Numicon Planning Numicon 5 NPC NNS 7

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|  | Monday | Tuesday | Wednesday | Thursday | Friday |
| **Activity Group Title** | Solving Problems with fractions, decimals and percentages |
| Learning Opportunities, Language, Important activities and challenges | This activity group builds on the work in Numbers and the Number System 3, where children explored equivalences between fractions and decimals, relating this understanding to percentages (introduced in Calculating 11). Children use this knowledge to find proportions of quantities, e.g. to work out that, if 40 out of 50 children are girls, then 80% are girls. They also explore equivalents of commonly used fractions, and are introduced to using a percentage as an operator, e.g finding 20% of 160 cm. Children will develop an understanding that percentages can be used in contexts where comparisons are important (e.g. trade, science) as a ‘common language’, recognizing that it is easier to compare 44% with 45% than with .Learning opportunities• To become confident at making connections betweenpercentages, decimals and fractions.• To be familiar with the decimal and fraction equivalents of 1%, 10%, 100%, 25% and 50%, e.g. 25% = 0·25 =• To use known equivalents to determine new relationships, e.g. 10% =, so 40% = .• To find fractions of amounts, including measures.• To use percentages as proportions of quantities and asoperators on quantities.Language – see poster and word cardsfraction, decimal, percentage, per cent, part-whole relationship, equivalent, denominator, numerator, proportion, for every, out of, unit fraction, proper fraction, improper fraction, mixed number, factor, common factor, multiple, simplest form |
| **Quick warm-up**Maintenance fromTeaching Handbook Whole Class activities | With your partner write a description of ‘percentage’ ‘fraction’, ‘decimal’Show it with Numicon or Cuisenaire, or PV blocks, or Number lineIf chn are struggling then refer to NPC5 NNS3, CAL11.  | What’s 1% in capacity, money, effort, length? | Sort these in order:.95, 2%, 5/100, 25%, .01, 26/100, 91%, .45Or use cards from PCM 52 Washing Line cards | Take 15/100 off $200, $500.Take 25% off 120*l*, 350cmAdd .5 to 20kg, 45kg | Would you prefer to calculate interest rates in percentages, fractions or decimals. Why? |
| **Exploration** using the Pupil Book Practice sectionand Opening Pages on Oxford Owl to solve problems | Page 102Question 1Can you write 30% in its simplest form? Now as a decimal. | 103Question 1 | 104Questions 1 and 2 | 105 after the focus teaching | Explorer Progress Book 5c pages 4-5 |
| **Whole Class**1. Discuss the outcomes
2. Focus Activities from Teaching Handbook
 | Focus Activities 1 and 2Finding equivalents of 1% and other percentagesFinding percentages of amounts other than 100 | Focus Activities 3 and 43. Finding equivalents of multiples of 10% and findingpercentages of amounts4. Finding equivalents of commonly used fractions | Focus Activity 5 5. Using percentages as proportions of a quantity | Focus Activity 66. Using percentages as operators |  |
| **Independent** Activities from Teaching HandbookandPupil Book In-depth | After activity 2Complete PB 102 | After activity 3After activity 4Complete PB 103Game: Explore More 14 – 100% | After Activity 5Complete PB 104 | After activity 6Complete PB 105 |  |
| **Reflection****Whole class** |  |  |  |  |  |

