Definition of the domain for summative evaluation

BLG-5063-2

Biology Secondary V

The Human Digestive System

Reach for your Dreams

Québec

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The Human Digestive System

Formation professionnelle et technique
et formation continue

Direction de la formation générale
des adultes

ISBN 2-550-42062-4

Legal deposit—Bibliothèque nationale du Québec, 2004

1. Introduction

This definition of the domain for summative evaluation describes and classifies the essential and representative elements of the *Biology* program—specifically, for the course *The Human Digestive System*. It presents an overview of the program, but should by no means replace the program itself. The purpose of defining the domain is to ensure that all the instruments for summative evaluation are consistent with the overall program.

This definition of the domain is organized in the same way as it is in other courses. The content of each section is, however, specific to this course.

The definition of the domain for summative evaluation is used to prepare examinations that are valid from one version to another, from year to year, and from one school board to another, taking into account the responsibilities shared by the Ministère de l'Éducation and the school boards.

2. Program Orientations and Consequences for Summative Evaluation

Orientations	Consequences
The purpose of this program is to help students acquire knowledge of human anatomy and physiology.	Evaluation will test the students' knowledge of anatomical and physiological concepts of the human digestive system.
The purpose of this program is to help students understand how the human body functions.	Evaluation will test the students' understanding of nutrition and how the human digestive system functions.
The purpose of this program is to help students understand the causes and effects of the principal health disorders associated with the human body and the factors that contribute to its health.	Evaluation will test the students' ability to establish relationships between acquired anatomical, physiological and nutritional concepts and the principal health problems associated with the human digestive system.

3. Course Content for Purposes of Summative Evaluation

Themes

- **Anatomy of the Digestive System**
  - Description of the digestive system:
    - name of organs and glands
    - description of organs and glands
    - role of organs and glands
    - diagram
  - Dentition
  - Basic processes of the digestive system

- **Physiology of the Digestive System**
  - Nature, role and function of an enzyme
  - Movement of digestive tract
    - segmentation and peristalsis
    - mixing and transport of food
  - Digestion and absorption of food

- **Digestive Health and Hygiene**
  - Composition of everyday foods
  - Role, caloric content and storage of carbohydrates, lipids and proteins
  - Nature, role and sources of vitamins and minerals
  - Requirements of the human body and *Canada's Food Guide*
  - Teeth and gum problems
  - Carbohydrate, lipid, protein, vitamin and mineral excess and deficiency
  - Health problems related to the digestive system

Skills

- **Describing:** Observing, identifying or recalling the characteristics of a phenomenon or the components of a system.

- **Explaining:** Showing in a structured way the nature and interaction of complex relationships between objects or phenomena.

- **Analyzing:** Examining the components, the relationships between components, and the laws or mechanisms of a system or complex set of components.

4. Table of Dimensions

Themes / Skills	Anatomy of the Digestive System 25%	Physiology of the Digestive System 25%	Digestive Health and Hygiene 50%
Describing 45%	Description of digestive system (15%) Dentition (5%) Basic processes of digestive system (5%) **(1) 25%**		Nature, role and sources of vitamins and minerals (10%) Teeth and gum problems (5%) Digestive disorders (5%) **(3) 20%**
Explaining 35%		Nature, role and function of an enzyme (5%) Digestive tract motility (5%) - segmentation and peristalsis - mixing and transport of food Digestion and absorption of food (15%) **(2) 25%**	Role, caloric content and storage of carbohydrates, lipids, proteins, vitamins and minerals (5%) Carbohydrate, lipid, protein, vitamin and mineral excess and deficiency (5%) **(4) 10%**
Analyzing 20%			Composition of everyday foods (10%) Requirements and *Canada's Food Guide* (10%) **(5) 20%**

5. Observable Behaviours

Dimension 1

– Name the structures indicated on a diagram of the digestive system and associate each of these structures with roles and descriptive elements appearing on a list. (The list should contain more roles and descriptive elements than are required.) (15%)

– Name the teeth indicated on a diagram of the jaw and specify their role. (5%)

– Associate the basic processes of the digestive system with parts of the digestive tract and with digestive glands. (5%)

Dimension 2

– Given a series of statements, choose those that correctly explain the nature, role and function of an enzyme. Correct false statements to make them valid. (5%)

– Given a series of statements, choose those that correctly explain the phenomenon of digestive tract motility. Correct false statements to make them valid. (5%)

– Given a particular food, describe the path taken by a bolus of food in the digestive tract and explain the mechanisms of digestion and absorption that occur. (15%)

Dimension 3

– Associate three vitamins and three minerals with their corresponding sources and roles appearing on a list. (The list should contain more elements than are required.) (10%)

– Given a series of statements, choose those that correctly describe the causes and formation of teeth or gum problems such as caries, dental plaque, tartar, and *materia alba*. Correct false statements to make them valid. (5%)

– Associate the name of various digestive disorders with the following elements of information: symptoms, affected organs, causes and effects. (Elements of information are chosen from a list that contains more elements than are required.) (5%)

Dimension 4

– For a given situation involving a choice of menu, justify the choice of a high carbohydrate, high lipid or high protein menu. (5%)

– Given two concrete examples of a poor diet, one related to an excess of carbohydrates, lipids, protein, vitamins or minerals, the other to a deficiency, explain the long-term consequences of each type of diet. (5%)

Dimension 5

– Given a list of foods eaten at a given meal, determine, for each food, the source of carbohydrates, lipids and proteins. (A list of ingredients used to prepare the food is provided.) (10%)

– Analyze a list of foods eaten in the course of a day and explain whether this diet meets the recommendations of *Canada's Food Guide*. (10%)

6. Explanation of Content and Weighting

In establishing the relative importance of the themes *Anatomy*, *Physiology* and *Health and Hygiene*, greater weight has been assigned to understanding how the digestive system functions and the factors that help maintain its health, than to memorizing anatomical structures.

