

| Codes and Ciphers | UNIT 7 Postcodes Lesson Plan 1 | |
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| Activity 2 <i>(continued)</i> | <p>T: So how many possible units are there in total? How can we calculate this?</p> <p>T (writes on board, as directed by P(s)):</p> $650 \times 99 \times 10 \times 650 \approx 418 \text{ million}$ <p style="text-align: right;"><i>30 mins</i></p> | <p style="text-align: center;">Notes</p> <p>Review answers interactively; agree/disagree; T should sort out any problems/mis-understandings.</p> |
| 3 | <p>Allocating codes</p> <p>T: The Post Office actually uses about 120 areas, 2900 districts, 9000 sectors and 2 million units.</p> <p>T: Does this figure for the number of areas sound realistic compared with the possible number that are available? <i>(Yes – 650 areas are available)</i></p> <p>T: What about districts, sectors and units?</p> <p>T: Now answer the questions in Exercise 2 in your Text.</p> <p>T: Who can give us answers to parts (a), (b) and (c)?</p> <p>(a) $\frac{2900}{120} \approx 24 \text{ districts per area (up to 99 available)}$</p> <p>(b) $\frac{9000}{2900} \approx 3.1 \text{ sectors per district (up to 9 available)}$</p> <p>(c) $\frac{2 \times 10^6}{9000} \approx 222 \text{ units per sector (up to 650 available)}$</p> <p>T: And for part (d)? <i>(About 12)</i> Who would like to write their calculation on the board?</p> <p>P (on board):</p> $\frac{\text{no. of units}}{\text{no. of households}} = \frac{24 \times 10^6}{2 \times 10^6}$ $= \frac{24}{2}$ $= 12 \text{ households/unit}$ <p>T: Well done. Does everyone else agree with this?</p> <p>T: Why did the Post Office choose this number of households per unit?</p> <p>T: If you had to devise a replacement system, what design would you use?</p> <p style="text-align: right;"><i>45 mins</i></p> | <p>Interactive discussion to see if the results are feasible; Ps work in pairs on the calculations.</p> <p>T gives Ps 5 minutes to answer these questions, then reviews Ps' answers. Volunteer Ps give answers verbally; others agree/disagree.</p> <p>Other Ps agree/disagree and T sorts out any misunderstandings.</p> <p>Whole class discussion on technology, noting that this system was introduced in 1966.</p> |
| | <p>Homework</p> <p>Either Activity 2 or complete the question about a replacement system of postcodes, set at the end of the lesson.</p> | |