



Move On Up: Learning Chunk – Entry 2 numeracy

A learning chunk is not a session plan. It provides a series of activities around a skill(s) area. It is intended that teachers can select and adapt the ideas to meet the requirements of their learners in different contexts.

Putting information into lists, tables and diagrams

Curriculum references: HD1/E2.4, HD1/E2.5

Contexts: Learners will come across lists, tables and diagrams in a wide range of everyday and vocational contexts and need to build confidence in using these – both to understand information presented in a range of different ways and to be able to present information using them effectively to make it as clear as is possible.

Teaching approach	Teaching and learning ideas	Resources
Whole group warm up/mental maths activities – to get the learners active and to build their confidence with identifying features and comparing information.	Stand up/sit down <ul style="list-style-type: none">The teacher calls out different criteria and learners follow the instructions to stand up/sit down, etc., depending on whether they fit the criteria mentioned or not. <i>e.g. 'Stand up if you travelled here by car. Sit down if you didn't drive. Put up your left hand if you listened to the radio on the way here . . .'</i> etc. Variation on 'Stand up/sit down' <ul style="list-style-type: none">This activity can also be done with learners moving to different points of the room for different criteria. <i>e.g. 'Move to the left if you prefer coffee; to the right if you prefer tea.'</i> This sometimes works better if the criteria picked take slightly longer to think about (preferences, opinions, etc.) and there may be some that people are not sure which way to go. Find someone <ul style="list-style-type: none">Learners have a list of criteria (e.g. has blue eyes; is a grandparent; rides a motorbike; is wearing blue underwear, etc.) and move around the room trying to find someone to fit each category listed. They should aim to find a different person for each category (maybe using each person twice if the group is fairly small).	<ul style="list-style-type: none">Lists of criteria to ask other learners about.

Teaching approach	Teaching and learning ideas	Resources
<p>Whole group warm up/mental maths activities – to get the learners active and to build their confidence with identifying features and comparing information.</p>	<p>Variation of ‘Find someone’</p> <ul style="list-style-type: none"> Learners move round the room trying to find two things in common with three other people in the group – one thing preferably being something they didn’t previously know about them. As a group they then compare results. This activity encourages learners to talk together and get to know one another and also gets them thinking about what people have in common and about which we might survey a group. <p>Sort them out</p> <ul style="list-style-type: none"> Learners sort and group the others in the group according to a criteria of their own choice (e.g. if they have long hair or not). They tell the rest of the group their two lists of people – or physically sort them into the two groups – and the others have to guess what their criteria was. <p>True/false</p> <ul style="list-style-type: none"> The teacher gives various statements and the learners have to say if each one is true or false by writing on an individual mini-whiteboard or visually indicating (e.g. thumb up = true / thumbs down = false). <p><i>e.g. ‘There are more men than women in the group.’</i> <i>‘There are five spare chairs in the room.’</i></p> <p>Differentiation</p> <ul style="list-style-type: none"> Depending on the skills of the learners, the statements could incorporate using other maths skills to determine if they are true or not. <p><i>e.g. ‘Half the women are wearing trousers.’</i> <i>‘Only one person is over 2 m tall.’</i></p>	

Teaching approach	Teaching and learning ideas	Resources
<p>Discussion and small group/pair work – to get learners involved in practical activities to build their skills using tables, lists and diagrams, so they feel able to use these to reflect/understand everyday data.</p>	<p>Everyday tables, lists and diagrams</p> <ul style="list-style-type: none">• As a group, list the tables, lists and diagrams they typically come across in everyday and working life. Discuss similarities and differences between these, which they feel confident to use and which are more difficult to use.• Collect examples of these typical lists, tables and diagrams and get learners to highlight the key features of them such as the title, labels, keys, etc. (Are they each easy to understand and to read? Is there any important information missing from any?) <p>Tally it up</p> <ul style="list-style-type: none">• Working with the whole group, model the process of analysing and collating raw data into a tally and a table, encouraging learners to make suggestions and discussing options.• Ask learners to work in pairs/small groups, providing each with a set of data in the form of raw numbers (e.g. how people in an office travel to work) and ask them to represent this data as a tally and then to transfer this information into a suitable table. Discuss as a whole group afterwards what they did and any decisions they had to make. <p>Differentiation</p> <ul style="list-style-type: none">• Repeat the process described above but for some learners maybe using data that may need to be grouped before tallying it up (e.g. the heights of a group of people).	<ul style="list-style-type: none">• Examples of everyday lists, tables and diagrams.• Sets of raw data for learners to tally and collate.

