



## HEALTH SCIENCE PACING GUIDE

### GRADE 7

	STRAND	UNIT	OBJECTIVES	Lessons
TERM ONE	Healthy Living	<b>Introduction to Health Science</b>  <i>Pg 40-49</i> <i>H. Sci Curr</i>	Definitions of Health (physical, mental, emotional). Characteristics of Healthy persons. Personal Hygiene: for disease prevention, health promotion and self-esteem development. Washing genitals (puberty). Dental Hygiene (tartar, plaque) dental disease prevention. Importance of rest and sleep. Conflict resolution (recognizing and dealing with differences, respect for self and others). Stress Management. Importance of physical exercise. Nutrition (nutrients, role balanced diet) lifestyle disorders	<b>15 lessons</b>
	Body Systems	<b>Cell Organisation</b>  <i>Pg 53- 54</i> <i>H. Sci Curr</i>	Make a diagram of epithelial (cheek) cells. Identify cell organelles. Make a model of a cell. Identify specialized cells. Relate the shape of specialized cells to their functions. Classify tissue based on cells observed. Cells, tissues, Organs and Systems. Level of Organization with examples. Ten Body Systems . Body cavities and related organs.	<b>6 lessons</b>
	Body Systems	<b>Skeletal System</b>  <i>Pg 55 - 59</i> <i>H. Sci Curr</i>	Identify the functions of the skeleton. Relate the structure of the skeleton to its functions. Compare common names to scientific names. Make a model of the human skeleton. Observe the range of motion of different joints. Classify the five types joints. Four types of tissues. Observe the four types of tissues. Recognize and explain the relationship between healthy bones, cartilage, ligaments and tendons. Injuries and Diseases. Good Health practices, correct posture. Diet, rest, stretches, exercise	<b>7 lessons</b>
	Body Systems	<b>Muscular System</b>  <i>Pg 60 - 64</i> <i>H. Sci Curr</i>	Explain the functions of muscles. Types of muscles skeletal, cardiac and smooth. Names of muscles common and scientific. Classify muscles as voluntary or involuntary. Observe and identify how antagonistic muscles work. Movement: Relaxing and contracting. Use scientific names to identify major muscles. Injuries and Diseases. Good Health practices. Correct posture. Diet rest stretches, exercise.	<b>6 lessons</b>
	Body Systems	<b>Fitness</b> <i>Pg 65 - 67</i> <i>H. Sci Curr</i>	Use data to calculate BMI. Construct graphs. Make a decision to attain and maintain the personal BMI recommended for healthy living. Recognize the relationship between exercise and fitness/good health	<b>3 lessons</b>

# TERMS TWO & THREE

	STRAND	UNIT	OBJECTIVES	Lessons
	Body Systems	Nutrition  <i>Pg 68-74 H. Sci Curr</i>	Define food and Nutrients. Identify Food Nutrients and state their functions. Carbohydrates, proteins, vitamins, mineral, water, fiber, lipids (fats & oils). Explain the relative portions of food group in the food pyramid/drum. Make a food drum. Classify food as starch, fat, simple sugars or fibre. Distinguish between saturated and unsaturated fats. Balanced Diet. Make menus for balanced diets Deficiency Diseases - Cause, symptoms and treatment. Food Tests: Lipids, Carbohydrates and Proteins	13 LESSONS
	Body Systems	<i>Digestive System Pg 75- 78 H. Sci Curr</i>	Identify parts of the digestive system. Make a model of the digestive systems. Name and define the steps involved in digestion: Ingestion, Digestion, Absorption and Assimilation. Define and Describe peristalsis.. Identify where digestion begins and ends for each class of nutrient.	10 lessons
	Body Systems	<i>Teeth  H. Sci Syllabus</i>	State the types and functions of the four types of teeth. Identify, locate and give the numbers of the four types of teeth. Temporary and permanent types of teeth. Label the external and internal structures of a tooth. Name the hardest material found within the body. Name the various foods necessary for the development of strong, healthy teeth. Proper care and hygiene.	6 lessons
	Body systems	<i>Path of Digested Food  H. Sci Syllabus</i>	Match the digestive juices with the organs that produce them. State the function of the gall bladder and bile. Explain the general function of enzymes. Describe what happens to food in the different parts of the alimentary canal. Explain the relationship between enzymes and the rate of digestion. State the end products of digestion. Identify food nutrients that do not have to be digested. State how digested foods are used by the body. Describe absorption and assimilation of food nutrients. Villi. To list the main functions of the large intestine.	8 lessons
	Body systems	<i>The Liver H. Sci Syllabus</i>	Identify the liver as the largest internal body organ. Locate the position of the liver in the body. List the functions of the liver. State that the liver produces urea.	2 lessons
	Diseases and Bush Medicines	<i>Digestive Disorders Pg 83 -85 H. Sci Curr</i>	Digestive Disorders: Describe the condition, signs and symptoms of indigestion, constipation, diarrhea, gastric/peptic ulcers, heartburn, flatulence, gastroenteritis/food poisoning, appendicitis, gall stones, diabetes, anorexia, obesity.	2 lessons



