

Mayerthorpe Jr/Sr High School

Course Outline

2020
Biology 30

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COURSE DESCRIPTION

Biology 30 is an academic program that helps students better understand and apply fundamental concepts and skills. The focus is on helping students understand the biology principles behind the natural events they experience and the technology in their daily lives. The program develops in students the attitudes, skills, and knowledge to help them become capable of committing to setting goals, making choices, and acting in ways that will help improve their own lives and life in their communities.

COURSE CURRICULUM OUTCOMES

Upon completion of this course, participants will:

1. be encouraged to show interest in science-related questions and issues and confidently pursue personal interest and career possibilities within science-related fields.
2. be encouraged to appreciate that scientific understanding evolves from the interaction of ideas involving people with different views and backgrounds.
3. be encouraged to seek and apply evidence when evaluating alternative approaches to investigations, problems and issues;
4. be encouraged to work collaboratively in planning and carrying out investigations and in generating and evaluating ideas

COURSE TOPICS/UNITS

DATES

1.	Unit A: Nervous and Endocrine Systems • Students will explain how the nervous system controls physiological processes. • Students will explain how the endocrine system contributes to homeostasis.	4 weeks • unit exam • topic quizzes • projects/labs • other formative assessment as
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		required
2.	Unit B: Reproduction and Development - Students will explain how survival of the human species is ensured through reproduction. - Students will explain how human reproduction is regulated by chemical control systems. - Students will explain how cell differentiation and development in the human organism are regulated by a combination of genetic, endocrine and environmental factors.	4 weeks - unit exam - topic quizzes - projects/labs - other formative assessment as required
3.	Unit C: Cell Division, Genetics and Molecular Biology - Students will describe the processes of mitosis and meiosis. - Students will explain the basic rules and processes associated with the transmission of genetic characteristics. - Students will explain classical genetics at the molecular level.	6 weeks - unit exam - topic quizzes - projects/labs - other formative assessment as required
4.	Unit D: Population and Community Dynamics - Students will describe a community as a composite of populations in which individuals contribute to a gene pool that can change over time. - Students will explain the interaction of individuals in a population with one another and with members of other populations. - Students will explain, in quantitative terms, the change in populations over time.	2 weeks - unit exam - topic quizzes - projects/labs - other formative assessment as required

RESOURCES/TEXTS/SUPPLIES: Nelson Biology 20 – 30

FEES: none

PREREQUISITES: 65% or above in Biology 20 recommended

COURSE EVALUATION

STUDENT ASSESSMENT:

Assessment for Learning (Formative Assessment) is a systematic process of collecting information or evidence about student learning and is not assigned a grade/mark for the report card. **Assessment of Learning (Summative Assessment)** is the judgment we make about the assessments of student learning based on established criteria and a mark/grade is recorded for the report card. The purpose of assessment is to improve student learning. This means that judgments of student performance must be criterion-referenced so that descriptive feedback can be given that includes clearly expressed next steps for improvement. Tools of varying complexity are used by the teacher to facilitate this. For the more complex evaluations, the criteria are incorporated into a rubric where levels of performance for each criterion are stated in language that can be understood by students. Where possible, students will be engaged in their own assessment through self reflection and the construction of rubrics

Assessment is embedded within the instructional process throughout each unit rather than being an isolated event at the end. Often, the learning and assessment tasks are the same, with formative assessment provided throughout the unit. In every case, the desired demonstration of learning is articulated clearly and the learning activity is planned to make that demonstration possible. This process of beginning with the end in mind helps to keep focus on the expectations of the course curriculum outcomes. The evaluations are expressed as a percentage/mark/grade based upon levels of achievement.

The Final Grade:

The evaluation for this course is based on the student's achievement of curriculum expectations and the demonstrated skills required for effective learning.

The percentage grade represents the quality of the student's overall achievement of the expectations for the course and reflects the corresponding level of achievement.

Credit is granted and recorded for this course if the student's grade is 50% or higher. The final grade for this course will be determined as follows:

30% - Diploma Exam – DIPLOMA DATE – June 23
70% - School Awarded Mark

The school awarded mark is broken down as follows:

- o Assignments and labs – 10%
- o Quizzes – 30%
- o Unit tests and final cumulative assessment – 60%

GRADE DETERMINATION:

Term grade determination:

Grade will be based upon evaluations conducted throughout the course. This portion of the grade will reflect the student's most consistent level of achievement throughout the course, although special consideration will be given to more recent evidence of achievement.

Final grade determination:

Grade will be based on the accumulation of term grade evidence and a final examination administered at the end of the course (this exam will be based on an evaluation of all units of the course). This grade will reflect the student's most consistent level of achievement throughout the course, although special consideration will be given to more recent evidence of achievement.

OPPORTUNITIES TO DEMONSTRATE LEARNING:

When the teacher's professional judgment indicates the student is in a position to demonstrate learning on a summative assessment with greater success than the initial attempt, such an alternative or additional summative assessment will be provided at a time agreed upon by the student and the teacher.

Classroom Expectations:

- Be on time for every Biology 30 class.
- Be prepared for every Biology 30 class.
- Complete all assignments and readings
- Set a goal, for example my goal is for every student to achieve 70% or better.
- Adhere to Mayerthorpe High School Code of Conduct.

Therefore:

- You are responsible for getting all notes and assignments missed due to absence.
- You are responsible for your achievement. Help is available outside class time when permitted.

- All summative assessments must be written. All summative assessments must be written.
- You will be marked late if not in the room as attendance is completed. 20 minutes late is considered an absence and a Synervoice call home will be made.
- Attendance policy is in effect – see student handbook

I have read and understand what is required of me for this course

Please email me at jason.bidniak@ngps.ca if you have questions or concerns.