



Maths

Addition, Subtraction,
Multiplication and Division

Engines Ready

Aim

- I can divide numbers by a two-digit number using short division.

Success Criteria

- I can use known multiplication facts to complete calculations.
- I understand why place value is important whilst performing written calculations.
- I can use a written method to solve a calculation.
- I can divide numbers by a two-digit number using short division.

Make Me a Number



In pairs, take turns to roll a dice and place the digit onto the Make Me a Number Activity Sheet.



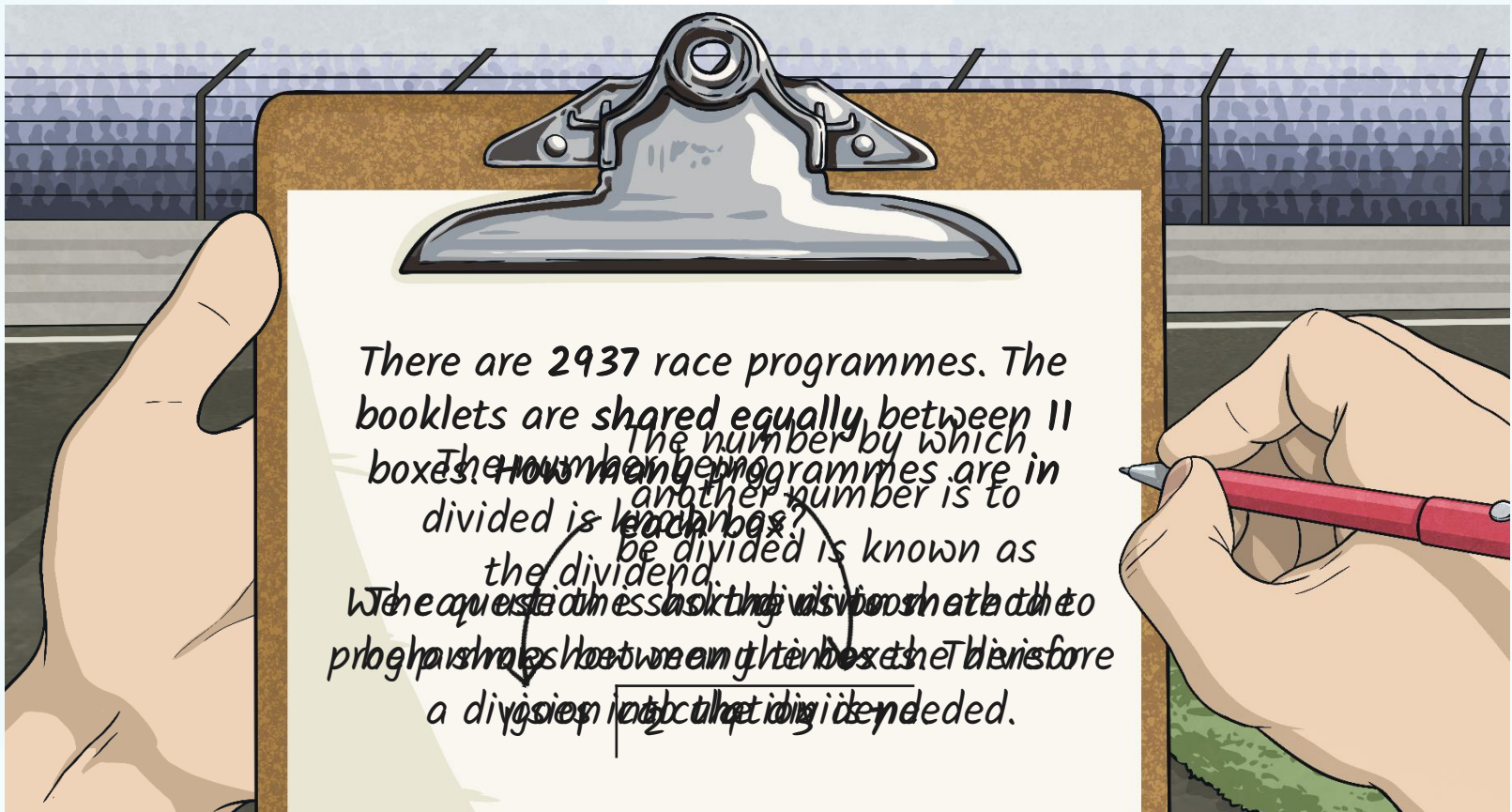
