### Lesson Plans



| sson No. |   | Referenc                      |  |
|----------|---|-------------------------------|--|
| 1        | Probability Scale   |                               |  |
|          | Introduce concept with simple examples - discussion           | A5.1 or OS 5.2                |  |
|          | Examples: clarify terms used                                  | T5.1                          |  |
|          | Exercises   | T5.1                          |  |
|          | Activity - 'Odds and Evens'                                   | A5.2                          |  |
|          | Homework  | P5.1                          |  |
| 2        | Simple Probability  |                               |  |
|          | Basic ideas   |                               |  |
|          | Examples  | T5.2                          |  |
|          | Exercises   | T5.2                          |  |
|          | Activity with variety of outcomes                             | OS 5.3 or 5.4                 |  |
|          | Homework  | Complete activity and P5.2    |  |
| 3        | Outcome of Two Events   |                               |  |
|          | Introduce through experiment (e.g. two dice/ three dice)      |                               |  |
|          | Example   | T5.3                          |  |
|          | Exercises   | T5.3                          |  |
|          | Activity - 'A Russian Fable', whole class activity, collating | results A5.4                  |  |
|          | Homework Comp   | lete activity and P 5.3 (Q.4) |  |
| 4.       | Finding Probabilities Using Relative Frequencies              |                               |  |
|          | Activity - 'Experimental Probabilities'                       | A 5.3                         |  |
|          | Examples  | T5.4                          |  |
|          | Exercises   | T5.4                          |  |
|          | Homework  | P 5.4 (Q.2)                   |  |
| 5.       | Determining Probabilities                                     |                               |  |
| J.       | Simple examples   | T5.5                          |  |
|          | Exercises   | T5.:                          |  |
|          | Examples  | A5.:                          |  |
|          | Lampica   | AJ.,                          |  |

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| Lesson No. |                                     | References       |  |
|------------|-------------------------------------|------------------|--|
| 6.         | Probability of Two Events (1)       |                  |  |
|            | Recap outcomes                      |                  |  |
|            | Simple examples - two coins         | OS 5.1/ T5.6     |  |
|            | Exercises                           | T5.6             |  |
|            | Homework                            | P5.6 (Q 4 and 5) |  |
| 7.         | Probability of Two Events (2)       |                  |  |
|            | Revise with further worked examples | T5.6             |  |
|            | Activity - 'Open and Shut Case'     | T5.6             |  |
|            | Exercises                           | T5.6             |  |
|            | Homework                            | P5.5 (Q.6 and 7) |  |
| 8.         | Tree Diagrams (1)                   |                  |  |
|            | Introduce through worked examples   | T5.7             |  |
|            | Exercises                           | T5.7             |  |
|            | Return to earlier activities        | OS 5.3 or 5.4    |  |
|            | Homework                            | P5.7 (Q.2 and 3) |  |
| 9.         | Tree Diagrams (2)                   |                  |  |
|            | Review homework                     |                  |  |
|            | Exercises                           | T5.7             |  |
|            | Homework                            | P5.7 (Q.6 and 7) |  |
| 10.        | Misconceptions                      |                  |  |
|            | Class activity (selected)           | A5.9             |  |
|            | Revise unit                         |                  |  |
|            | Introduce possible coursework task  | A5.5             |  |

MEP: Demonstration Project UNIT 5: Probability

### UNIT 5 Probability

### Lesson Plans



Lesson No. References

#### 1. Simple Probability

Basic ideas

Examples T5.2
Exercises T5.2
Activity with variety of outcomes OS 5.3 or 5.4
Homework Complete activity and P5.2

#### 2. Outcome of Two Events

Introduce through experiment (e.g. two dice/ three dice)

Exercises T5.3

Activity - 'A Russian Fable'. Whole class activity, collating results A5.4

Homework Complete activity and P 5.3 (Q.4)

#### 3. Finding Probabilities Using Relative Frequencies

Activity - 'Experimental Probabilities'

Examples

T5.4

Exercises

T5.4

Homework

P 5.4 (Q.2)

#### 4. Determining Probabilities

Simple examplesT5.5ExercisesT5.5ExamplesA5.5HomeworkP 5.5 (Q.8 and 9)

#### 5. Probability of Two Events (1)

Recap outcomes

Simple examples - two coins

Exercises

T5.6

Homework

OS 5.1/ T5.6

P5.6 (Q 4 and 5)

