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| **THEME:** | Binary numbers |
| **DATE**: | 19 – 09 – 2024 |
| **CLASS**: | Js 3 |
| **TIME**: | 8:40-09:20am |
| **DURATION** | 40 minutes |
| **SUBJECT**: | Mathematics |
| **UNIT TOPIC:** | Binary Numbers |
| **LESSON TOPIC:** | Binary Division |

**SPECIFIC OBJECTIVE**: By the end of the lesson, students should be able to

1. Define Binary Division
2. State the binary division rules
3. Solve binary division equations

**INSTRUCTIONAL RESOURCES:**  Flash Cards and charts

**LESSON PRESENTATION**

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| **STEP 1** | **PREVIOUS KNOWLEDGE:** last class we learnt binary multiplication, its rules and solving equations on it. | | Students recall. |
| **STEP 2** | **EXPLORATION:**  The teacher introduces the topic with the following questions:   1. What is binary division? 2. Do you know the binary division rules? 3. Can you solve binary division equations? | | Students make attempt to answer the questions. |
| **STEP 3**  ***Objective1:***  ***Objective 2:***  ***Objective 3:*** | **DISCUSSION: *The teacher starts the discussion by explaining binary division:***  Binary division, is the process whereby two binary numbers of base 2 can be divided using the basic binary division rules  **Binary division rule:**  The main rules of the binary division include:   1. 1÷1 = 1 2. 1÷0 = Meaningless 3. 0÷1 = 0 4. 0÷0 = Meaningless   **Note;** Binary division follows the long division method to find the resultant in an easy way.  **Solving division equations on Binary**   1. Example 1: 100100012 1012   111  1012 10010012  101  1000  101  101  101  0  **NOTE:** To divide binary numbers, we can also convert the binary number to decimal number (base 10), divide the number and then convert back to binary number. | | Students listen attentively and take down notes. |
| **STEP 4** | **APPLICATION:** Solve using the long division method: 1011012 ÷ 1012  10012  1012 1011012  101  101  101  0 | | Students ask questions on the topic which the teacher answers. |
| **STEP 5** | **EVALUATION:** the teacher evaluates the students with the following questions:   1. What is binary division? 2. State the binary division rules? 3. Solve this using long division 01111100 ÷ 0010 | | The students answer the questions. |
| **Assignment**  Using long division solve these:   1. 10101112 1112 2. 100112 112   **References**  **New concept mathematics for Jss3 by A. A. Arigbabu et al.**  **New general mathematics for Jss3 by M/ F. Macrae et al.** | |  |