## A Summary of Several Learning Theories

<table>
<thead>
<tr>
<th>Theory</th>
<th>Researcher</th>
<th>Key Points</th>
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| Behavioural                   | Piaget     | - 4 stages of child development.  
- assimilation involves new experiences interpreted through existing frameworks.  
- accommodation involves modification of existing ideas to incorporate new experiences.  |
| Zone of Proximal Development  | Vygotsky   | - ZPD represents the gap between a child’s actual developmental level and what he or she can learn at a potential development level with the guidance of a more capable person.  
- scaffolding of ideas.  |
| Discovery Theory              | Bruner     | - students are given appropriate experiences and assume an active role in establishing relationships and making connections.  |
| Constructivism                | Several    | - students construct their own understandings  
- new understandings are built on prior knowledge  
- misconceptions may occur.  
- individual’s construct their own knowledge – it is not passively received  
- construction of meaning is influenced by an existing body of knowledge and by the socio-cultural context of the learning community.  |
| Personal                      | VonGlasersfeld |  |
| Social                        | Driver     |  |
| Brain/mind Or Brain-based     | Caine      | - brain processes thoughts and emotions simultaneously  
- learning engages the entire physiology.  
- patterning helps to make meaning.  |

Adapted from DiGiuseppe (2007). *Science Education: A summary of research, theories & practice. A Canadian perspective*