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 between  percentages, 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 as  operators on quantities.  Language – see poster and word cards  fraction, 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 from  Teaching 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 line  If 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%, .45  Or use cards from PCM 52 Washing Line cards | Take 15/100 off $200, $500.  Take 25% off 120*l*, 350cm  Add .5 to 20kg, 45kg | Would you prefer to calculate interest rates in percentages, fractions or decimals. Why? |
| **Exploration** using the Pupil Book Practice section  and Opening Pages on Oxford Owl to solve problems | Page 102  Question 1  Can you write 30% in its simplest form? Now as a decimal. | 103  Question 1 | 104  Questions 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 2  Finding equivalents of 1% and other percentages  Finding percentages of amounts other than 100 | Focus Activities 3 and 4  3. Finding equivalents of multiples of 10% and finding  percentages of amounts  4. Finding equivalents of commonly used fractions | Focus Activity 5  5. Using percentages as proportions of a quantity | Focus Activity 6  6. Using percentages as operators |  |
| **Independent** Activities from Teaching Handbook  and  Pupil Book In-depth | After activity 2  Complete PB 102 | After activity 3  After activity 4  Complete PB 103  Game: Explore More  14 – 100% | After Activity 5  Complete PB 104 | After activity 6  Complete PB 105 |  |
| **Reflection**  **Whole class** |  |  |  |  |  |

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