Race Day

There are 2937 race programmes. The booklets are shared equally between 11 boxes. How many programmes are in each box?



Race Day

First, we need to read the question and highlight any key words.



Race Day

Let's have a go at a different problem involving four-digit numbers.

There are 5284 souvenir trophy replicas. Each box must contain 12 trophies. How many boxes are needed? Are there any trophies remaining?

Short division is based on the idea of distributing a number as far as possible and finding how many equal parts remain. The number by which another number is to be divided is known as the divisor. The number to be divided is known as the dividend. In the division of 5284 by 12, the divisor is 12 and the dividend is 5284. The number 5284 is divided by 12 to give 440 with a remainder of 4. The number 4 is less than 12, so it cannot be divided further. Therefore, 440 boxes are needed and 4 trophies are remaining.

Race Day

Let's have a go at a different problem involving four-digit numbers.

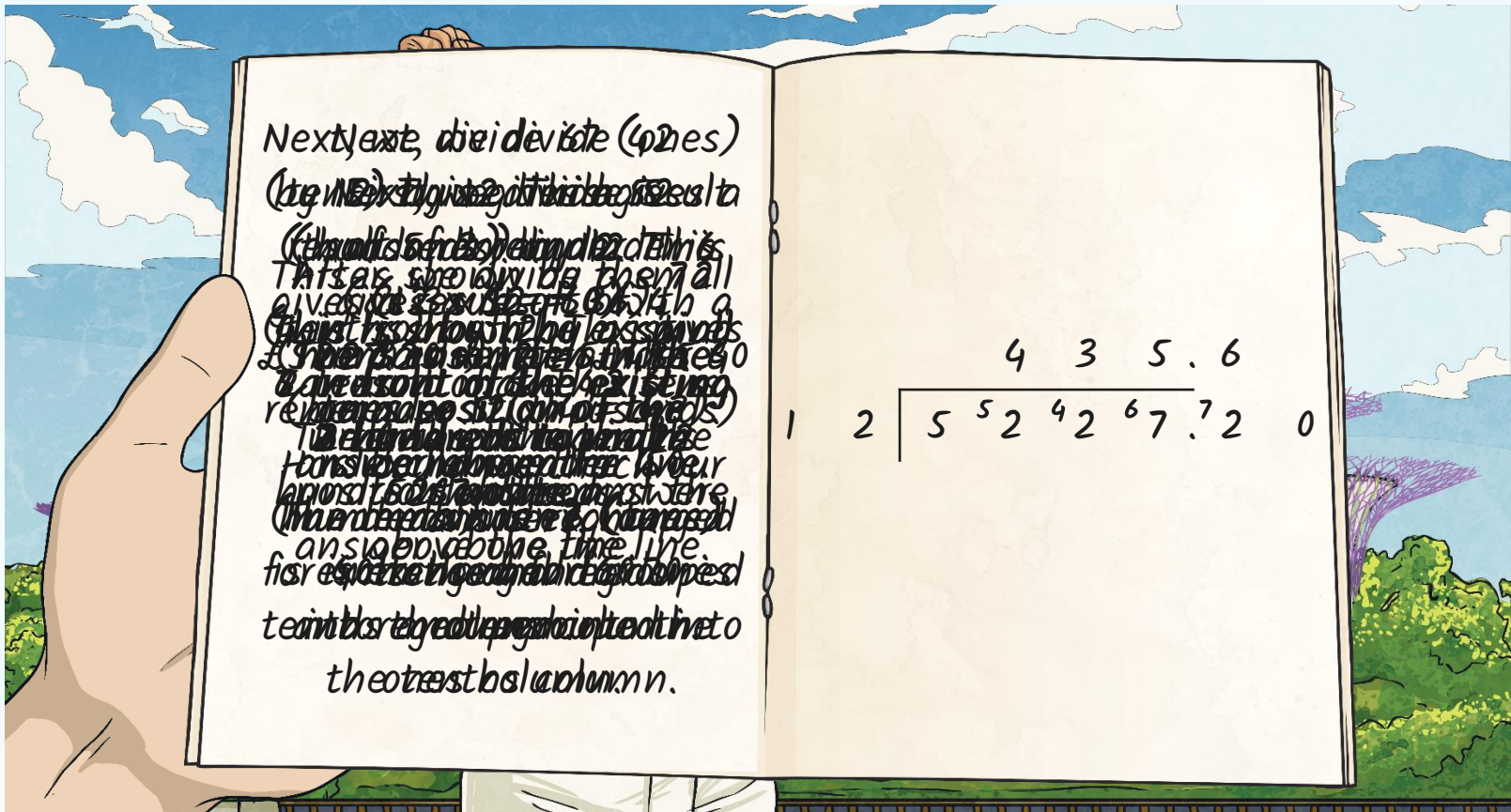
The race driver's prize fund of £5227.20 is split equally between his 12 chosen charities.
How much money does each charity receive?

