



Grade 9 Science Course Syllabus

Crocus Plains Regional Secondary School | Fall 2026

Teacher: Joshua Baker

Course: Grade 9 Science

Semester: Fall 2026

Class Period: 5

Welcome to Grade 9 Science!

Welcome to Grade 9 Science. This course is designed to help you think and work like a scientist. Throughout the semester you will investigate questions, conduct experiments, analyze evidence, solve problems, and communicate your ideas. Science is not simply about memorizing facts. It is about understanding how we know what we know and using evidence to make informed decisions. This course emphasizes curiosity, critical thinking, collaboration, and scientific inquiry.

What We Will Learn

The Grade 9 Science curriculum focuses on four major knowledge areas:

Unit 1: Matter

- Pure substances and mixtures
- Physical and chemical changes
- Conservation of mass
- Atomic theory
- Atomic structure
- The periodic table

Unit 2: Electrical Energy

- Static electricity
- Current electricity
- Circuits
- Electromagnets
- Energy transfer
- Electricity generation and safety



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Unit 3: Reproduction and Genetics

- Asexual and sexual reproduction
- Human reproduction
- DNA and chromosomes
- Genetic variation
- Inheritance
- Mutations

Unit 4: Evolution

- Evidence for evolution
- Natural selection
- Adaptation
- Speciation
- Artificial selection
- Earth's evolutionary history

Big Questions for the Course

Throughout the semester we will explore questions such as:

- How do scientists develop and revise explanations about the natural world?
- How do matter, energy, genetics, and evolution help us understand life on Earth?
- What role does evidence play in scientific decision-making?
- How do scientific discoveries impact society and the environment?
- How can science help solve problems facing our communities and the world?

How We Will Learn

Our classroom follows an **Activate → Acquire → Apply** approach.

Students will learn through:

- Laboratory investigations
- Hands-on experiments
- Scientific inquiry
- Group discussions
- Problem-solving activities
- Engineering and design challenges
- Data collection and analysis
- Scientific communication



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- Reflection and self-assessment

Assessment and Evaluation

Your grade will be based on multiple forms of evidence of learning.

Category	Weight
Portfolio of Learning Evidence	45%
Student Interviews/Conferences	25%
Quizzes, Tests, and Check-ins	10%
Labs and Scientific Investigations	10%
Final Demonstration of Learning	10%

Portfolio (45%)

Throughout the semester, you will collect evidence of your learning in a portfolio. Possible portfolio artifacts include:

- Lab investigations
- Projects
- Reflections
- Scientific models
- Problem-solving tasks
- Science news analyses
- Photos and videos of practical work
- Self-assessments

Learning Interviews (25%)

Approximately every 4-6 weeks you will participate in a brief conference with the teacher to discuss your learning and portfolio evidence.

Labs and Investigations (10%)

Science is an experimental subject. Active participation in labs and investigations is an important part of this course. Assessment focuses on:

- Scientific reasoning
- Data collection
- Analysis
- Reflection
- Laboratory safety



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Final Demonstration of Learning (10%)

Students may demonstrate learning through:

- A final exam and/or A final project

Classroom Expectations

Students are expected to:

- Arrive prepared and on time.
- Participate actively in class activities.
- Respect classmates, equipment, and learning spaces.
- Follow all laboratory safety procedures.
- Complete assigned work to the best of their ability.
- Contribute positively to group activities.
- Ask questions and seek help when needed.
- Demonstrate academic honesty.

Laboratory Safety

Safety is our highest priority during investigations.

Students must:

- Follow all teacher instructions.
- Wear required safety equipment.
- Report accidents immediately.
- Use the equipment appropriately.
- Handle chemicals and materials responsibly.
- Behave safely and respectfully in the laboratory.

Failure to follow safety expectations may result in removal from laboratory activities.

Technology Use

Students will regularly use:

- Windows laptops
- Microsoft 365 applications
- Online research tools
- Data collection technology
- Modeling and presentation software

Technology should be used to support learning and scientific investigation.



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Homework

Homework will be purposeful and limited. Most work will be completed during class time, but students may occasionally be expected to:

- Finish assignments
- Complete portfolio reflections
- Study for quizzes or interviews
- Conduct simple research
- Prepare for investigations

Student Success Tips

Successful science students:

- Stay organized.
- Keep the portfolio evidence updated.
- Participate in discussions and labs.
- Ask questions.
- Review feedback carefully.
- Reflect on their learning.
- Focus on understanding rather than memorization.

A Final Message

Science is about curiosity, investigation, and discovery. Mistakes are an important part of learning, and every scientist improves through questioning, testing, and revising their ideas. This classroom is a place to take intellectual risks, explore interesting questions, and develop the skills needed to think critically about the world around us. We are excited to learn together this semester.

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