

## **Scheme of work - Numeracy and health and social care (Entry 3 - Level 1)**

### **Aims**

The themes in this scheme of work are designed to exemplify the numeracy skills that are integral to developing employability skills within a variety of Health and Social Care contexts. They can be used for support the development and on-the-job training of health as well as social care practitioners. The scheme of work is a tool for planning an employability skills development programme or as a menu of themes or topics for inclusion in induction to a workplace. The focus is on developing a problem-solving approach so as to be able to fulfil a range of job functions – carrying out tasks with due care for clients, understanding and knowledge of health topics as well as consideration of safety matters.

Those involved in the skills development of new staff may find this scheme useful when planning a series of training interventions or induction for a new employee. The themes selected are generic to a wide range of health and social care contexts, but these may need to be modified or adapted to fully address the skills needed in a particular setting. Depending on learner need and the learning environment, teachers and trainers may wish to add home work tasks and portfolio building as activities which enhance knowledge and learning skills.

This scheme of work highlights numeracy content and it is aimed at employees whose numeracy skills are around Entry 3, but progression onto Level 1 and occasionally Level 2 is included where appropriate. The scheme is presented as 6 learning themes.

Key numeracy objectives:

- recognising, selecting and using appropriate units of measure for height, weight, fluid measure, temperature, time and other measures related to health
- interpreting data presented in the form of tables, charts and graphs
- presenting data in the form of tables, charts, graphs and diagrams
- using the four rules of number in relevant job role tasks
- calculating angles
- using relevant formulae.

| Context of learning  | Primary numeracy focus   | Other numeracy skills  | Possible activities  | Resources  | Assessment  |
|--|--|--|--|--|---|
| <b>1: Diet and healthy eating</b>  |  |  |  |  |   |
| <p>Concept of a well balanced diet</p> <p>Healthy eating requires an understanding of the composition of food and its links to lifestyle</p> | <p>Extract numerical information from lists, tables, diagrams and simple charts</p> <p>Make comparisons from bar charts and pictograms</p> | <p>Measure weight of foods Work with percentages and 'content per 100g'</p> <p>Recognise other units of measure such as calories</p> | <p>Examine a variety of packaging for food for clients in a care home or for meals on wheels</p> <p>Identify and compare food content as described on the labels</p> <p>Present content of food (e.g. in a typical client's meal) in tables or charts</p> <p>Identify grams of salt or sugar per day in different meals and compare with recommended daily intake</p> <p>Discuss the relationship between food intake and sugar and salt content. Identify possible ways to reduce intake to reduce health risks. Also consider links between food intake and exercise</p> | <p>Packaging from client's food with contents tables</p> <p>Weighing instruments</p> <p>Calculators</p> <p>Graph or squared paper</p> <p>Healthy eating and nutrition publications</p> | <p>Measuring accurately</p> <p>Observation</p> <p>Question and answer</p> |

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|---|--|--|--|---|---|
| <b>2: Physical growth</b>   |  |  |  |   |   |
| Investigate common weights, heights and volumes and patterns of development | Measure height<br>Measure weight<br>Measure time | Convert measurements (within metric system)<br><br>Use charts and table<br><br>Draw and read graphs and charts<br><br>Convert measurements between metric and imperial units | List the metric units used for measuring height and weight, e.g. kg and g, m, cm and mm. Put the units in order of size and use the appropriate units to estimate and measure the size of a variety of objects e.g. height of wheelchair, width of doorway, weight of a chair, volume of medicine in a spoon<br><br>Investigate health and safety recommendations for safely lifting people and manual handling of weights relevant to context<br><br>Investigate BMI graphs and tables to discuss the link between the range of heights and weights of clients<br><br>Discuss how the recommendations in the table may be used with a relevant client group | Measuring tapes<br><br>Scales<br><br>Calculators<br><br>Graph or squared paper<br><br>Paper and coloured pens | Observation of accurate ordering, weighing and measuring<br><br>Question and answer to check conceptual understanding of units of measure |