First, we need to read the question and highlight any key words.

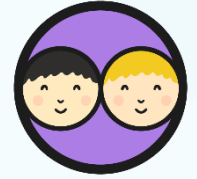
The number ~~short division~~ is based on the idea of distributing the division across a partitioned number, e.g. distributing the division of 12 across the addition of five thousands, two hundreds, two tens, seven ones and two tenths in the number 5227.20. The question is asking us to find out how much each charity receives from the prize fund. Therefore a division calculation is needed. The number being divided is known as the dividend. The number which is to be divided is known as the divisor.

Race Day

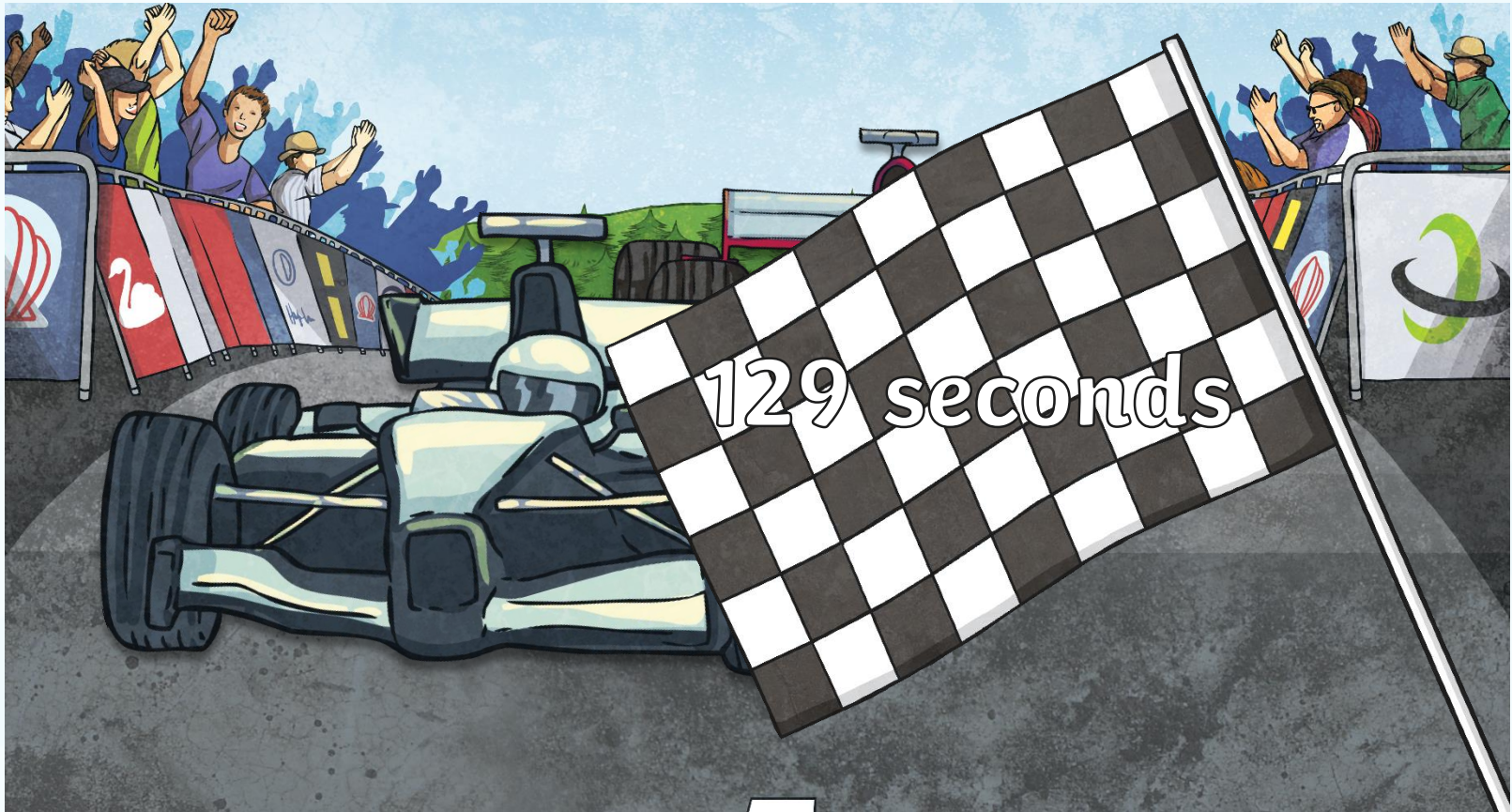
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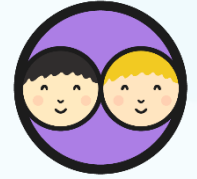
Race Day Problems