## Lesson Plans



| Lesson No. |   | References          |  |
|------------|---|---------------------|--|
| 6.         | Probability of Two Events (2)             |                     |  |
|            | Revise with further worked examples       | T5.6                |  |
|            | Activity - 'Open and Shut Case'           | T5.6                |  |
|            | Exercises                                 | T5.6                |  |
|            | Homework                                  | P5.5 (Q.6 and 7)    |  |
| 7.         | Tree Diagrams (1)                         |                     |  |
|            | Introduce through worked examples         | T5.7                |  |
|            | Exercises                                 | T5.7                |  |
|            | Return to earlier activities              | OS 5.3 or 5.4       |  |
|            | Homework                                  | P5.7 (Q.2 and 3)    |  |
| 8.         | Multiplication Law for Independent Events |                     |  |
|            | Introduce through examples                | T5.8                |  |
|            | Exercises                                 | T5.8                |  |
|            | Homework                                  | P5.8 (Q.6, 7 and 8) |  |
| 9.         | Mutually Exclusive Events                 |                     |  |
|            | Introduce through examples                | T5.9                |  |
|            | Activity - 'Fruit Machine'                | A5.7                |  |
|            | Exercises                                 | T5.9                |  |
|            | Homework                                  | P5.9 (Q.11 and 12)  |  |
| 10.        | Misconceptions                            |                     |  |
|            | Class activity (selected)                 | A5.9                |  |
|            | Revise unit                               |                     |  |
|            | Introduce possible coursework task        | A5.5                |  |

## Lesson Plans



| Lesson No. |  | References                        |  |  |
|------------|--|-----------------------------------|--|--|
| 1.         | Outcome of Two Events Introduce through experiment (e.g. two dice/ three dice) |                                   |  |  |
|            |  |                                   |  |  |
|            | Example  | T5.3                              |  |  |
|            | Exercises  | T5.3                              |  |  |
|            | Activity - 'A Russian Fable'. Whole class activity,                            | collating results A5.4            |  |  |
|            | Homework   | Complete activity and P 5.3 (Q.4) |  |  |
| 2.         | Finding Probabilities Using Relative Frequencie                                | 20                                |  |  |
| 2.         | Activity - 'Experimental Probabilities'  | A 5.3                             |  |  |
|            | Examples   | T5.4                              |  |  |
|            | Exercises  | T5.4                              |  |  |
|            | Homework   | P 5.4 (Q.2)                       |  |  |
|            |  |                                   |  |  |
| 3.         | <b>Determining Probabilities</b>   |                                   |  |  |
|            | Simple examples  | T5.5                              |  |  |
|            | Exercises  | T5.5                              |  |  |
|            | Examples   | A5.5                              |  |  |
|            | Homework   | P 5.5 (Q.8 and 9)                 |  |  |
| 4.         | Probability of Two Events  |                                   |  |  |
|            | Introduce through examples   | T5.6                              |  |  |
|            | Exercises  | T5.6                              |  |  |
|            | Activity - 'Open and Shut Case   | A5.6                              |  |  |
|            | Homework   | P 5.7 (Q.6 and 7)                 |  |  |
| 5.         | Tree Diagram   |                                   |  |  |
|            | Introduce through examples   | T5.7/ OS 5.3 or 5.4               |  |  |
|            | Exercises  | 15.77 65 5.5 61 5.1               |  |  |
|            | Activity   | A5.7                              |  |  |
|            | Homework   | P5.7 (Q.2, 6 and 7)               |  |  |
|            |  |                                   |  |  |
| 6.         | Multiplication Law for Independent Events                                      |                                   |  |  |
|            | Introduce through examples   | T5.8                              |  |  |
|            | Exercises  | T5.8                              |  |  |
|            | Homework   | P5.8 (Q.6, 7 and 8)               |  |  |

# UNIT 5 Probability Lesson Plans



| Lesson No. |                                      | References            |  |
|------------|--------------------------------------|-----------------------|--|
| 7.         | <b>Mutually Exclusive Events</b>     |                       |  |
|            | Introduce through examples           | T5.9                  |  |
|            | Activity - 'Fruit Machine'           | A5.7                  |  |
|            | Exercises                            | T5.9                  |  |
|            | Homework                             | P5.9 (Q.11 and 12)    |  |
| 8          | Conditional Probability (1)          |                       |  |
|            | Introduce through examples           | T5.10                 |  |
|            | Exercises                            | T5.10                 |  |
|            | Activity - 'Seek and Win'            | A5.8                  |  |
|            | Homework                             | P 5.10 (Q.1, 2 and 6) |  |
| 9.         | Conditional Probability (2)          |                       |  |
|            | Review homework                      |                       |  |
|            | Exercises                            | T5.10                 |  |
|            | Activity - 'Birthday'                | A5.10                 |  |
|            | Homework                             | P5.10 (Q.7, 8 and 10) |  |
| 10.        | Misconceptions                       |                       |  |
| 10.        | Class activity                       | A5.9                  |  |
|            | Revise unit                          | AJ.)                  |  |
|            | Introduce possible coursework tasks  | A5.11                 |  |
|            | introduce possible course work tusks | 710.11                |  |