



Chemistry and Biology Learning Matrix

Curriculum Level 6

Learning Area Whakataukī:

*Mā te whakaaro nui e hanga te whare; Big Ideas create the house;
mā te mātauranga e whakaū. knowledge maintains it.*

Big Ideas			
Chemistry and Biology are dynamic bodies of knowledge that use unique models and language to explain the material and living environment	Matter and energy are conserved in chemical change and in biological systems	Matter is made of very small particles interacting to determine properties of materials	All living things are related and live as part of interconnected systems
Significant Learning			
At Curriculum Level 6, ākonga will...			
<ul style="list-style-type: none"> • apply inquiry approaches to develop understanding of Chemistry and Biology concepts, including how mātauranga Māori can inform inquiry practice • consider patterns in the ways that chemical reactions rearrange atoms or ions • explore the implications of the conservation of mass in a chemical reaction • explore how the impact of chemicals can change depending on state, quantity, and location • consider how physical properties of matter are affected by the relative strengths of interactions between particles, atoms, ions, and molecules • recognise that nutrients cycle and energy is transferred through biological systems • explore the interrelations within an ecosystem to understand the dynamic nature of the environment • explore characteristics of life in an interconnected system including microscopic and submicroscopic level • consider how genetic variation arises and its effects on biological systems • explore how materials can meet the needs of a sustainable future by relating properties to purpose and use • explore ways that breakthroughs in chemical and biological knowledge have furthered understandings in related disciplines. 			