Teaching approach	Teaching and learning ideas	Resources
<p>Discussion and small group/pair work – to get learners involved in practical activities to build their skills using tables, lists and diagrams, so they feel able to use these to reflect/understand everyday data.</p>	<p>Conducting a survey</p> <ul style="list-style-type: none"> As a group, brainstorm ideas of different things you could survey amongst the group. Examples might include modes of transport, age, how many times people attend tuition in a week, postcodes, how much TV they watch in a typical week, mobile phone networks, etc. Arrange learners into pairs/small groups and assign them (or ask them to choose) a survey to do. They ask the others about their chosen item, collect the data and record this in a way of their choice (with help and discussion with the teacher if needed). If appropriate before doing the actual surveys, the group could discuss the surveys chosen and predict what sorts of results they think each will get. Ask learners in pairs to write down/record one statement they predict for each survey. <i>e.g. 'We think most people will travel by car'</i> <i>'We think the amount of TV people watch will vary a lot between different people in the group.'</i> <p>Match them up</p> <ul style="list-style-type: none"> Collect examples of typical lists, tables and diagrams. Cover up or remove their title, labels, etc., and spread them around the room marked 1, 2, etc. Give learners in pairs/small groups a list of the removed titles and labels and ask them to match these to the different graphics. Compare results as a whole group and discuss any that were difficult to assign (and why). 	<ul style="list-style-type: none"> Examples of everyday/vocational tables, lists and diagrams with their titles, labels, etc., removed or covered.

Teaching approach	Teaching and learning ideas	Resources
<p>Problem-solving/ investigations – to develop learners’ awareness of the relationships between lists, tables and diagrams.</p>	<p>Changing the graphic</p> <ul style="list-style-type: none"> Encourage learners to explore representing data in more than one way (e.g. as a bar chart or a pie chart or in a table or on a chart). They can use an IT application to create different charts and then discuss the difference between how this data looks, how clearly the two ways show the information and which way of showing the data they prefer. Discuss conducting a survey in the workplace or in the local shopping centre. Who could you survey to get very different results to the same type of survey (e.g. use of leisure time with two groups of very different ages)? <p>Drawing it out</p> <ul style="list-style-type: none"> Discuss examples of diagrams that learners use or can think of, e.g. instructions, bus/Tube maps, room/garden plans, flowcharts, etc. Provide learners, working in pairs/small groups, with a short text that could be transferred into a diagram – such as instructions on how to do a specific task, directions between two places, instructions on which questions to answer in a questionnaire/form. Ask them to represent the information in a suitable diagram and then present it to the rest of the group. Discuss these diagrams together and identify useful ideas or features for future reference. <p>Extension of ‘Conducting a survey’</p> <ul style="list-style-type: none"> Identify as a group examples of other things you might survey but would need more people/data to make them work. As a group, discuss who you could ask if you wanted to conduct one of these surveys, e.g. friends and family, other students in college/employees. 	<ul style="list-style-type: none"> Data in a spreadsheet for learners to create a chart. Examples of diagrams such as maps, plans, instructions, flowcharts. Text which gives simple instructions or directions or describes a sequence of events.

Teaching approach	Teaching and learning ideas	Resources
Integration of IT	<ul style="list-style-type: none"> IT can be very useful in working on tables as learners can create tables in Word using the Table menu, amending the number of rows and columns if needed as they work and moving the table around amongst other text if useful. Learners can use spreadsheets to do similar things as well as to help them in adding up data and creating graphic representations using the Insert – Picture – Chart function to create charts from data for them. This means they can produce charts quickly and present them well – and can easily try several different formats for one chart to compare results and choose which they think would be best. 	
Embedded/ contextualised activities – to encourage learners to practise/use the skills they are learning in contexts most relevant to them.	<ul style="list-style-type: none"> Learners will read lists, diagrams and tables in a wide variety of everyday situations, including price lists, menu lists, sports results tables, tournament charts, information in holiday brochures, timetables, instructions, catalogues, etc. Tables, lists, diagrams and plans will also be important in a range of vocational and work contexts such as horticulture and building trades (plans and sketches), office work and retail (price lists, stock levels), animal care (feed rates, weights), beauty and hairdressing (application of chemicals), timesheets, work rotas, etc. 	<ul style="list-style-type: none"> Embedded Materials: Sports leadership – SL 4:5–4:10, SL 5:1–5:4, SL 5:5–5:12. SfL Learner Materials: SfL LM/NE2 Unit 4.
Application of skills – to build learners’ confidence to apply the skills they are learning to real life contexts and to reflect on this	<ul style="list-style-type: none"> As a group discuss the lists, tables and diagrams they typically come across in everyday or working life. Encourage learners in pairs to pick an example and to present it to the others in the group, saying where they found it, why they chose it, the key information it shows and pointing out any particular things about it. <i>e.g. One pair might bring in the page from an appointments book, pointing out that it is important to look at the notes which say how long each appointment will last so you know when you can book the next. Another pair might bring in a train timetable, pointing out that the timetable changes on a particular date and so will be replaced.</i> 	