



"When mathematical ideas are connected to each other or to real-world phenomena, students begin to view mathematics as useful, relevant and integrated." (pg. 7)

"The brain is constantly looking for and making connections." (pg. 7)

(The Alberta 10-12 Mathematics Programs of Study with Achievement Indicators 2008, Alberta Education)

## Seven Mathematical Processes

- Communication
- **Connections**
- Mental Mathematics and Estimation
- Problem Solving
- Reasoning
- Technology
- Visualization

## Thoughts on Connections

Connections consists of two main parts:

1. Connections between mathematical ideas. (*Mathematical Flow*)
2. Connections to real world applications. (*Authentic Tasks*)



### Connections between mathematical ideas

The following examples show attempts at connecting mathematical ideas...

**[Adding & Subtracting Polynomials](#)** (*use other concepts to show the idea of adding items of similar size / combining like terms*)

**[Area Model for Multiplication](#)** (*Connect Basic Numerical Multiplication to Polynomial Multiplication*)

### Connections to real world applications

Examples that connect to real world applications:

- **[M30-3 Purchase a Vehicle Project](#)**
- **M30-3/M20-2 Probability & Games** (Dice Game: **[Settlers of Catan](#)**)
  - Play games to collect experimental probability for the sum of two dice and then compare to theoretical probability.
  - Discuss how understanding probabilities can help when making decisions.

For more information and additional supports for implementation, visit <http://erlc.ca/resources/filter.php?theme=11&title=Mathematics>