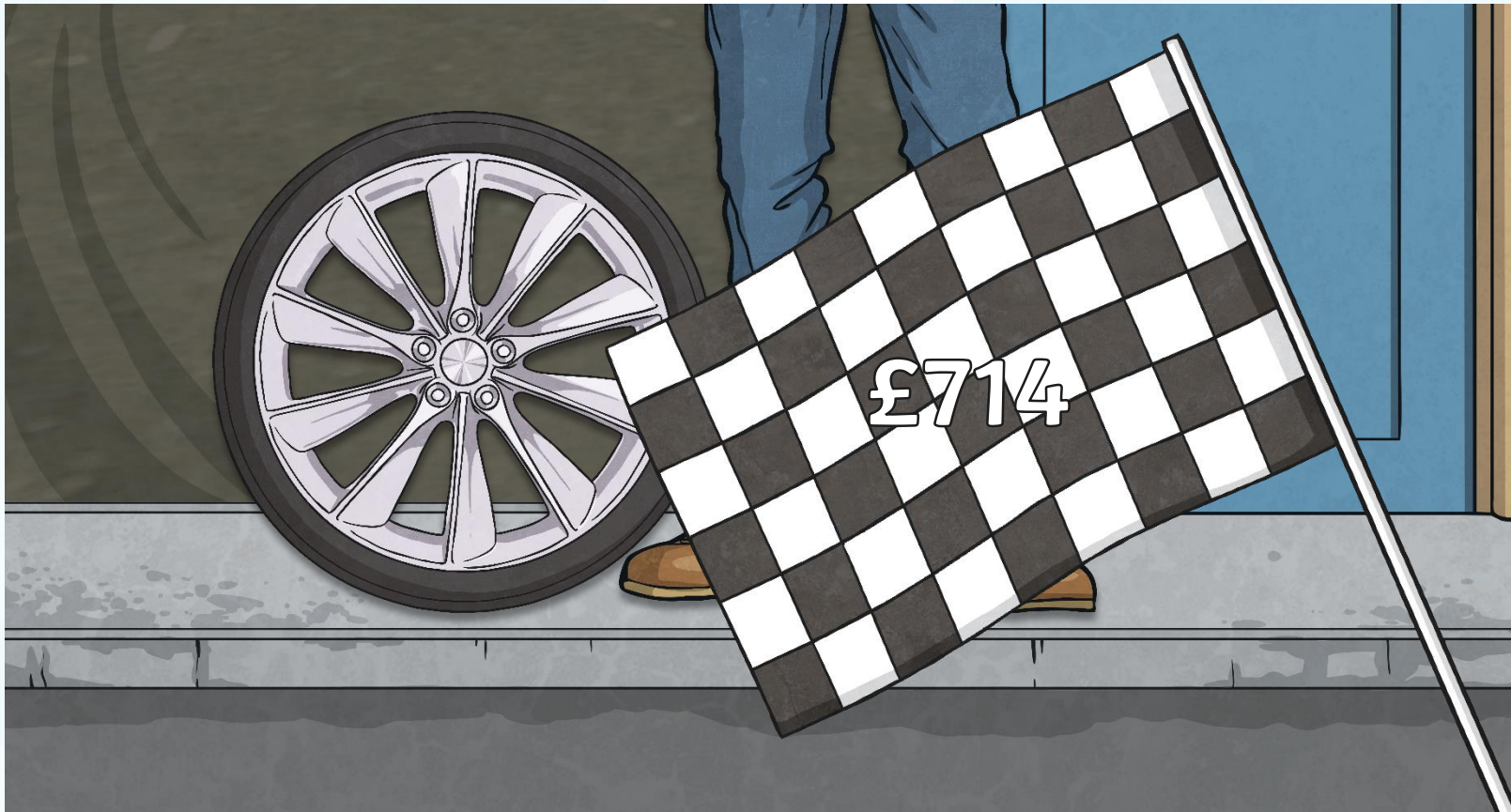
It takes a driver 1935 seconds to complete 15 laps.
What is the average time taken to complete one lap of the track?



Race Day Problems



It costs £8568 for 12 spare tyres. How much does each tyre cost?



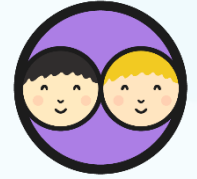
Race Day Problems



Race Day T-shirts are packed into boxes of 11. There are 5029 T-shirts.
How many boxes are needed? Are there any T-shirts remaining?



Engines Ready

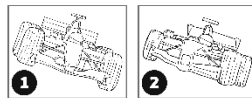
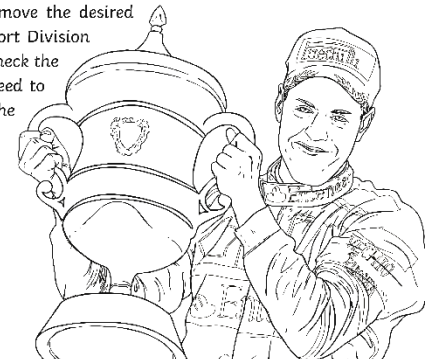


Use your marvellous maths skill to complete these activities:

