



## ZOO SCHOOL INFORMATION

The following contains preliminary information regarding Zoo School. Upon registration a more detailed course outline will be sent.

<b>Course Title:</b>	Biology
<b>Course Code:</b>	SBI3U
<b>Grade:</b>	11
<b>Course Type:</b>	University Preparation
<b>Credit Value:</b>	1.0
<b>Prerequisite:</b>	Science, Grade 10, Academic (SNC2D)

### A Day in the Life of Zoo School

The following is an example of a typical day at Zoo School. Please note each day will be different and timings/activities will vary.

#### Example Lesson: Meiotic Division

09:00 - 09:30	- Review of homework, introduction to today's topic
09:30 - 10:30	- <b>Interactive lesson</b> in the classroom
10:30 - 12:00	- <b>"Genetics Tour"</b> – meet the Zoo Reproductive Physiologist
12:00 - 12:30	- Lunch
12:30 - 13:30	- <b>Practical lesson</b> – observing meiosis under the microscope
13:30 - 14:30	- <b>Visit the cheetah</b> – discussion about conservation genetics
14:30 - 15:30	- Back in the classroom to recap today's lesson and complete assignment(s)

#### Reference to the Ontario Curriculum:

**A. Scientific Investigation skills and career exploration** A2.1. **C. Evolution** C1.1, C1.2, C2.1, C3.2, C3.4. **D. Genetic processes** D1.2, D2.2, D3.1, D3.2, D3.5.

**Please note:** The Zoo School educator will be available to offer additional support to students/parents by appointment.

## Zoo School Description

Through interactive lessons, behind-the-scenes tours, and discussions with Zoo staff, students will not only learn the complexities of biological systems, but will see them in practice at the Toronto Zoo. Students will study theory and conduct investigations in the areas of diversity of living things; evolution; genetic processes; the structure and function of animals; and the anatomy, growth, and function of plants. The course focuses on the theoretical aspects of the topics under study and helps students refine their skills related to scientific investigation. Students will also have an opportunity to meet several Zoo staff to understand the scope of careers that the study of biology can lead to.

