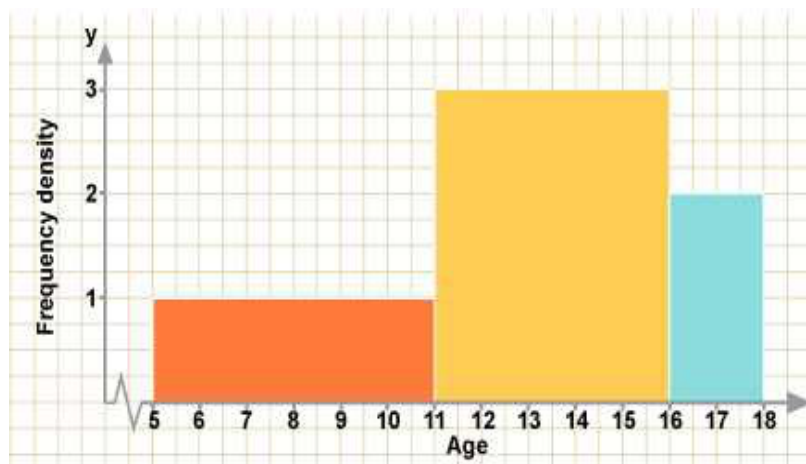


## HISTOGRAM



The histogram shows the number of children in each age group on a school bus. There are no children under 5 years and no children over 17 years. There are 6 children aged between 5 and 10 years.

Explain why the **class boundaries** are 5, 11, 16 and 18.

Ages of children on the bus	Frequency	Frequency density
5 - 10	6	1
11-15		
16-17		
>17	0	

Complete the frequency table.

How many children are there on the bus altogether?

Remember that in a **histogram** the **area** of the bar represents the frequency and the label on the vertical axis should be '**frequency density**'. It is incorrect to label the vertical axis 'frequency'.

## HELP

You might work with a partner or in a small group as it helps to talk about this sort of question, and to explain the ideas to each other.

It is important to understand what the words mean.

On the horizontal scale, marked **Age**, the **age groups** (also called **classes**) are : 5 - 10, 11 - 16 and 17- 18. The **area** of the bar in a **histogram** represents the frequency and the **height** is the **frequency density**.

So for the children aged 5 - 10 the **frequency density** (the **height** of the bar) is 1 child per year and the **frequency** (the **area** of the bar) is  $6 \times 1 = 6$  children in that age group.

**NEXT**

In your class most of the learners will be the same age so the histogram for ages will not be very interesting. How would you plan a project to collect data, and draw a histogram, for the ages of all the children in the class together with the ages of all their brothers and sisters or perhaps for your family including all the children and all the adults? What ages would you expect to have on the horizontal axis?