

## EC4 SCIENCE FRAMEWORK

### Contents

THEMES AND CONTENT .....	1
SCIENCE AND ENGINEERING PRACTICES (DEVELOPED IN CONJUNCTION WITH THE PERFORMANCE INDICATORS) .....	1
SCIENCE NOTEBOOK EXPECTATIONS.....	2
SCIENTIFIC WRITING EXPECTATIONS.....	2
SCIENCE LABORATORY SAFETY EXPECTATIONS.....	2
INFORMATION TECHNOLOGY EXPECTATIONS .....	2
PERFORMANCE INDICATORS (ASSESSED ON REPORT CARDS).....	2
PHYSICAL SCIENCE .....	2
LIFE SCIENCE .....	3
EARTH AND SPACE SCIENCE .....	3
ENGINEERING, TECHNOLOGY, AND APPLICATIONS OF SCIENCE.....	3

### THEMES AND CONTENT

- Physical Science: Energy, Colors and Matter
- Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment
- Weather and Climate
- Earth and Science: Sun and Moon

### SCIENCE AND ENGINEERING PRACTICES (DEVELOPED IN CONJUNCTION WITH THE PERFORMANCE INDICATORS)

- Demonstrate curiosity and increased ability to raise questions about objects and events in their environment.
- Observe objects and events in the environment and describe them in greater detail.
- Identify and use a greater variety of observation and measurement tools. May spontaneously use an appropriate tool, though may still need adult support.
- Compare and contrast objects and events and describe similarities and differences in greater detail.
- Demonstrates an increased ability to make predictions and check them (e.g., may make more complex predictions, offer ways to test predictions, and discuss why predictions were correct or incorrect).
- Demonstrate an increased ability to make inferences and generalizations based on evidence.

- Record information more regularly and in greater detail in various ways, with adult assistance, including pictures, words (dictated to adults), charts, journals, models, photos, or by tallying and graphing information.
- Share findings and explanations, which may be correct or incorrect, more spontaneously and with greater detail.

### **SCIENCE NOTEBOOK EXPECTATIONS**

Students reflect on their findings through discussions, stories, constructions and PowerPoints.

### **SCIENTIFIC WRITING EXPECTATIONS**

Students document their work by taking pictures, creating classroom books about specific themes and drawing their discoveries.

### **SCIENCE LABORATORY SAFETY EXPECTATIONS**

Students will be expected to learn and to follow the expectations for safe and appropriate practices during laboratory activity, as shown on the “Science Laboratory Safety” document.

See link below:

[https://www.caislisbon.org/uploaded/Curriculum\\_links/Science/Science\\_lab\\_safety\\_EC3to5th.pdf](https://www.caislisbon.org/uploaded/Curriculum_links/Science/Science_lab_safety_EC3to5th.pdf)

### **INFORMATION TECHNOLOGY EXPECTATIONS**

Students will be expected to use a variety of digital tools according to grade level expectations stated in CAISL’s Research and Information Technology Integration Scope and Sequence.

See link below:

[https://www.caislisbon.org/uploaded/Curriculum\\_links/2019-2020/IT\\_Skills\\_Scope\\_and\\_Sequence\\_by\\_Grade.pdf](https://www.caislisbon.org/uploaded/Curriculum_links/2019-2020/IT_Skills_Scope_and_Sequence_by_Grade.pdf)

### **PERFORMANCE INDICATORS (ASSESSED ON REPORT CARDS)**

#### **PHYSICAL SCIENCE**

Energy: Use models and carry out investigations to show that the sun produces heat, light and shadow. DOK 2

Colors: Make observations and conduct an investigation to show that there are different colors in the rainbow. DOK 2 E

Colors: Ask questions and conduct an investigation to show that mixing colors makes a new color. DOK 2

Matter: Make observations and predictions of the different states of water. DOK 2

**LIFE SCIENCE**

Plants and Animals: Make observations and carry out investigations to show that living things need resources (i.e. food and water) for energy and growth. DOK 2

Plants and Animals: Develop a model to show that living things go through a process of growth and change. DOK 3

**EARTH AND SPACE SCIENCE**

Solar System: Use a model to show that the sun, moon, and stars are the major features in the sky. DOK 2

Seasons: Ask questions and gather information which demonstrate that we have different seasons throughout the year. DOK 2

Seasons: Analyze and interpret data which shows that nature changes in different seasons. DOK 2

Weather: Analyze and interpret data to find and describe patterns in local weather conditions. DOK 2 E

**ENGINEERING, TECHNOLOGY, AND APPLICATIONS OF SCIENCE**

Engineering Design: Make observations and gather information using our senses. DOK 2 E

Engineering Design: Develop a model using blocks or Legos. DOK 3 E