
***Activity Resource
Management Document***

Grade 11
Health Care
(College Destination, Public)

**Unit 4, Activity 8:
Summative Assessment for Anatomy
and Physiology**



*This Activity Resource Management Document (ARMdoc)
was produced by the Ontario Council for Technological Education (OC TE)
to supplement the Ministry of Education's Grade 11 Course Profiles.
It may be used in its entirety, in part, or adapted.*

Activity Resource Management Document



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TPA3C Health Care

UNIT 4, ACTIVITY 8:**Summative Assessment of Anatomy and Physiology****Activity Description (from Course Profile)**

Time: (6 hours)

Students demonstrate understanding of major body systems. Students engage in exercises designed to help them to become familiar with disease processes. Through a posterboard and oral presentation, they demonstrate knowledge of body systems, treatments, preventions and specific management related to the role of the health care worker.

Activity Resource Management Doc (ARMdoc) Contents

Teacher Resource Pack (TRP)	Pre-planning Notes, Expectations by Category, Activity Deliverables, Instructional Aid Sheets, Terminology List, Career Information
Student Project Brief (SPB)	Project Brief, Assessment/Evaluation Checklists and Rubrics, Activity Log
Safety Resource Pack (SRP)	Safety Information (list of pages to be inserted from the separate Safety Resource Pack)

This Activity Resource Document (ARMdoc) was produced to supplement the Ontario Ministry of Education's Grade 11 Course Profiles. These profiles can be found at:

<http://www.curriculum.org/occ/profiles/profiles.htm>

ARMdocs for several Technological Education profiles can be found at:

<http://www.octe.on.ca>

The Technological Education policy documents can be found at:

<http://www.edu.gov.on.ca/eng/document/curricul/seccurr.html>

Pre-activity Planning Notes

The purpose of this activity is to teach students disease processes of major systems of the body and specific treatments and preventions. Through the use of available resources students will develop a posterboard and oral presentation.

Teachers should pre-establish accessibility to textbooks, trade journals and magazines, computer hardware, software and videos available at the school site or through the school district's system and community resources pertinent to this activity.

If possible, teachers should collect exemplar works or samples from previous students to illustrate some of the techniques used in this activity. Sample student posterboards can help illustrate presentation techniques.

Teachers may elect to define basic terminology in the classroom, or ask students to define the terms as an assignment prior to the beginning the lessons. Review the deliverables and handout the Student Project Briefs and evaluation materials prior to initiating the activity.

Teachers should check that all resource web sites are current and valid. Include any new web sites (found through using keywords in such search engines as Google), as resources.

Expectations by Category (from Course Profile)

Knowledge

- TFV.01** explain how lifestyle choices can have a great impact on an individual's health and well-being;
- TF2.09** identify healthier personal lifestyles for themselves by evaluating their own lifestyle choices and habits;
- TF2.01** explain the relationship among body systems and how they affect personal health;
- TF2.03** describe significant changes in the body during the life cycle;
- TF4.02** identify and determine the purpose of common instruments, equipment and materials used in the health care industry.

Inquiry

- SPV.01** use correct techniques and skills that meet industry standards in the health care field and explain the rationale for each technique;

Communication

- TFV.01** demonstrate an understanding of human anatomy, physiology and medical terminology;
- TF1.01** demonstrate an understanding of human anatomy and physiology, including the functioning of body systems;
- SPV.02** demonstrate effective communication, interpersonal and teamwork skills.
- TF1.02** correctly use basic terminology related to health care.

Application

- 1C3.01** identify present health care opportunities and those anticipated in the near future;
- 1CV.02** describe health and safety procedures and their application in health care;
- SP2.04** describe professional decorum that is appropriate to specific health care situations.

Assessment/Evaluation

Students will be assessed and evaluated on the following deliverables. See the Student Project Brief for assessment/evaluation instruments.

	Deliverable	Notes	Suggested Time (hr)
1	Topic Proposal (incl. disease process and resources to be utilized)	Team	.5
2	Posterboard Design Proposal	Team	1
3	Production of Posterboard and Oral Presentation	Team	4
4	Posterboard and Oral Presentation	Team	.5
5	Time Log	Individual (for discussion)	-

Terminology List

Angina:	chest pain, often described as tightness, may radiate down left or up into the jaw.
Arrhythmia:	an abnormal rhythm of the heart.
Artery:	large vessel that carries blood away from the heart.
Atherosclerosis:	disease of the arteries in which cholesterol and lipids builds up inside the artery wall.
Asystole:	absence of a heartbeat.
Capillary:	very small blood vessel
Cardiac Bypass:	surgical procedure that redirects blood flow.
Cardiac Catheterization:	procedure in which a catheter is inserted into a large vein or artery to detect problems.
Cardiomegaly:	an enlarged heart
Cholesterol:	a fat-soluble substance found in animal fats and oils.
Congestive Heart Failure:	an abnormal condition characterized by circulatory congestion.
Hypertension:	elevated blood pressure.
Hypotension:	low blood pressure
Lipids:	fatty acids found in the blood.
Myocardial Infarction:	an occlusion of a coronary artery, also called a heart attack
Nitroglycerin:	medication that dilates the artery to improve blood flow.
Pericarditis:	inflammation of the inner lining of the heart.
Vein	vessel that carries blood back to the heart.