Engines Ready Game

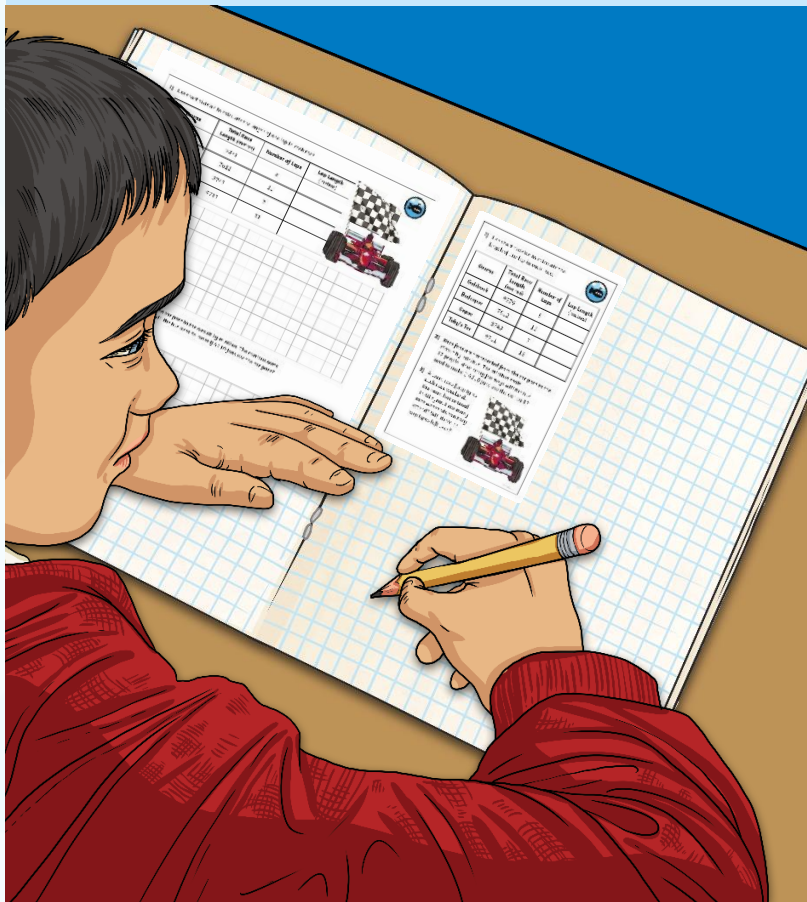
I can divide numbers by a two-digit number using short division.

Place your race cars on the start square. Taking turns, roll the dice and move the desired number of spaces. Complete the calculation that you land on using the Short Division Record Sheet. Once you have completed the calculation, ask your partner to check the calculation using a calculator. If you have the incorrect answer, you will need to move your race car back to where you began your turn. The first race car to the end of the track wins.



Diving into Mastery

Dive in by completing your own activity!



1) Use short division to calculate the length of one lap in each race.



Course	Total Race Length (metres)	Number of Laps	Lap Length (metres)
Goldrock	9375	5	
Badcopse	7612	11	
Capse	8743	7	
Toby's Tor	9711	13	

2) Race fans are transported from the car park to the circuit by minibus. The minibus seats 12 people. How many journeys will the bus need to make if 4110 fans use the car park?

3) A team uses forty tyres each race weekend. The team has ordered 1448 tyres. How many race weekends can they attend? Will there be any tyres left over?



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1) Felicity has carried out this short division to calculate the number of seats per row in Capse Grandstand. There are 2156 seats in eleven rows. She did not expect his answer to have a remainder so thinks that she might have made a mistake. Explain Felicity's error and work out the correct answer.



$$\begin{array}{r} 214 \\ 11 \overline{) 2156} \\ \underline{22} \\ 15 \\ \underline{15} \\ 6 \end{array} r2$$


2) Daniel is working out how many full laps of Goldrock Circuit he could complete in 50 hours. Each lap takes him 14 minutes to complete. He has correctly worked out that 50 hours is 3000 minutes.



I can complete 215 full laps in 50 hours.

Do you agree? Explain your answer.

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Do you agree? Explain your answer.

Three Stars and a Wish



Discuss with the person next to you three things that you did well this lesson and one thing that you would like to improve on.



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