

# Curriculum Newsletter for Grades 7 and 8 Science

Mr. Bennett

Dear Parents,

This term, your children will get an introduction into cellular biology. Below is a chart that briefly outlines the main curriculum expectations that they will be taught and how we will assess them. For each major project, students will be given a specific outline along with success criteria.

This year, we are returning to the system where the students at John McCrae have a stream-lined curriculum for grades 7 and 8 Science. What this means is that both the grade 7's and the grade 8's will be learning the grade 8 curriculum this year and both will be learning the grade 7 curriculum next year. Grade 7's are still assessed as grade 7's and 8's as 8's. The only difference is when they learn the material. The streamlining helps when running labs, activities and especially in the wood shop so that there is far less setting up and shutting down time for the students and far more time spent on learning.

If all of the intermediates are working on the same projects, the room doesn't have to be set up and shut down each period.

When there are tests, though the content will be similar, each grade will take a separate test with questions designed for their level.

If you have any questions, please do not hesitate to contact me at [rhus.bennett@ugdsb.on.ca](mailto:rhus.bennett@ugdsb.on.ca)

## Unit 1: Cells

| <b>Curriculum Expectation:</b>  | <b>Teaching Strategy:</b>  | <b>Assessment:</b>  |
|---|--|---|
| ! Assess the impact of cell biology on individuals, society and the environment                                 | ! Small group discussions to access prior knowledge<br>! individual research on current technologies<br>! whole group lessons<br>! guest presentation  | ! Students will research an organ system in the human body and present current practices on how to keep the system healthy  |
| ! Investigate functions and processes of plant and animal cells   | ! Investigative laboratories to learn about osmosis<br>! Whole class demonstrations of diffusion   | ! Students will report on their measurements and observations from labs<br>! In class assignments   |
| ! Demonstrate an understanding of the basic structure and function of plant and animal cells and cell processes | ! Use microscopes to observe and identify cells<br>! Use research skills to investigate the similarities and differences between types of cells<br>! Observe live samples of single-celled organisms | ! Students will create labelled diagrams of "mystery cells"<br>! Students will prepare their own slides of specific specimens and identify structures within the cell<br>! quizzes and test |

## Unit 2: Systems in Action

| <b>Curriculum Expectation:</b>  | <b>Teaching Strategy:</b>   | <b>Assessment:</b>   |
|---|---|--|
| <ul style="list-style-type: none"> <li>! Assess the personal, social and environmental impacts of a system and evaluate improvements to a system and/or alternative ways of meeting the same needs</li> </ul> | <ul style="list-style-type: none"> <li>! Small group discussions to access prior knowledge</li> <li>! individual research on systems and how technology changes systems</li> <li>! whole group lessons</li> </ul> | <ul style="list-style-type: none"> <li>! Investigate an automated system and evaluate its environmental and social impacts</li> </ul>  |
| <ul style="list-style-type: none"> <li>! Investigate a working system and the ways in which the components of the system contribute to its desired function</li> </ul>  | <ul style="list-style-type: none"> <li>! Investigative laboratories to learn about mechanical advantage</li> <li>! Whole class demonstrations of levers, gears and pulleys</li> </ul>                             | <ul style="list-style-type: none"> <li>! Construct a car that uses gears or pulleys to change the nature of its movement</li> <li>! build working models to demonstrate how systems use mechanical advantage to reduce force needed</li> </ul>   |
| <ul style="list-style-type: none"> <li>! Demonstrate an understanding of different types of systems and the factors that contribute to their safe and efficient operation</li> </ul>                          | <ul style="list-style-type: none"> <li>! Use models to demonstrate how systems work</li> <li>! class discussions of different systems</li> </ul>  | <ul style="list-style-type: none"> <li>! Students will create a working machine from wood</li> <li>! explanation of how levers, gears and pulleys help us do work</li> <li>! calculate the work done by systems if force and distance are known</li> <li>! quizzes and test</li> </ul> |