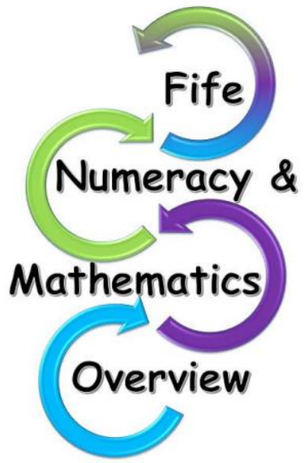

Information Handling

The Information Handling Progression Overview:

- Provides a **brief overview** of progression within Information Handling
- **Aligns with** the Information Handling ***Progression Pathway***
- **Should be used** in **conjunction** with the ***Information Handling Pathway***
- **Should not be used** as a standalone document
- **Can be used** as part of **professional dialogue** in relation to **Teacher Professional Judgement**

	Early		First			Second		
	Phase 1 – Prerequisite	**Phase 1**	**Phase 2**	**Phase 3**	**Phase 4**	**Phase 5**	**Phase 6**	**Phase 7**
	Key vocabulary: labels, signs, match, sort, criterion, sequence, graph, yes/no questions, classify, data, pictogram, block graph, frequency, tally marks, chart, compare, height, length, most popular, least popular, Venn diagram, table, bar graph, scale, axis, Carroll diagram, flow chart, intervals, survey, sampling, misleading, line graph, pie chart, database, spreadsheet, tree diagram, histogram, grouped data							
Data and Analysis	• I can use simple labels and signs in everyday life • I can match using one criterion (e.g. colour) • I can sort and labels objects (e.g. roll/don't roll) • I can describe a likeness between things (e.g. some of these things are Lego bricks) • I can place objects into sequences (e.g. order sticks by length) • I can create a picture as a record of results (e.g. a graph made with sweets) • I can ask yes and no questions to gather information • I can pose questions (e.g. what's your favourite animal) • I can give information about myself using a variety of methods (e.g. show hands, yes/no answers) • I can make predications based on criteria (e.g. I think dogs will be the most common pets)	• I classify things using one of two criteria (e.g. shape and colour) • I can pose questions suggested by collected data (e.g. what's the most popular lunch choice today) • I can display in 1:1 correspondence picture or objects that represent information • **I can make pictograms using 1:1 correspondence** • I can make block graphs using real data • I can interpret block graphs made by others • I can suggest ways of effectively counting data • I can summarise information from a chart by counting (e.g. count how many children have wellies on) • I can compare heights or lengths of columns on graphs • I can report the frequency of information using tally marks • I can read frequencies from a block graph • I can describe the results of my data using a few sentences (talk/written)	• I can offer suggestions about how to classify or sort information • I can suggest data to collect (e.g. can we find out what flavour of cookie to bake for the school fayre) • I can form appropriate questions to collect the required data • **I can plan and collect information in a variety of ways such as surveys and practical investigations** • **I can record frequency data accurately using tally marks and organised lists** • I can use mathematical language related to data such as most popular and least popular	• I can adapt a survey question so it can be answered easily with few options (yes/no, colours) • I can summarise data based on tally marks • I can summarise data in diagrams (including Venn diagrams) • I can summarise and interpret data in tables • I can make graphs to explore data • I can explain the data I have collected to others • I can display frequency data in vertical and horizontal bar graphs • I can read a bar graph where not all number are shown (e.g. 0, 2, 4, 6) • I make predictions on data that might be collected • I can comment on predictions made following data collection	• **I can label bar graphs with titles, axes** • **I can and interpret make bar graphs where the scale is appropriate, one unit may represent more than one value** • I can use a variety of different methods to explore, display and interpret relationships between data (including Venn and Carroll diagrams) • I can understand why organisation of data is necessary • I can describe information from diagrams that use arrows (flow charts)	• I can produce working graphs to explore data • I can suggest ways to improve a classification to better answer a question (e.g. refine classification of animals) • I can revise a survey question so it can be answered by multiple choice • I can construct and use my own categories to classify information (e.g. how animals move- leaners choose options) • I understand that data can swayed by the questions I have asked • I can organise data into intervals (e.g. ages 1-5, 6-10) • I can collect data using surveys and investigation in collaboration with others • I can read information provided on the axis of bar graphs and line graphs including where not all numbers are shown on the scale • **I can represent data in diagrams and table including simple pie charts, Venn diagrams and Carroll diagrams** • I can suggest what data to collect to help estimate number or quantities	• **I can ensure that data is displayed in a way that is can be easily interpreted by others (including bar graphs, line graph, pie chart, diagrams)** • I can explore the different ways in which data can be collected • I can enter data into databases with predefined fields • I can enter data into a prepopulated spreadsheet • I can interpret and report on information provided in simple tree diagrams • I can comment sensibly on how well questions were answered by the data collected and suggest how it could be improved • **I can explore the effect of incorrect use of scale (misleading scale)** • **I can explore the effect of poor sampling (e.g. only asking a specific group of people questions)** • **I can display measurements in tables with class intervals (e.g. pupil heights)**	• I can create simple spreadsheets • I can explore the difference in appearances of graphs by changing the scale • I can use fractions and percentage to summarise data (e.g. half the children had a cats) • I can explore misleading statistics in real life • **I can select the most suitable way of collecting data for a given task** • **I can create, interpret and report on information provided in tables and bar graphs where the data might be grouped into simple intervals** • Interpret and report and information provided in complex Venn diagrams that have more than one circle • I can interpret and report on information in line graphs describing the trends seen in data • I can comment sensible on how well my own collected data answers the original question • I can interpret histograms for grouped data including where the data on the axis must be read between the scale numbers • I can interpret pictograms where one unit represents a different data value (e.g. one pear = 5 people)