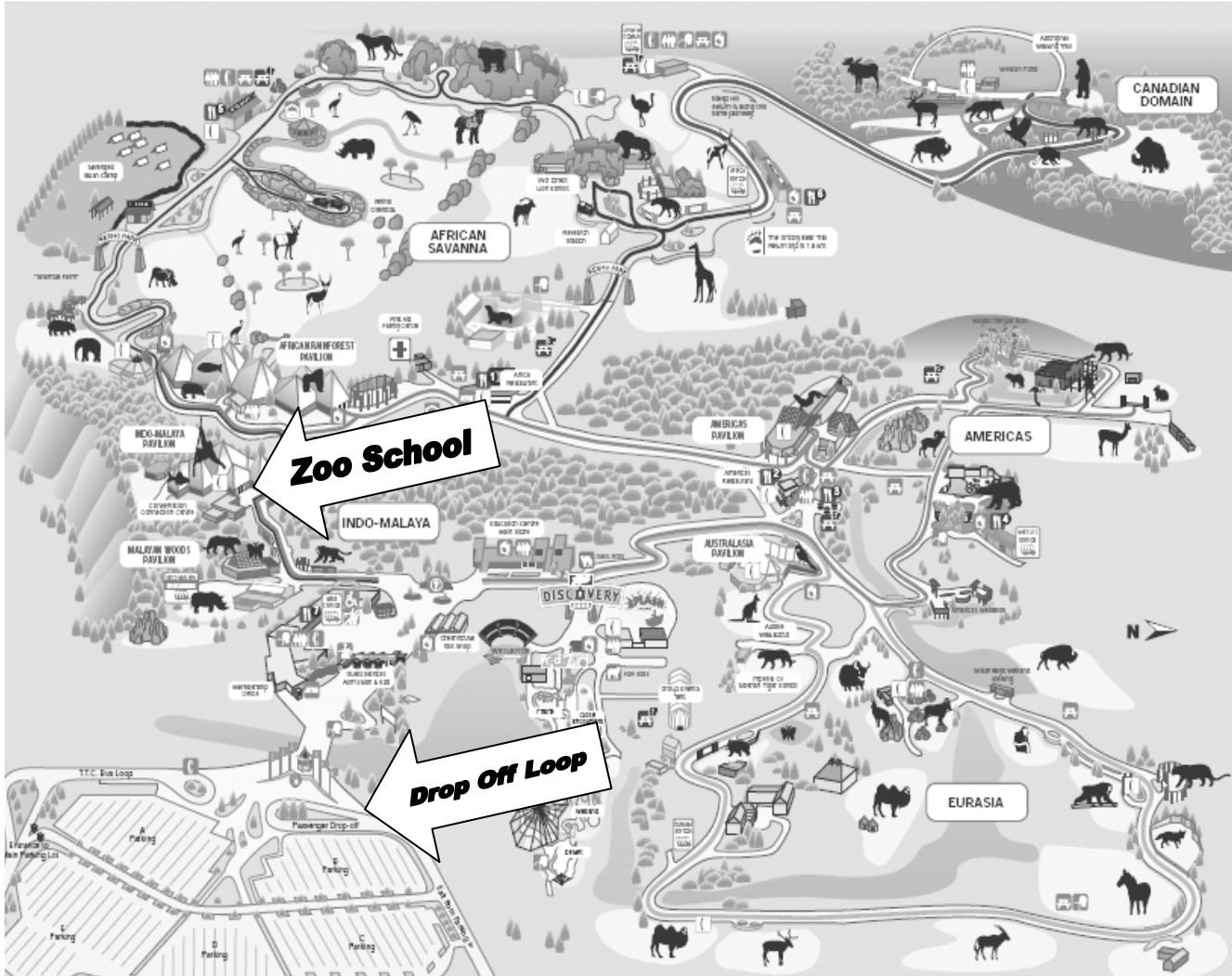
## Unit Descriptions

Unit	Unit description	Time
<b>Unit 1</b>	<p style="text-align: center;"><b><u>Diversity of Living Things</u></b></p> <p><b>Students will:</b></p> <ul style="list-style-type: none"> <li>• Visit examples of endangered animals in the Zoo collection, and analyse the effects of various human activities on the diversity of living things.</li> <li>• Investigate, through laboratory and Zoo site activities, the principles of scientific classification, using appropriate sampling and classification techniques.</li> <li>• Investigate the vast array of animals at the Zoo to gain an understanding of the diversity of living organisms in terms of the principles of taxonomy and phylogeny.</li> </ul>	<b>22 hours</b>
<b>Unit 2</b>	<p style="text-align: center;"><b><u>Evolution</u></b></p> <p><b>Students will:</b></p> <ul style="list-style-type: none"> <li>• Analyse the economic and environmental advantages and disadvantages of artificial selection technology, and evaluate the impact of environmental changes on natural selection and endangered species.</li> <li>• Investigate evolutionary processes, and analyse scientific evidence and Zoo animal characteristics that support the theory of evolution.</li> </ul>	<b>21 hours</b>
<b>Unit 3</b>	<p style="text-align: center;"><b><u>Genetic Processes</u></b></p> <p><b>Students will:</b></p> <ul style="list-style-type: none"> <li>• Evaluate the importance of some recent contributions to our knowledge of genetic processes, and how these can be used in Zoo breeding programs.</li> <li>• Analyse social and ethical implications of genetic and genomic research.</li> <li>• Investigate genetic processes, including those that occur during meiosis, and analyse data to solve basic genetics problems involving monohybrid and dihybrid crosses.</li> <li>• Demonstrate an understanding of concepts, processes, and technologies related to the transmission of hereditary characteristics.</li> </ul>	<b>21 hours</b>

