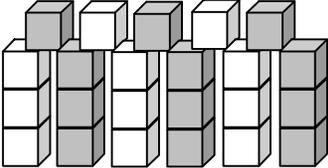
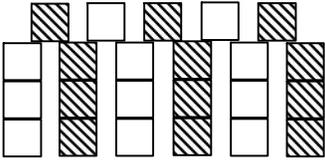


## Why are elementary students studying algebra?

As a parent, you might remember learning algebra in high school or even junior high school. We often associate the word "algebra" with "hard math" or "using letters/variables instead of numbers". Algebra is the study of relationships and change and is rooted in the study of solving equations.

Learning to work with patterns in the early grades helps students develop algebraic thinking, which is foundational for working with more abstract mathematics in higher grades. Patterns may be shown in three forms: concrete, visual, or symbolic.

<p><b>Concrete</b> form uses objects, such as buttons, toys, etc. For example, students may make a pattern with blocks using red and blue blocks.</p> 	<p><b>Visual</b> form could be pictures or drawings. For example, students may draw their block pattern.</p> 	<p><b>Symbolic</b> form includes variables, including numbers, letters or shapes. For example, students may determine an expression to explain the block pattern.</p> <p style="text-align: center;"><b><math>4n-1</math></b></p>
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When students are studying algebra they will be involved in:

- Using concrete materials to display patterns.
- Investigating and describing patterns using tables and charts.
- Extending patterns, both with numbers and non-numbers.
- Using patterns to solve problems.
- Writing and solving equations.

Often when studying algebra in high school you may have thought, "When will I ever need to know this?" The processes and ideas of algebra support real-life mathematics in many areas including distribution and communication networks (telecommunications), population models, laws of physics, and statistics.

### How might I support my child with algebra?

- Encourage your child to look for patterns in your home (tiles, quilts, clothing, etc.) and talk about them. Talk about how you use patterns in your daily life.
- Challenge young children to sort things at home (laundry, utensils, toys, etc.) and to sort them again another way.
- Talk about similarities and differences.
- Talk about how you use charts/tables or spreadsheets in your work.

Alberta Education Implementation Schedule	2008-2009	2009-2010	2010-2011
Provincial	Grades K, 1, 4, 7	Grades 2, 5, 8	Grades 3, 6, 9, 10
Optional	Grades 2, 5, 8	Grades 3, 6, 9	

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