

## Year 3 Rubric – Pattern and Function

	Describes patterns in a variety of ways	Represents patterns using numbers and other symbols	Describes number patterns in our number system (odd, even, skip counting, inverse relationships)
<b>Advanced</b>	<ul style="list-style-type: none"> <li>Identifies, creates and continues linear patterns (up to 2 steps e.g. <math>n = t \times 4 + 1</math>)</li> <li>Identifies growing patterns in a variety of situations (up to 2 step and including square numbers)</li> <li>Uses mathematical language to describe patterns (terms, objects, linear, growing, square etc)</li> </ul>	<ul style="list-style-type: none"> <li>Represents patterns using objects, pictures, tables, numbering and graphs</li> <li>Creates rules for linear patterns</li> <li>Creates rules for growing patterns</li> <li>Predicts <math>n</math>th term</li> <li>Uses pattern rules in solving problems (eg rates charged by trades people 1 hr—\$35, 2 hrs—\$60, 3hrs—\$95 = <math>nx35-10</math> for various hours worked).</li> </ul>	<p><b>Number properties</b></p> <ul style="list-style-type: none"> <li>Skip counting including decimals and fractions (e.g. 2.1, 2.4, 2.6... OR <math>\frac{1}{2}</math>, 1, <math>1\frac{1}{2}</math>...)</li> <li>Inverse relationships</li> <li>Multiplication as repeated addition and division is repeated subtraction</li> <li>Patterns in our base 10 system (include decimals)</li> <li>Recognises patterns in a multiplication charts (tables)</li> <li>Prime and composite</li> <li>Multiples and factors</li> <li>Square numbers</li> </ul>
<b>3 = Proficient (Phase 2)</b>	<ul style="list-style-type: none"> <li>Sorts and classifies by a variety of criteria (e.g. sort by colour <u>and</u> size <u>and</u> shape)</li> <li>Identifies patterns in a variety of situations (including numbers, shapes, movement, sound, music, artwork, time and environmental patterns)</li> <li>Uses mathematical language to describe patterns               <ul style="list-style-type: none"> <li>Terms</li> <li>Pattern</li> <li>Repetition</li> <li>Rules</li> <li>Symbols</li> <li>Prediction</li> </ul> </li> <li>Identifies similarities and differences in patterns (e.g. 'Your pattern goes 2, 3; mine goes 4, 1 but they're both patterns of 5').</li> </ul>	<p><b>1 step linear patterns</b></p> <ul style="list-style-type: none"> <li>Continues patterns</li> <li>Creates patterns</li> <li>Represents linear patterns in a variety of ways (e.g. 1, 1, 2 is the same pattern unit as red, red, blue) ...           <ul style="list-style-type: none"> <li>Materials</li> <li>Words</li> <li>Symbols</li> <li>Drawings</li> <li>Numbers</li> <li>Actions</li> </ul> </li> <li>Identifies rules in patterns (describes the rule in informal ways) – the rule identified is almost always correct</li> <li>Predicts future terms using rules</li> <li>Recognises the term in a pattern</li> </ul>	<p><b>Number properties</b></p> <ul style="list-style-type: none"> <li>Odd/even</li> <li>Inverse relationships of addition and subtraction</li> <li>Inverse relationship of multiplication and division</li> <li>Relationship of addition and multiplication</li> <li>Relationship of subtraction and division</li> <li>Skip counting/multiplicative thinking (can record 1 term is 3, 2 terms are 6...)</li> <li>Patterns in our base ten system (goes up in 10s)</li> <li>Identifies patterns using hundreds charts</li> </ul> <p><i>Consistently does above – few errors made – little support needed.</i></p>

<b>Consolidating</b>	<ul style="list-style-type: none"> <li>• Sorts and classifies by at least two criteria</li> <li>• Identifies patterns in a variety of situations (including numbers, shapes, movement, sound, music, artwork, time and environmental patterns)</li> <li>• Uses mathematical language to describe patterns <ul style="list-style-type: none"> <li>- Terms</li> <li>- Pattern</li> <li>- Repetition</li> <li>- Rules</li> <li>- Symbols</li> </ul> </li> <li>• Identifies the part of the pattern that is repetitive</li> </ul>	<p><b>1 step linear patterns</b></p> <ul style="list-style-type: none"> <li>• Continues patterns</li> <li>• Creates patterns</li> <li>• Represents linear patterns in a variety of ways (e.g. 1, 1, 2 is the same pattern unit as red, red, blue) ... <ul style="list-style-type: none"> <li>- Materials</li> <li>- Words</li> <li>- Symbols</li> <li>- Drawings</li> <li>- Numbers</li> <li>- Actions</li> </ul> </li> <li>• Identifies rules in patterns (describes the rule in informal ways) – with support</li> <li>• Recognises the term in a simple pattern</li> </ul>	<p><b>Number properties</b></p> <ul style="list-style-type: none"> <li>• Odd/even</li> <li>• Inverse relationships of addition and subtraction</li> <li>• Inverse relationship of multiplication and division</li> <li>• Relationship of addition and multiplication</li> <li>• Relationship of subtraction and division</li> <li>• Skip counting/multiplicative thinking (can record 1 term is 3, 2 terms are 6...)</li> <li>• Patterns in our base ten system (goes up in 10s)</li> <li>• Identifies patterns using hundreds charts</li> </ul> <p>May be inconsistent – needs teacher support – makes errors.</p>
<b>Beginning</b>	<ul style="list-style-type: none"> <li>• Sorts and classifies by one criterion</li> <li>• Records and describes patterns (e.g. 6 red, 2 blue, 6 red ...) informally</li> <li>• Identifies similarities and differences in patterns (e.g. mine is blue, red yours is red, red)</li> <li>• Recognise and describe patterns significant to their everyday lives (e.g. days of the week, seasons)</li> </ul>	<ul style="list-style-type: none"> <li>• Continues basic patterns e.g. knows to add a blue circle ... for red, red blue, red, red, _____?</li> <li>• Makes patterns using materials</li> </ul>	<p><b>Number properties</b></p> <ul style="list-style-type: none"> <li>• Knows Odd/even</li> <li>• Skip counting by 10s and possibly 5s</li> </ul>