River Flow Maths Problems 1

During your visit to our Discovery Centre you were Welsh Water Ecologists surveying the river, studying its flow, and assessing pollution levels. Welsh Water takes water from the river, cleans it and sends it through pipes to our taps. Welsh Water also take away your wastewater, before returning it to the environment. Think back to your trip to the River Taff when we timed our dog biscuits to measure its' flow.

Work out these averages for other groups visiting the river. Challenge: Work out the averages without a calculator!

	Try 1	Try 2	Try 3	Average time (s)	
Group 1	3	4	5		
Group 2	1	2	3		Remember to find the average we divide by 3 because we had three tries throwing the dog biscuit into the water.
Group 3	7	6	8		
Group 4	6	5	7		
Group 5	10	11	6		
Group 6	8	10	12		
Group 7	7	7	10		
Group 8	5	3	7		

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}} \text{ (distance} \div \text{time)}$$

Use this formula to answer the questions below. Challenge: Don't use a calculator! MPH = Miles per hour

A girl walked a distance of 12mi (miles) and it took 2 hours. What was the average speed? _____mph Tip – count up in twos until you get to 12.	Over two days, a boy ran a distance of 18mi (miles) and it took 3 hours. What was the average speed? _____ mph Tip – count up in threes until you get to 18.	A canal barge travelled a distance of 36mi (miles) and it took 4 hours. What was the average speed? ____mph Tip – count up in fours until you get to 36.
A canoeist travelled a distance of 15mi (miles) and it took 5 hours. What was the average speed? _____mph Tip – count up in fives until you get to 15.	Challenge: - A bus travelled at an average speed of 40mph for 2 hours. What was the distance travelled? Tip – Distance = speed x time	Challenge: - A barge travelled a distance of 120m travelling at an average speed of 3mph. How long did it take? Tip – Time = Distance ÷ Speed