100\%$.

However for Orange Juice the calories from sugar are 96 calories, and the total calories are 110, and so % sugar = $96/110 \times 100\% = 87\%$.

Q 16) Using the calories information on the Sugar Stacks site, calculate the % of calories supplied by sugar for five drinks and five foods.