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|---|---|-----------------------|--|---|---|
| <b>3: Other measures of physical health</b>                                 |   |                       |  |   |   |
| Understand measures of fluid intake, pulse rates and temperature regulation | Measure capacity<br>Measure temperature<br>Identify and measure complex units<br>Use formulae | Use charts and table  | Use common containers, e.g. cup, mug or teaspoon to estimate fluid intake. Then measure content accurately using specific equipment such as a measuring jug<br>Record clients' fluid intake on charts used in a relevant context<br>List in order of size the units of metric measure used for height, weight and volume<br>Measure clients' pulse rate at rest and after exercise, and display information<br>Use appropriate data sources for client group to interpret various blood pressure readings<br>Measure external, room and body temperatures. Display information and compare to temperature data on comfortable living ranges, indicators of illness and hypothermia | Measuring jugs and any fluid containers<br>Thermometers<br>Graph or squared paper<br>Data sources on fluid intake<br>Data sources on pulse rate, blood pressure<br>Data sources on body temperatures (ill and healthy) and extreme climate temperatures | Observation<br>Charts and graphs<br>Record of data collection<br>Personal aide memoire for estimating liquid measure when using common containers |

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|--|---|--|--|--|---|
| <b>4: Inherited illness and physical conditions</b>            |   |  |  |  |   |
| Understand Inherited illness and inherited physical conditions | Basic probability and probability trees | <p>Read and interpret population statistics</p> <p>Use percentages to interpret data</p> | <p>Investigate available data sources on common inherited illnesses and disabilities relevant to own client group</p> <p>Produce simplified diagrams indicating how inheritance works and the probability of members of client group having these diseases or disabilities</p> <p>Discuss the implications of these probabilities linked to risks using appropriate language and vocabulary, e.g. most likely, less likely, probably, almost 100% certain, extremely unlikely</p> <p>Discuss how these characteristics may, or may not, affect a relevant client group</p> | <p>Graph or squared paper</p> <p>Data sources on genetics and inherited illness</p> <p>Calculators</p> | <p>Observation of accurate presentation of graphs</p> <p>Calculators used correctly</p> |

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|---------------------------------------|---|---|---|---|---|
| <b>5: Health and safety</b>           |   |   |   |   |   |
| Health and safety and risk assessment | <p>Extract information<br/>Understand signs and symbols</p> <p>Organise and represent information in different ways</p> | <p>Recognise a range of different units, e.g. time storage limits, temperature limits</p> <p>Use ratio</p> <p>Use percentages to interpret data</p> | <p>Conduct a risk assessment of a room or building that may need adapting to take into account the needs of young children and/or people with disabilities</p> <p>Present findings in the form of a report with charts or graphs to indicate recommendations</p> <p>Research and interpret data based on ratios (e.g. number of toilets in relation to number of staff, office space requirements per person)</p> <p>Research health and safety issues related to a relevant work context, e.g. likelihood of manual handling and lifting, or slips and trips</p> | Data on workplace or organisation type from Health and Safety Executive or other reliable sources | <p>Observation of health and safety awareness and regulations</p> <p>Presentation of information in an appropriate format, including simple charts and graphs</p> |

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|--------------------------------------|---|---|---|--|--|
| <b>6: Planning for accessibility</b> |   |   |   |  |  |
| Wheelchair use                       | Measure area and make a scale drawing<br><br>Convert units of measure in the same system<br><br>Work out the area<br><br>Work out the perimeter | Measure accurately and draw to scale<br><br>Write scales in different formats<br><br>Estimate<br><br>Measure angles | Plan a room for a wheelchair user. Draw the room and furniture to scale, and using a cut out rectangle (to scale) to represent the wheelchair check for access (e.g. doorways, between furniture)<br><br>Draw a plan to show how to provide an access ramp. Investigate a safe angle for the ramp and consider other safety factors related to making rooms and buildings wheelchair accessible | Graph or squared paper<br><br>Rulers<br><br>Data on workplace or organisation from Health and Safety Executive or other reliable sources | Observation of ability to extract relevant information<br><br>Drawing to scale |