The relative importance of each skill to be developed has been determined by adding up the weightings given to the observable behaviours pertaining to that skill.

On the basis of the tasks prescribed in the terminal objectives of the program, the weighting of the themes and skills has been established as follows:

Dimensions related to the theme *Anatomy*	25%
Dimensions related to the theme *Physiology*	25%
Dimensions related to the theme *Health and Hygiene*	50%
Dimensions related to the skill *Describing*	45%
Dimensions related to the skill *Explaining*	35%
Dimensions related to the skill *Analyzing*	20%

7. Description of the Examination

A. Type of Examination

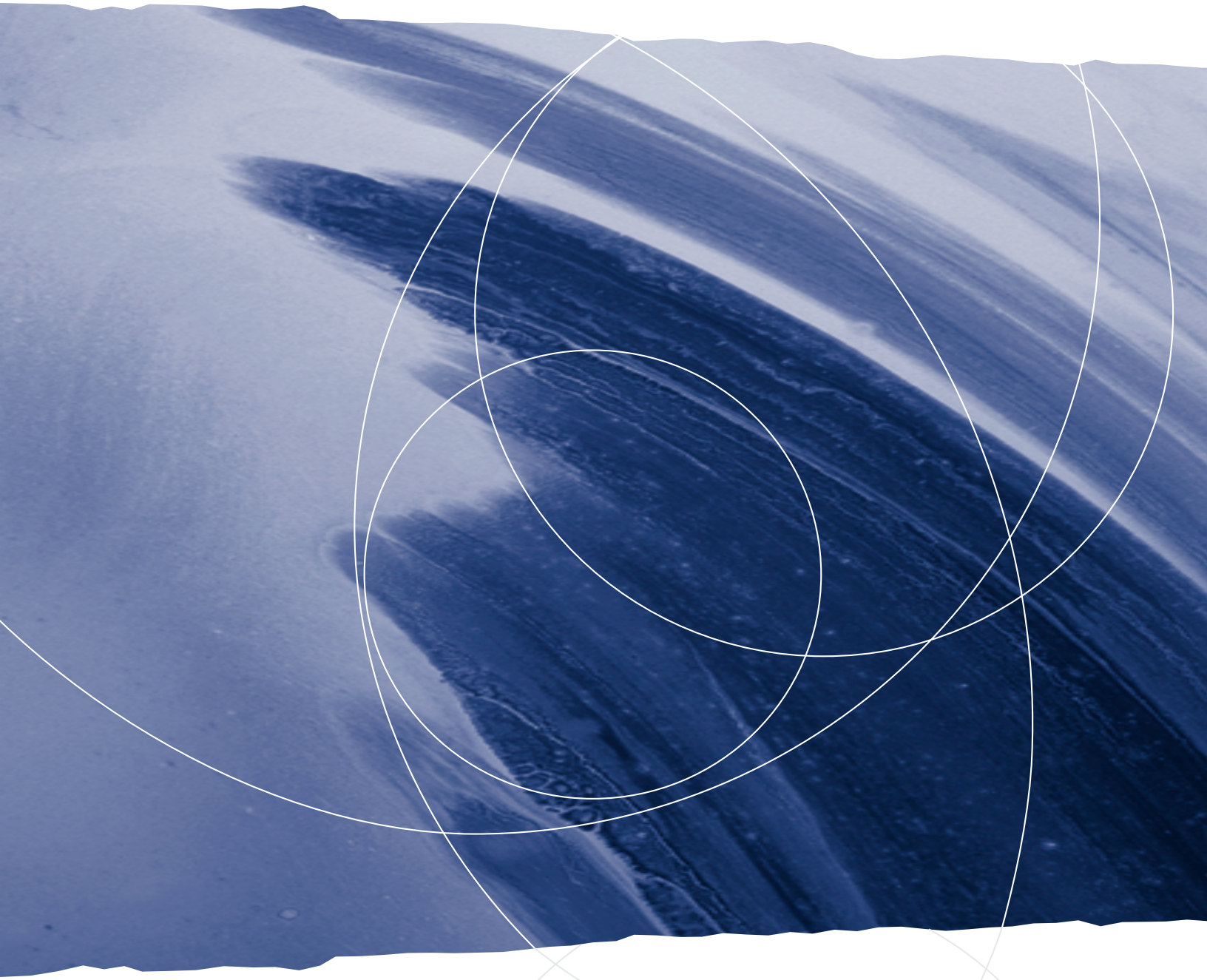
The summative examination is a written examination administered at the end of the course. It is designed to measure all of the dimensions and counts for 100% of the final mark. It consists of structured-response and short-response items.

B. Characteristics of the Examination

The examination is written at the end of the course in a single session lasting no more than 120 minutes.

C. Pass Mark

The pass mark for the entire examination is 60%.



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