**MATHEMATICS STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM: | WEEK: 4 | STRAND:Statistics & Probability | **SUB-STRAND:**  **Chance 2** | **WORKING MATHEMATICALLY:**  **MA1-1WM** |
| OUTCOMES: **MA1-18SP** | | **Recognises and describes the element of chance in everyday events** | | |
| **CONTENT:** | | **Describe outcomes as 'likely' or 'unlikely' and identify some events as 'certain' or 'impossible' (ACMSP047)**   * describe possible outcomes in everyday activities and events as being 'likely' or 'unlikely' to happen * compare familiar activities and events and describe them as being 'likely' or 'unlikely' to happen * identify and distinguish between 'certain' and 'uncertain' events * describe familiar situations as being certain or uncertain, eg 'It is uncertain what the weather will be like tomorrow', 'It is certain that   tomorrow is Saturday' (Communicating) | | |
| ASSESSMENT FOR LEARNING (PRE-ASSESSMENT) | | * Teacher asks the students three questions that require a ‘chance’ word to gauge student understanding of ‘chance’ eg “What is the chance of…?   Students identify chance in everyday situation.  Assessment Criteria- No idea, can state,, can state and explain. | | |
| WARM UP / DRILL | | * Possible/Impossible Game- students move to sign according to possibility. | | |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION | |  | | |
| QUALITY TEACHING ELEMENTS | | **INTELLECTUAL QUALITY** | **QUALITY LEARNING ENVIRONMENT** | **SIGNIFICANCE** |
| * Deep knowledge * Deep understanding * Problematic knowledge * Higher-order thinking * Metalanguage * Substantive | * Explicit quality criteria * Engagement * High expectations * Social support * Students’ self-regulation * Student direction | * Background knowledge * Cultural knowledge * Knowledge integration * Inclusivity * Connectedness * Narrative |
| RESOURCES | | <http://www.bbc.co.uk/schools/mathsfile/shockwave/games/fish.html>  <http://www.bbc.co.uk/schools/teachers/ks2_lessonplans/maths/probability.shtml>  <http://www.bbc.co.uk/bitesize/ks2/maths/data/probability/play/>  <http://www.kidsmathgamesonline.com/numbers/probability.html>  coloured pegs, statement cards, bean bag or ball, playground | | |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES | |
| * **What chance? Discussion**   Hold a class discussion about items that are likely to be found in the playground at the end of play. Record predictions. Make sure that students give reasons for their predictions.   * **Knock Knock**   Students brainstorm a list of possible people who could knock at the classroom door eg the principal, a teacher, a primary child, a young infant child, a mother, a father, a grandmother, a grandfather. Students write the names on cards. As a class, students discuss and rate people from ‘least likely to knock’ to ‘most likely to knock’. During the day the students record who comes to the door. At the end of the day, students discuss the findings.  Language- might, certain, probably, likely, unlikely, possible, impossible,  predict, maybe, might not, will happen, will not happen, can happen, cannot happen, good chance, poor chance, fair, not fair, could happen, never | LEARNING SEQUENCEES1 | * **Will It Happen?**   Picture sorting |
| LEARNING SEQUENCES1 | **Group & Independent Activities**   * **What chance? Statement Cards**   Students sit in a circle. One student, holding a ball or beanbag, begins by making a statement such as ‘The principal will visit the class today’. The ball or beanbag is passed to the next student and this indicates it is now their turn to talk. This student agrees or disagrees with the statement eg ‘No, the principal won’t visit today. I saw her walking to another room.’ The next student in the circle is passed the ball or beanbag and contributes a statement that agrees or disagrees eg ‘The principal could visit our room after she has visited the other room.’   * **Certain, Uncertain**   Certain uncertain- devise own rating scale using language of chance.   * Investigation: **Items in Playground**   Students express their opinions about the chance of finding various items in the playground at lunchtime with a partner eg a chip packet, a shopping trolley, a relative. Students challenge any differences in opinion. For example, Ellen might say it would be ‘impossible’ to see her mother in the playground at lunchtime. Another student could challenge this thinking by stating that Ellen’s mother could arrive as a surprise. Students investigate their predictions by visiting the playground after lunch. They record their findings and share this information with the class.   * **Certain or Uncertain**   Have students draw/write scenarios depicting certain and uncertain events. Use these scenarios and ask students to compare and describe the likelihood of events. Discuss the difference in chance between students. |
| LEARNING SEQUENCEExtensionEarly S2 | * **Pegs**   In groups, students are given a bucket of pegs. The bucket could have 10 blue and 10 yellow pegs. Students are asked to sort and count the pegs and then return them to the bucket. Students are asked to predict all possible combinations of pegs if two pegs are randomly taken from the bucket. They select one possible combination and, without looking, take two pegs out of the bucket. They see if the actual result matches their predicted result and discuss. Students repeat the selection several times returning the pegs to the bucket after recording their selection. They write a description of the activity explaining their observations. |
| **EVALUATION & REFLECTION** | Student Engagement: Resources:  Achievement of Outcomes: Follow-up: |

* All assessment tasks should be written in **red** and planning should be based around developing the skills to complete that task.
* Assessment rubrics or marking scale should be considered.