	Early		First			Second		
	Phase 1 – Prerequisite	**Phase 1**	**Phase 2**	**Phase 3**	**Phase 4**	**Phase 5**	**Phase 6**	**Phase 7**
	Key Vocabulary: will, won't, might, can, can't, possible, impossible, certain, uncertain, likely, unlikely, more likely, less likely, always, never, sometimes, fair, unfair, choose, outcome							
Ideas of chance and uncertainty	• I can respond appropriately to everyday language associated with uncertainty. (e.g. will, won't, might, can, can't, not sure, sure) • I can choose between simple options such as what to have at snack time, who to play with. • Use language such as, 'always', 'never', sometimes' • Talk about choices and justify them. (e.g. I chose blue paint because it is my favourite colour) • Talk about events recognising the nature of chance (e.g. It might rain today) • Talk about decisions and justify them (e.g. I decided to stay in because it was raining)	• I can understand that choices can be made (e.g. choose which t-shirt to wear, recognising that there was more than one option) • I can respond appropriately to, and use 'possible' and 'impossible' for describing familiar events and actions. (e.g. it is impossible for me to fly like a bird) • Identify possible outcomes for daily events (e.g. after Dad picks me up from school, we might go to the park)	• I can talk about events recognising the nature of chance. (e.g. The new baby might be a girl or might be a boy) • I can identify situations which would not be fair (e.g. If Danny's name is not on a lollipop stick the teacher can't choose him. It would be impossible to pull out his name) • I can respond appropriately to everyday language associated with uncertainty. (e.g. will, won't, might, could, couldn't, lucky, unlucky, fair, unfair, lucky, unlucky) • I can identify possible outcomes for daily events. (e.g. After Dad picks me up from school, we go to the shops, go straight home or go to Gran's.) • I can use language such as 'won't happen', 'will happen' or 'might happen', 'always', 'never', sometimes' • I can recognise and consider the possibility of different results for repetitions of the same simple action (e.g. rolling a dice)	• I can compare events within their experience, describing them as being likely (e.g. It is more likely that we will have an indoor break if it is raining) • I can describe familiar events as being likely to happen. (e.g. we are more likely to go to Grandpa's house in the car than the bus.) • I can distinguish impossible from unlikely events using appropriate vocabulary (e.g. We never go to the park after school, but it isn't impossible – it could happen) • I can respond appropriately to and use 'possible' and 'impossible' for describing familiar events and actions. (e.g. it is impossible for my dad to be younger than me.) • I can identify situations where there is an element of luck (e.g. When the raffle tickets are drawn at the Christmas Fayre) • I can identify possible and impossible results of a familiar simple action by thinking about the situation, (e.g. You might get a red or a green or a pink sweet because they are the colours we put in the bowl. You couldn't get a black one because we didn't put any in)	• I can use data to consider events, describing them as being likely, (e.g. It is less likely that we will play rugby at break because most people want to play football.) • I can predict the likelihood of an outcome justifying reasonableness, (e.g. is it probable, certain/uncertain) • I can identify possible results of an action or event by collecting data, (e.g. Using an uneven spinner.)	• I can describe outcomes as having an equal chance or equally likely • I can order events from least likely to most likely. (e.g. Tomorrow will be Monday. There will be salad at lunch tomorrow) • I can justify choice of more or less likely. (e.g. We have salad choices every day so it is most likely that we will have that tomorrow. But today is Friday so it is really, unlikely that it will be Monday) • I can recognise that the chance of an event happening can be influenced. (e.g. I am more likely to get to go swimming with my friend if I walk the dog for Mum.) • I can use language of chance. (e.g. impossible, probably, unlikely, always)	• I can list all possible outcomes for straightforward situations. (e.g. If I can choose two scoops of ice cream for my cone what are my options) • I can use a simple probability scale to record likelihood. • I can understand that certainty relates to events that must happen and events that cannot happen) • I can use available data to order things from most likely to least likely. (e.g. using rainfall data to order Scottish cities from least likely to have rain in July to most likely.) • I can order outcomes for a single random action from least to most likely by thinking about (i.e. analysing) the situation, e.g. for a die with the faces 1, 1, 2, 2, 2, 3, state that a 2 is most likely,1 is next and 3 is least likely) • I can use data to predict the likelihood of the outcome of a simple experiment, justifying reasonableness • I can order probability devices from the one most likely to the one least likely to produce an outcome (e.g. order three spinners with different proportions shaded yellow from the one most likely to the one least likely to produce a yellow result)	• I can analyse and explain results **of** simple experiments involving chance. e.g. When creating a tombola what are the chances that the customer will win a prize? • **I can plan and conduct repeated simple experiments of chance and record findings to determine which outcome is likely** • **I can use probability to explain fairness in mathematical terms.** • **I can use language of probability to describe the likelihood of a simple event. e.g. equal chance, 50/50, a one in three chance.** • Design a probability device such as a die, spinner or a bag of coloured beads to produce a specified order of probability.