

STATISTICAL LITERACY COMPETENCIES			
	Basic (upper primary)	Intermediate (junior secondary)	Advanced (middle/senior secondary)
1. Data awareness.	Read the data*: <ul style="list-style-type: none"> Understand the need for data to be collected. Recognise that there is more than one way to collect data (eg census, survey, by-product). 	Read between the data*: <ul style="list-style-type: none"> Understand that various factors impact on data quality. Be aware of how bias can be introduced; (e.g. response rate, question wording, sample selection, etc). Recognise how to limit errors. Understand which data collection method is appropriate for a specific question. Formulate research questions. Make decisions about the suitability of data. 	Read beyond the data*: <ul style="list-style-type: none"> Understanding of methodological issues (sampling technique, survey design, minimising 'noise', etc). Contextual understanding.
2. Ability to understand statistical concepts.	Descriptive: <ul style="list-style-type: none"> Recognise basic concepts (e.g. mean, range) and have some understanding of their meaning. Understand basic graphs/tables. 	Explanatory: <ul style="list-style-type: none"> Understand concepts such as variance. Understanding of chance: percentages, ratios, etc. Choose the correct statistic for the purpose. 	Analytical/critical: <ul style="list-style-type: none"> Understanding of probability: randomness, independence, statistical significance, etc.
3. Ability to analyse, interpret and evaluate statistical information.	<ul style="list-style-type: none"> Summarise basic data. Ability to read and produce graphs/tables. 	<ul style="list-style-type: none"> Recognise relationships among and between variables. Understand concept of errors. Produce tables/graphs/maps of data appropriately. Question the source of data and the methodology used. When interpreting statistics, understand the importance of and take into account, the metadata. 	<ul style="list-style-type: none"> Understand which statistical tools appropriate to context. Explain more complex relationships (e.g. trends, multi factor variance, etc). Predict/generalise from data. Recognise that trends may exist but may not be stable. Understand how a third variable may explain a relationship between two others. Assess data quality. Identify gaps in the data.
4. Communicate statistical information and understandings.	<ul style="list-style-type: none"> Ability to describe in words what set of data is saying. Ability to display data in simple graphical and tabular form. Ability to produce basic statistical summary data (e.g. percentages, mean, etc). 	<ul style="list-style-type: none"> Ability to turn data into information. Understanding of statistical conventions of representing data. Ability to organise and manage data. Use appropriate format and medium to report data. 	<ul style="list-style-type: none"> Ability to apply statistical reasoning to support decisions. Communicate the meaning of statistical terms and concepts to others. Demonstrate adherence to ethical issues such as confidentiality.

* Friel, Susan N. et al (2002)