**AUSVELS : Australian SCIENCE Curriculum, F-10:**

**Overarching ideas:** Patterns, order & organization; Form and function; Stability and change; Scale and Measurement; Matter and energy; Systems

There are **three strands** which are to be taught in an integrated way. The order & detail in which content descriptions are organized in to learning programs are decisions to be made by the teacher.

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| **Science Understanding** – content described by year level | **Science as Human Endeavour** – content described in 2 year bands | **Science Inquiry Skills** – content described in 2 year bands |
| **Sub strands:**Biological sciencesChemical sciencesEarth and Space sciencesPhysical sciences | **Sub strands:**Nature and development of scienceUse and influence of science | **Sub strands:**Questioning and predictingPlanning and conductingProcessing and analysing data and informationEvaluatingCommunicating |

**Year/Level 2 SCIENCE Students:**

* Describe the components of simple systems, such as stationary objects subjected to pushes or pulls, or combinations of materials & show how objects and materials interact through direct manipulations
* Observe patterns of growth and change in living things & describe patterns and make predictions
* Explore the use of resources from the Earth & are introduced to the idea of the flow of matter when considering how water is used
* Use counting and informal measurements to make and compare observations and begin to recognise that organising these observations in tables makes it easier to show patterns

\*This document intends to assist teachers in their implementation of the Australian curriculum through AUSVELS– it combines description and elaboration statements. The blue elaborations are examples of how the learning can be achieved; not a list of tasks that have to be done. Teachers are advised to consult the online documentation to clarify further detail for themselves. The ‘AusVELS’ is the official documentation for Victorian schools.

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| **Science understanding:** | **Science as Human Endeavour:** | **Science Inquiry Skills:** |
| **Biological sciences:**Living things grow, change and have offspring similar to themselves (ACSSU030)* representing personal growth and changes form birth
* recognising that living things have predictable characteristics at different stages of development
* exploring different characteristics of life stages in animals such as egg, caterpillar, butterfly
* observing that all animals have offspring, usually with two parents

**Chemical sciences:**Different materials can be combined, including by mixing, for a particular purpose (ACSSU031) * exploring local environment to observe a variety of materials, and describing ways in which materials are used
* investigating the effects of mixing materials together
* suggesting why different parts of everyday objects such as toys and clothes are made from different materials
* identifying materials such as paper that can be changed and remade or recycled into new products

**Earth and space sciences:**Earth’s resources, including water, are used in a variety of ways (ACSSU032) * identifying the Earth’s resources including water, soil and minerals, and describing how they are used in the school
* describing how a resource such as water is transferred from its source to its point of use
* considering what might happen to humans if there were a change in a familiar available resource, such as water
* identifying actions at school such as turning off dripping taps, that can conserve resources

**Physical sciences:**A push or a pull affects how an object moves or changes shape (ACSSU033)* exploring ways that objects move on land, through water and in the air
* exploring how different strengths of pushes and pulls affect the movement of objects
* identifying toys from different cultures that use the forces of push or pull
* considering the effects of objects being pulled towards the Earth
 | **Nature & development of Science:**Science involves asking questions about, and describing changes in, objects and events (ACSHE034) * describing everyday events and experiences and changes in our environment using knowledge of science
* suggesting how everyday items work, using knowledge of forces or materials
* identifying and describing sources of water

**Use & influence of science:**People use science in their daily lives, including when caring for their environment and living things (ACSHE035) * monitoring information about the environment and Earth’s resources, such as rainfall, water levels and temperature
* finding out about how Aboriginal and Torres Strait Islander people use science to meet their needs, including food supply
* exploring how different cultures have made inks, pigments and paints by mixing materials
* identifying the ways humans manage and protect resources, such as reducing waster or caring for water supplies
* recognising that many living things rely on resources that may be threatened, and that science understanding can contribute to the preservation of such resources
 | **Questioning & predicting:**Respond to and pose questions, and make predictions about familiar objects and events (ACSIS037)* using the senses to explore the local environment to pose interesting questions, make inferences and predictions
* thinking about ‘What will happen if...?’ type questions about everyday objects and events

**Planning & conducting:**Participate in different types of guided investigations to explore and answer questions, such as manipulating materials, testing ideas, and accessing information sources (ACSIS038)* manipulating objects and materials and making observations of the results
* researching with the use of simple information sources
* sorting objects and events based on easily identified characteristics

Use informal measurements in the collection and recording of observations, with the assistance of digital technologies as appropriate (ACSIS039)* using units that are familiar to students from home and school, such as cups (cooking), hand spans (length) and walking paces (distance) to make and compare observations

**Processing & analyzing data & information:**Use a range of methods to sort information, including drawings and provided tables (ACSIS040)* constructing column and picture graphs with teacher guidance to record gathered information
* sorting information in provided tables and graphic organisers

Through discussion, compare observations with predictions (ACSIS214)* comparing and discussing, with guidance, whether observations were expected

**Evaluating:**Compare observations with those of others (ACSIS041)* discussing observations with other students to see similarities and differences in results

**Communicating:**Represent and communicate observations and ideas in a variety of ways such as oral and written language, drawing and role play (ACSIS042)* presenting ideas to other students, both one-to-one and in small groups
* discussing with others what was discovered from an investigation
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| **Level 2 Achievement Standard:**By the end of Level 2, students describe changes to objects, materials and living things. They identify that certain materials and resources have different uses and describe examples of where science is used in people’s daily lives.Students pose questions about their experiences and predict outcomes of investigations. They use informal measurements to make and compare observations. They follow instructions to record and represent their observations and communicate their ideas to others. |

Cross-curriculum priorities to be included in all learning areas: Aboriginal and Torres Strait Islander histories and cultures (); Asia and Australia’s engagement with Australia (ã ); Sustainability ()

Reference : <http://ausvels.vcaa.vic.edu.au/> This grid is an adaption of the information from the VCAA site to create a visual representation to assist teachers.