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| **Lesson** | **Prior Knowledge** |
| **Key Learning Objectives:**  I can find the lowest common multiple using times table facts.  **Starter:**  What are multiples?  Why are they multiples?  What are the multiples of:  2  5  7  10 | **Success Criteria:**  I have-   * Found the multiples of numbers * Found the common multiples between two numbers * Found prime factors using a prime factor tree   **Key Vocabulary:**  Times table, multiples, common, same, factor, prime number, divisible |
| **Activity** | **Resources** |
| **Fluency**  Multiples are numbers that can be divided by another certain number without a remainder (they are the numbers in the times tables)  Common multiple are – the same multiple that found in two different times tables/the same multiple that can be divided by two different numbers without a remainder.  Children to find common multiples between two numbers.  Eg. 2 and 3  Multiples of 2 = 2, 4, 6, 8, 10, 12  Multiples of 3 = 3, 6, 9, 12  So common multiples = 6 and 12  **Find common multiples between:**  6 and 15  2 and 5  6 and 8  12 and 18  5 and 15  10 and 25  **Reasoning**  If, 2, 4, 6, 8, 10 are multiples of 2 would 800 be a multiple of 2?  Would 87?  Would 136?  How do you know? Explain.  Explain why a multiple of 80 is also a  multiple of 8.  **Mini-Plenary**  Create your own questions and solve them about other common multiples. Investigate as many as you can.  **Problem-solving**  Nancy is double her sister’s  age. They are both older  than 20 and younger than  50. They are both multiples  of 7. How old are they?  Clare’s age is a multiple of 7  and 3 less than a multiple of  8. How old is Clare?    **Next Step: Investigative Work using previous knowledge of multiples.**  Prime factors are factors of a number which are prime numbers. You can find the prime factors of any number by using a prime factor tree.  Look at the example of a prime factor tree    27  9 3  3 3  Prime factors of 27 = 3 x 3 x 3  We can find the LCM (lowest common multiple) of two numbers by using common prime factors, instead of listing the multiples and looking for the LCM.  Example:  Prime factors of 27 = 3 x 3 x 3  Prime factors of 45 = 5 x 3 x 3  Using a venn diagram we can find the common prime factors.  27 45  3 3 5  3  LCM of 27 and 45 = 3 x 3 = 9  Investigate LCM using prime factors and venn diagram.  Find the prime factors of:  12 and 18  24 and 60  24 and 45  36 and 48  48 and 180  420 and 132  660 and 252 | Knowledge of times tables facts and divisibility rules.  Create a times table square to help you.  Use your fingers to help you count. |