<table>
<thead>
<tr>
<th>Approaches to literacy education</th>
<th>Literacy in English</th>
<th>Literacy in mathematics</th>
<th>Literacy in science</th>
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<tbody>
<tr>
<td><strong>Code-breaking</strong></td>
<td>Decoding and encoding written and spoken texts, which might include:</td>
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<td></td>
<td>• using appropriate technical terms during reading activities such as letter, word, title, page, cover, illustration, author;</td>
<td>• recognising and using content words specific to the subject (e.g. cosine, parallelogram);</td>
<td>• spelling scientific terminology;</td>
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<td>• explicitly discussing the use of cohesive ties in texts, such as the use of pronouns to refer to nouns, either anaphorically (I have read several books by this author and they have all been good) or cataphorically (In his 1997 book, Smith argues strongly in favour of post-modernism);</td>
<td>• recognising and using appropriately content words which have a different meaning in everyday English (e.g. product, ray, multiply);</td>
<td>• using a range of connectives to express relationships such as cause and effect, sequence, comparison and contrast;</td>
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<td>• recognising connectives that express chronological (first, next, then ... ) or logical (due to, however, consequently ... ) relationships.</td>
<td>• recognising and using symbols such as numerals and various mathematical signs (e.g. +, -, =, %);</td>
<td>• recognising reference words (e.g. this, those, it) in scientific reports;</td>
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<td>• using prepositions to signify different meanings (e.g. The temperature increased to 5 degrees. The temperature increased from 5 degrees.+);</td>
<td>• recognising the use of passive voice in science texts;</td>
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<td>• recognising and using different ways of expressing the same information (e.g. 3 + 4 = 7. The sum of three and four is seven. Three pence and four pence make seven pence);</td>
<td>• using scientific abbreviations and symbols;</td>
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<td>• recognising that the order in which information is presented in mathematics sometimes conflicts with the order in which it is processed (e.g. Take away 6 from 12).</td>
<td>• identifying the origins of scientific words.</td>
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Meaning-making
This entails knowing about and using the meanings conveyed by written and spoken texts (including vocabulary and clause meanings and the conventions and components of various genres). In NLS terms this would encompass text level knowledge. The emphasis is on comprehending and composing meaningful written and spoken texts including:
- drawing on prior knowledge to construct meaning from texts;
- comparing one’s own experiences with those described in the text;
- interpreting and using literal and inferential meanings of words, clauses, sentences and texts;
- understanding the way texts are constructed to make meaning.

Comprehending and composing written and spoken texts, which might include:
- describing the main characteristics of a scene, person or animal in an extended text;
- interpreting the use of imagery, such as similes and metaphors;
- interpreting the features that indicate personal opinions about issues (e.g., tone of voice and facial expression in spoken language; modal verbs and adjective choice in written texts);
- understanding the main elements of plot;
- using comparisons and contrasts to support arguments for and against an issue.

Comprehending and composing written and spoken texts, which might include:
- describing the component stages of a scientific process;
- interpreting cause and effect relationships in such processes;
- interpreting and using scientific terminology (e.g., velocity, mass, circuit);
- interpreting information in diagrams, tables, charts and graphs;
- using the internet to download information from relevant websites;
- using headings, main ideas and supporting details to gather information from reference books;
- organising information, ideas and arguments, using a variety of media;
- selecting, summarising and organising ideas and information from a variety of sources.

Text-using
This entails knowing about and using the functions of various text types (including the purpose-form relationships of various genres and the social and cultural expectations associated with different forms of communication). The emphasis is on understanding the purposes of different written and spoken texts including:
- understanding that different cultural and social contexts shape the way texts are structured, their tone and degree of formality;
- using appropriate text types for particular purposes both inside and outside school;
- recognising that each text type has particular structures and features;
- understanding the options involved in using a text to convey particular meanings effectively.

Understanding and using texts for a range of purposes, which might include:
- representing events or information in texts through timelines, story maps, or flow charts;
- using narrative to write imaginative stories;
- using texts to negotiate transactions such as filling in application forms;
- following sets of instructions to achieve an end product;
- synthesising information from different sources and using this to put forward a reasoned argument.

Understanding and using texts for a range of purposes, which might include:
- following instructions for carrying out experiments;
- describing observations of chemical processes;
- using report genre to compare, contrast, predict, suggest causes, state conclusions, or principles;
- using explanations to describe various processes;
- using discussion to contrast arguments for and against particular uses of the environment.
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<td><strong>Text-analysing</strong></td>
<td>Understanding how texts influence and position readers and listeners, which might include:</td>
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<td>● discussing the effects in narrative texts of reversing male and female roles;</td>
<td>● identifying ways in which mathematical data can be analysed and represented to influence people’s ideas;</td>
<td>● assessing the ways science is reported in newspapers and magazines;</td>
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<td>● thinking about the possible reactions of particular readers to texts with overt biases (e.g. racist, sexist material);</td>
<td>● comparing and contrasting ways in which different cultures approach mathematical problem-solving;</td>
<td>● evaluating the effects of human activities on the environment and the ways this is described in scientific and populist accounts;</td>
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<td>● comparing different representations of similar events (e.g. reports in different newspapers);</td>
<td>● recognising different points of view in accounts of the development of mathematical ideas.</td>
<td>● recognising points of view in a discussion about space travel and being aware of alternative points of view not represented there;</td>
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<td>● discussing the ways that people can be represented in texts (e.g. suggesting and discussing texts in which particular groups are represented positively and negatively).</td>
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<td>● presenting an alternative position to that taken in a media account of a scientific issue.</td>
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