LNMTI Observation Sheet for the Planning and Enactment of Mathematics Lessons

**Student:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Class Group:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Date & Time:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Section A**: Numeracy in Mathematics Content Domain: the mathematical content as represented by the Irish mathematics syllabuses at Junior/Leaving Certificate

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| --- | --- | --- |
| **Understand** | **Use** | **Critically Appreciate** |
| **Acquisition of new mathematical Knowledge** | **Application of new mathematical knowledge** | **Recognise where mathematical reasoning can be used to solve problems** |
| **Comment:** | | |

**Section B**: Literacy and Numeracy Cognitive Processes: the extent to which students have opportunities to grapple with and make sense of the mathematics being taught

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| --- | --- | --- | --- | --- |
| **Strand 1**  **Probability and Statistics** | **Strand 2**  **Geometry and Trigonometry** | **Strand 3**  **Number** | **Strand 4**  **Algebra** | **Strand 5**  **Functions** |
| **Reference to real life context** | **Present □**  **Not Present □** | **Comment** | | |

**Section C**: Mathematical Quality of Instruction: the enabling of literacy and numeracy skills development by the enactment of rich instruction while working with students and mathematics d numeracy development

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| **MQI for LNMTI (LMT/Hill 2014)**  **Content Domain** | **Explanation** |  | **Comment** |
| ***Linking between representations*** | Captures an explicit link made by the teacher between representations of mathematical ideas.  This can be visual (using graphs or physical models), numerical, algebraic, verbal | **Present □**  **Not Present □** |  |
| ***Explanations*** | Describes the way in which the teacher (a) answers a question of clarification from a student or (b) explains why a mathematics procedure, solution etc. works | **Present □**  **Not Present □** |  |
| ***Mathematical Sense-Making*** | Focuses on the importance of number sense, reasonableness of a solution, mathematical definitions in the teaching and learning interaction | **Present □**  **Not Present □** |  |
| ***Multiple Procedures or solution methods*** | The presence of different mathematical approaches to solving a problem from teacher or student | **Present □**  **Not Present □** |  |
| ***Patterns and generalisations*** | Describes the examination of an example and its development into a generalisation from teacher or student | **Present □**  **Not Present □** |  |
| ***Remediation of student errors and difficulties*** | Captures the way in which a teacher deals with a student misconception and difficulty with an area of mathematics | **Present □**  **Not Present □** |  |

**Section D**: Literacy Forms: the various forms of communication in the classroom interaction to enable Literacy and Numeracy Skills development

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| --- | --- | --- | --- |
| **Literacy Form Domain** | **Explanation** |  | **Comment** |
| **Spoken Language**   1. ***Mathematical language*** | Focuses on the fluency of the teacher and the support given by the teacher to develop mathematical language use in the students. | **Present □**  **Not Present □** |  |
| ***Spoken Language***   1. ***Teacher uses student mathematical contributions*** | Describes how the teacher manages student answers/responses/work to advance the mathematics under instruction. | **Present □**  **Not Present □** |  |
| **Printed Text** | Focuses on the use of textbook, handout etc. non digital representational systems for mathematics such as hand drawn graphs, diagrams, tables etc | **Present □**  **Not Present □** |  |
| **Digital Media** | Use of PowerPoint, digital representational systems for mathematics (such as graphs/diagrams generated for example in GeoGebra) Calculator and internet | **Present □**  **Not Present □** |  |
| **Broadcast Media** | Use of video, film, newspapers, radio, television | **Present □**  **Not Present □** |  |