

Title: Answer the question
Subject Area: Mathematics
Key Stage 3
NC link: Ma2/1

Learning Objective:

- Children learn to work together as a group to solve a problem.
- Children use logical thinking, organizational skills.
- Pupils revise addition, subtraction, multiplication and percentage.

Resources:

- Photocopied question sheet, with the statements cut out and shuffled for each group.

Starter

Explain that pupils will have to work together to solve a problem. Split in groups of 4/5. Each group will need a 'pack' of statements and will probably want to appoint a scribe. Write the two questions that they will try to answer using the statements on the board;

- How many eggs were laid by free range chickens in the UK in 2004?
- What percentage of the total number of eggs laid in 2004 was this?

Main Teaching Activity:

Explain the rules of the challenge;

- Pupils must deal out the cards equally amongst their group.
- Pupils can NOT show anyone else their statements.
- Pupils can share the information from their statement verbally and discuss the contents.
- The winning group will together gather information to answer the two questions.

Plenary

- Discuss tactics, answers and methods.

Differentiation

Decide if calculators are appropriate. Encourage struggling groups to draw up a table (see special notes). As a challenge pupils can gather other statistics such as percentage of barn and other eggs or percentages per quarter.

Special Notes:

<http://statistics.defra.gov.uk/esg/statnot/eggnotce.pdf>

Period	Laying Cages	Free range	Barn and other	Total
1	3983	1599	491	6072
2	4084	1677	395	6155
3	4217	1726	419	6362
4	4156	1745	402	6303
Total	16440	6746	1706	24892

Data given in units

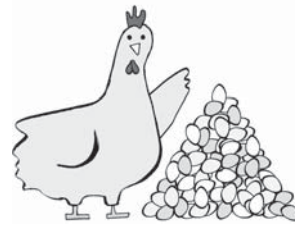
1 unit=1000cases

1 case=360eggs

No of eggs laid in 2004 by free range hens= $6746 \times 1000 \times 360$
 = 242640000 eggs

Percentage of free range eggs= approximately 27%

Answer the question



Answer the questions:

How many eggs were laid by free range chickens in the UK in 2004?

What percentage of eggs produced in 2004 were free range?



 Data for eggs is given in units

 1 unit = 1000 cases of eggs

 No of eggs in a case = 360.


 In the 1st quarter 3983 units were packed from laying cages.

 In the 1st quarter 2384 less units were packed from free range than from laying cages.

 Battery hens lay their eggs in laying cages

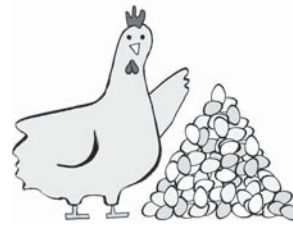
 The financial year is split into 4 quarters


 In the 2nd quarter 395 units were packed from 'Barn and Other'.

 There were 1282 more units packed in the 2nd quarter from free range compared to 'barn and other'.


 In the 3rd quarter there were 4217 units laid in laying cages

Answer the question




 In the 3rd quarter there were 2491 less units laid by free range hens compared to those laid in Laying cages


 In the 3rd quarter there were 419 units laid by 'barn and other'

 In the 4th quarter there were a total of 6303 units packed in the UK.

 In the 4th quarter there were 4156 units packed from laying cages

 In the 4th quarter there were 402 units packed from 'barn or other'

 In the UK there are 3 categories of chicken production; laying cages, free range and 'barn and other'.

 In 2004 there were a total of 16440 units packed from laying cages.

 In 2004 there were a total of 1706 units packed from 'barn and other'