<b>Unit 4</b>	<p align="center"><b><u>Animals: Structure and Function</u></b></p> <p><b>Students will:</b></p> <ul style="list-style-type: none"> <li>Investigate, through laboratory inquiry the functional responses of the respiratory and circulatory systems of animals, and the relationships between their respiratory, circulatory, and digestive systems.</li> <li>Demonstrate an understanding of animal anatomy and physiology, and describe disorders of the respiratory, circulatory, and digestive systems.</li> </ul>	<b>21 hours</b>
<b>Unit 5</b>	<p align="center"><b><u>Plants: Anatomy, Growth, and Function</u></b></p> <p><b>Students will:</b></p> <ul style="list-style-type: none"> <li>Investigate plants found on the Zoo site's Aboriginal Trail and evaluate the importance of sustainable use of plants to Canadian society and other cultures.</li> <li>Using the Zoo Horticulture Centre investigate the structures and functions of plant tissues, and factors affecting plant growth.</li> <li>Through observing plants in different geographical Zoo exhibits demonstrate an understanding of the diversity of vascular plants, including their structures, internal transport systems, and their role in maintaining biodiversity.</li> </ul>	<b>22 hours</b>
	<b>Mid term Exam</b>	<b>1 hour</b>
	<b>Final Exam</b>	<b>2 hours</b>
	<b>Total</b>	<b>110 hours</b>

***Please note: Unit content is subject to change.***

## Zoo School Location



***Zoo School will be located in the Conservation Connection Centre***

### **Student Drop Off/Pick Up**

Zoo School operates between the hours of 9:00 am and 3:30 pm. On the first day of Zoo School the class teacher will come to meet the students at the *Passenger Drop Off Loop* situated at the front of the Zoo. On subsequent days students will be expected to make their own way to the classroom, and arrive no later than 8:55 am. Students will be provided with a one-year student membership to the Zoo. They are required to bring their membership card to gain access to the Zoo each day, along with photo ID. At the end of the day students will make their own way out of the Zoo. If they are being picked up they should be met at the *Passenger Drop Off Loop*. Students driving their own vehicles will be provided with a parking pass each day.

## Learning Strategies at Zoo School

Zoo School takes an experiential approach to learning. We pride ourselves in offering engaging, dynamic lessons, with a hands-on approach. Our teaching tools will include Zoo Staff discussions, behind-the-scenes tours, debates, practical investigations, research, class discussions, and individual and group assignments.

### Evaluation

Student performance will be continually assessed throughout the course including individual assignments, group assignments, end of unit quizzes, and a final exam.

### Final Grade

The percentage grade represents the quality of the student's overall achievement of the expectations of the course and reflects the corresponding level of achievement described in The Ontario Curriculum Grades 11 and 12 Achievement Chart for Science. A credit is granted for this course if the student's final grade is 50% or higher. The final grade for this course will be determined as follows:

- 70% of the grade will be based on the student's performance throughout the course including, individual assignments, group assignments, class participation, and end of unit quizzes.
- 30% of the grade will be based upon a final examination.

Achievement Chart		
Percentage Grade Range	Achievement Level	Summary Description
80–100%	Level 4	A very high to outstanding level of achievement. Achievement is <i>above</i> the provincial standard.
70–79%	Level 3	A high level of achievement. Achievement is <i>at</i> the provincial standard.
60–69%	Level 2	A moderate level of achievement. Achievement is <i>below, but approaching</i> , the provincial standard.
50–59%	Level 1	A passable level of achievement. Achievement is <i>below</i> the provincial standard.
below 50%	Level R	Insufficient achievement of curriculum expectations. A credit will not be granted.

- Before the course begins students requiring an accommodation, having an I.E.P., or learning disability must inform Zoo School so adequate arrangements can be made.
- Toronto Zoo reserves the right to cancel or change any program due to insufficient registration.

**Contact Information:**

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**Teacher:** Nia Gibson  
**Principals:** Steve Jones  
Heather House