



**R.H. KING ACADEMY SCIENCE DEPARTMENT  
COURSE OUTLINE AND EVALUATION  
SNC 1D1: GRADE 9 ACADEMIC SCIENCE**

### **COURSE OVERVIEW**

This course enables students to;

1. understand basic concepts in biology, chemistry, earth and space science, and physics;
2. develop skills in the processes of scientific inquiry;
3. relate science to technology, society, and the environment.

### **TOPICS OF STUDY**

In this course, students will learn scientific theories and conduct investigations related to ecosystems; atomic and molecular structures and the properties of elements and compounds; the universe and space exploration; and the principles of electricity.

#### ***Ecology Unit***

In this unit students will:

- demonstrate an understanding of the dynamic nature of ecosystems, including the relationship between ecological balance and the sustainability of life;
- investigate factors that affect ecological systems and the consequences of changes in these factors;
- analyse issues related to environmental sustainability and the impact of technology on ecosystems.

#### ***Chemistry Unit***

In this unit students will:

- describe various models of the atom, the atomic structure of common elements, and their organization in the periodic table;
- investigate the physical and chemical properties of elements and compounds and use the periodic table to predict the properties of elements;
- describe technologies associated with the refinement, use, and recycling of chemical elements and compounds.

#### ***Electricity Unit***

In this unit students will:

- describe and apply models of static and current electricity;
- design and conduct investigations into electrical circuits found in everyday life and into the quantitative relationships among current, potential difference, and resistance;
- evaluate the social, economic, and environmental costs and benefits arising from the methods of electrical energy production used in Canada.

#### ***Space Unit***

In this unit students will:

- demonstrate an understanding of how scientific evidence and technological advances support the development of theories about the formation, evolution, structure, and nature of our solar system and the universe;
- investigate and predict the appearance and motion of visible celestial objects;

### **ASSESSMENT AND EVALUATION**

#### ***Assessment for learning***

*Diagnostic assessment:* *Posing questions, worksheets, etc.*

### **Assessment as learning**

Formative assessment: Homework Take-up, class activities, practice quiz or test, observations, student-teacher conversations, self-assessment, peer assessment, etc.

### **Assessment of learning (Evaluation)**

Type of Evaluation	Category	Percentage
Test	KU, TI, C, A	20%
Lab	TI, C, A	20%
Quiz/Assignment	KU, TI, C, A	15%
ISU	C, A	15%
Summative Evaluation	KU, TI, C, A	30%

### **Categories**

- **Knowledge and Understanding.** Subject-specific content acquired in each course (knowledge), and the comprehension of its meaning and significance (understanding).
- **Thinking and Investigation.** The use of critical and creative thinking skills and inquiry, research, and problem-solving skills and/or processes.
- **Communication.** The conveying of meaning through various forms.
- **Application.** The use of knowledge and skills to make connections within and between various contexts.

### **Summative Evaluation**

The summative evaluation for this course is in the form of a final written examination. This exam evaluates expectations in all four units.

**COURSE TEXTBOOK:** Investigating Science 9

**Replacement Cost:** \$95

### **MATERIALS REQUIRED**

binder, loose leaf paper, pens, pencils, eraser, ruler, calculator, graph paper

### **CLINIC**

All students can benefit by attending clinic periods when they feel they need extra help. You may be required to commit to clinic with your Science teacher based on marks, completion of work, disciplinary needs, or teacher request.

### **CHEATING AND PLAGIARISM**

It is expected that all students at R.H. King Academy will practice academic honesty and build this into their career philosophies. They must acknowledge any input from peers, parents and secondary sources. Information gathered from the Internet is considered a secondary source. To submit any work that is not completely their own is considered plagiarism. "Loaning" completed work to other students is considered to be cheating.

**Cheating will result in a mark of zero and may result in suspension and/or loss of credit.**