Reference Resources

Books

Marieb E.N. **Human Anatomy and Physiology**. Benjamin/Cummings Publishing Company, Inc. 1992.

This book by Marieb describes the fundamentals of anatomy and physiology in a framework that encourages genuine understanding of the concepts and helps students with applications of knowledge.

Birchenall J.A., Streight M.E. **Home Care Aide**. Mosby, Inc. 1997. ISBN 0-8151-10726-9

Perry E., Potter L. **Canadian Fundamentals of Nursing**. Mosby, Inc. 1997. ISBN 0-8151-8901-X

Sorrentino S.A. **Textbook for Nursing Assistants**. Mosby, Inc. 2000. ISBN 0-323-00924-7

Zucker, E. **Being A Homemaker/Hone Health Aide**. Brady Prentice Hall 1999. ISBN 0-9303-018-X

These four books describe techniques and skills important to health care workers to meet client needs. Concepts such as assessment, safety, health, nutrition and personal care are described.

Torres, H. **Modern Dental Assisting**. W.B. Saunders 1995. ISBN 0-7216-5053-8.

This book examines modern dental health care including aspects of health, safety and procedures.

Video

A Change of Heart, Recovering from Heart Disease – In Body and Mind. Canada: Heart and Stroke Foundation.

This video discusses recovery for those suffering from heart disease at any stage and their caregivers.

What You Really Need to Know About Cholesterol. Canada: Heart and Stroke Foundation. 40 min.

This video discusses what cholesterol is, where it comes from and how cholesterol problems are diagnosed. Lifestyle modification tips are also included.

Delmar's Home Care Aide Video Series Tape 8 USA: Delmar Publishers. 35 min.

Discusses safe body mechanics and positioning.

The Anatomically Correct World of Anatomy (Part 1 and 2) Canada: Canadian Video Services. 115 min. each.

Comprehensive review of all body systems.

Journals

Nursing 02. USA: Springhouse Corporation.

This publication is the world's largest nursing journal presenting updates on current nursing issues.

Computer Software

College of DuPage: **TLC Medical Center**

This software presents a simulated hospital information system where students can learn about health professionals and diagnostics in a hospital setting. It covers a variety of medical diagnoses and nursing and medical interventions associated with these conditions.

OESS: **The Ultimate Human Body 2.0**

Interactive software with graphics that presents human anatomy and physiology and promotes knowledge of body systems.

Websites

Canadian Health Network

<http://www.cnadian-health-network.ca/>

A resource from Health Canada that links information at all health related topics from organizations and associations across Canada. Excellent for patient-centred information.

MEDLINEPlus

<http://medlineplus.gov>

Links to patient handouts from major organizations on common diseases and conditions. Provides dictionaries and articles for medical information.

MEDHUNT

<http://www.hon.ch/cgi-bin/find>

An automated search robot that cruises the net for health related sites.

Heart and Stroke Foundation of Ontario

www.heartandstroke.ca

Community resource offering education to Canadians about heart and stroke prevention.

Professional Education

www.hsfpe.org

Developed by the Heart and Stroke Foundation this site provides information to professionals who have an interest in heart disease and stroke.

The websites were verified by the writer prior to publication. Given the frequency with which these designations change, teachers should always verify the websites prior to assigning them for student use.

Armdocs make reference to the use of specific texts, magazines, films, videos and websites. Teachers need to consult their board policies regarding use of any copyrighted materials.

Presentation Topics

The following is a list of topics to choose from. These subjects are subject to teacher approval.

Angina

Atherosclerosis

Dental Caries

Crohn's Disease

Mastitis

Contact Dermatitis

Arthritis

Muscular Dystrophy

Congestive Heart Failure

Sexually Transmitted Diseases

Myocardial Infarction

Peptic Ulcer

Colon Cancer

Congenital Heart Disease

Ankylosing Spondylitis

Quadraplegia

Career Information

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Career Information Sites:

Human Resources Development Canada: National Occupational Classification Database-
<http://www.hrdc-drhc.gc.ca/noc>

HRDC NOC Search Engine-
<http://www.worklogic.com:81/noc/Query.htm?lang=e>

Ontario Prospects: geared to young people and students
<http://www.edu.gov.on.ca/eng/general/elemsec/job/prospect/eng/index.html>

Job Futures 2000: what's hot, what's not
<http://www.hrdc-drhc.gc.ca/JobFutures>

Job Profiles: real people profile their jobs
<http://www.jobprofiles.org/index.htm>

Canada WorkInfoNet: national and regional market info
<http://www.workinfolnet.ca>

The following activity related careers are described in the Human Resources Development Canada (HRDC) National Occupational Classification (NOC) database. Use the search engine link above to learn the main duties performed by practitioners of each trade, the education requirements for the position, and related occupations.

3152 Registered Nurses
3233 Licensed Practical Nurses
3413 Nurses Aides, Orderlies and Patient Service Associates
3217 Cardiology Technologists
3234 Ambulance Attendants and Other Paramedical Occupations
3222 Dental Hygienists and Dental Therapists
3223 Dental Technologist, Technicians and Laboratory

Student Project Brief

TPA3C Health Care

UNIT 4, ACTIVITY 8:

Summative Assessment for Anatomy and Physiology

Contents:

1. Project Brief Handout
Provides an outline of required elements of project.
2. Design Scenario Handout
Provides step by step outline of project requirements.
3. Evaluation Checklists
Outlines evaluation process of presentation.
4. Activity Log
Records activities and time frames required for project completion.

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Student Project Brief Handout

Title:	A Holistic Approach to Client Care		
Activity:	Design and create a posterboard relating to a particular medical condition with an accompanying oral presentation	Course:	TPA 3C3 Health Care
Time Req'd:	6.0 hours	Date:	
RATIONALE			
<p>This activity is designed to provide you with planning, communication skills and medical knowledge. It will incorporate all of your learning from the course outline. This activity gives you the opportunity to explore and experience the role of a health care worker. How we present information is as important as the information itself. When we want to present information we have to consider the type of display, the intended audience, as well as the information or message we wish to convey.</p>			
THE ASSIGNMENT			
<p>You will work with a partner to design and produce a posterboard and use it in conjunction with an oral presentation. The topic will focus on a medical condition and will be presented to your peers. You will create your presentation with available resources from the teacher and through independent research. The topic will be negotiated with the teacher.</p>			
LEARNING EXPERIENCE: You will:			
<ol style="list-style-type: none"> 1. Understand selected medical conditions 2. gain an understanding of assessing client needs 3. understand the role of a health care worker in the health care industry 4. learn to document the process of researching 5. learn presentation techniques 			
TOOLS AND MATERIALS			
<p>Material determined by you to create posterboard demonstration (i.e. Bristol board, cardboard), tape, scissors, software, drawing and illustration tools, computers and software for research and word processing, resources such as books, journals, videos and websites.</p>			

EVALUATION				
No.	Deliverable	Time Limit (hours)	% Weight	Notes
1	Design brief/proposal	.5	10	
2	Draft of oral presentation and posterboard	1	20	
3	Complete posterboard and oral presentation	4	30	
4	Presentation of topic	.5	40	
5	Time log	-	-	
	TOTALS	6.0	100%	
NOTES				
<p>The presentation must be a maximum of 30 minutes in length. You will work in pairs. The posterboard and oral presentation must include basic anatomy and physiology, causes, symptoms and treatment of the condition. The posterboard title must be clear, colourful and be seen from a distance of 6 feet. Diagrams and graphics must be relevant and neat. Content should be organized and include assessment of the medical condition and client needs. The role of the health care worker must be included in the presentation.</p>				
PROJECT PROCEDURE				
Step	Procedure			
1	<p>Topic Analysis (Team) (approximately 1 period) Initiate log of hours Read available topics related to medical conditions (handout of medical condition). Analyze requirements and choose topic Receive topic approval from teacher Develop list of design criteria Hand in design proposal</p>			
2	<p>Presentation Draft (Team) (approximately 1 period) Discuss and brainstorm design criteria and possible solutions for posterboard Review resource materials relevant to the topic Develop draft for oral presentation and posterboard Seek teacher approval for continuation.</p>			
3	<p>Implementation (Team) (approximately 3.5 periods) Determine team responsibilities Develop posterboard and oral presentation.</p>			
4	<p>Report (Team) (0.5 hours) Presentation to class Timesheets/logs for each individual.</p>			

Checklist for Evaluation of Posterboard/Oral Presentation

Knowledge/Understanding	Yes/No	Comment
Explains how lifestyle choices can have an impact on individual's with selected condition		
Explains how your own lifestyle choices can effect your overall health		
identifies criteria for the assigned medical problem		
fully describes the signs and symptoms of the problem		
identifies causative factors of the problem		
identifies necessary immediate interventions to deal with the problem		
Identifies the common instruments, equipment, materials used to analyze and/or treat the selected condition		

Thinking/Inquiry

identifies pertinent information necessary to determine need for emergency interventions		
identifies presenting abnormalities and necessary interventions		

Communication

Demonstrates a clear understanding of human anatomy and medical terminology concepts		
clearly presents key concepts of assigned medical problem		
clearly presents abnormal changes of physiology		
clearly presents possible interventions		
Demonstrates effective teamwork, interpersonal and communication skills		

Application

Identifies health care career opportunities, and related safety and professionalism aspects		
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Safety Resource Pack

Health Care

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Contents:

Board Policy on Use of the Internet

(please insert your Board's policy on student's use of the Internet if applicable to research phase of this activity)