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### GRADE 8

	STRAND	UNIT	OBJECTIVES	LESSONS
	Body Systems	The Circulatory System The heart <i>Pg127</i> <i>H. Sci Curr</i>	Observe and Identify parts of a mammalian heart. Make a diagram. Structure, function, labels of the heart. Recall the special nature of the heart muscle. Describe how blood flows through the heart. Name and identify Valves. State the function of the valves of the heart.	
	<b>Body Systems</b>	<b>Blood</b>  <i>Pg 124 - 126</i> <i>H. Sci Curr</i>	List functions of human blood. Evaluate the importance of the functions of blood. State the composition of blood. State the functions of the constituents of blood. Describe features of the red and white blood cells. Differentiate how lymphocytes and phagocytes work. Make a model of blood cells. Explain the relationship of the structure of blood to their function. Distinguish between oxygenated and de-oxygenated blood. State the four main blood groups and their importance to blood transfusion.	
	<b>Body Systems</b>	<b>Blood Vessels</b>  <i>Pg 128 - 129</i> <i>H. Sci Curr</i>	Name the 3 types of blood vessels. Describe the structural and functional differences. Classify blood vessels according to their function. Use correct names for common blood vessels. Observe structural differences between arteries and veins. Differentiate between diagrams of cross- section of three types of blood vessels. Recognize and explain relationship between the thickness of walls of blood vessels to the pressure of blood. Recognize and explain the relationship between the presence of valves and low blood pressure.	
		<b>Lymphatic System</b> <i>H. Sci Syllabus</i>	Lymphatic System and Spleen: Identify the parts of the lymphatic system, state the function of the lymphatic system. Describe the role of the spleen in the human body. Explain how blood composition changes as it flows through body tissues.	
	<b>Body Systems</b>	<b>Respiratory System</b>  <i>Pg 131 - 132</i> <i>H. Sci Curr</i>	State the function of the respiratory system and define respiration, breathing and gaseous exchange. Use correct names for the parts of the respiratory system. Draw and label system. Recognize and explain the difference in diameter of air tubes from the trachea to the alveoli. Make an annotated diagram of the respiratory system. Make a model of the Respiratory System. State the simplified word formula for respiration.	

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### GRADE 8

	STRAND	UNIT	OBJECTIVES	WEEKS
<b>STERMS TWO &amp; THREE</b>	Body Systems	Gas Exchange <i>Pg 131 - 132</i> <i>H. Sci Curr</i> <i>H. Sci Syllabus</i>	Observe the thin epithelium of the alveolus. A capillary surrounds the alveolus. Recognize the relationship between the structure of the alveoli, capillaries and cells to gas exchange. Air composition ( both inspired and expired air). Describe the difference in composition of inspired and expired air. Describe how oxygen is used by the body cells to produce energy. Construct pie graphs showing the composition of inhaled and exhaled air.	5 lessons
	Body Systems	Breathing  <i>Pg 131 - 132</i> <i>H. Sci Curr</i>	Describe the mechanics of breathing: contractions of diaphragm and intercostals muscles, movement of diaphragm and ribcage. Make an oral presentation describing breathing. Calculate breathing rates. Explain the relationship between the circulatory system and the respiratory system. Predict the effects particular factors might have on breathing rate. Use limewater to test for carbon dioxide. Diseases of the Respiratory system. Make observations from comparing photographs of lungs of non-smokers and smokers.	6 lessons
	Body Systems	Excretion The Skin  <i>Pg 136</i> <i>H. Sci Curr</i>	Define the term excretion. Name and identify organs of excretion and their waste products. Make an annotated diagram of the skin. List the functions of the skin. Evaluate the extent to which the skin is adapted to carry out its functions. Describe skin as an excretory organ and a sense organ. Epidermis, dermis, subcutaneous fat, hair, sweat gland, nerve endings, sebaceous glands. List 4 common skin diseases.	2 lessons
	Body Systems	Excretion  <i>Pg 137 - 138</i> <i>H. Sci Curr</i>	Use correct names for the parts of the urinary system. Make an annotated diagram of the urinary system. Locate the position of the urinary system within the body. Construct a model of the Urinary system. Recall the nature of urea. List the normal components of urine. To be aware that doctors can use urine for diagnosing illnesses, pregnancy and drug use.	5 lessons
	Body Systems	<i>Endocrine System</i> <i>Pg 187 - 188</i> <i>H. Sci Curr</i>	Make an annotated diagram of the Endocrine System to show the position of the main endocrine glands within the human body. Use correct names for common ductless glands. Make observations of Endocrine glands after studying photographs. Compare two types of glands (ducts vs. ductless). Explain how hormones are transported around the body. Construct a table showing hormones and their functions. To describe the action of certain hormones (Thyroxin, Insulin and	5 lessons

			Adrenaline) on the body. Describe the effects of the “sex hormones” secondary sexual characteristics. Describe the special nature of the pituitary gland. Disorders of the Endocrine System.	



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### GRADE 9

	STRAND	UNIT	OBJECTIVES	Lessons
<b>TERMS TWO &amp; THREE</b>	Body Systems	<i>Reproduction</i>	Observe structures of male and female reproductive system. Identify and briefly describe male and female reproductive cells. Use the correct names for parts of the male and female reproductive systems. Label the main parts of the male and female reproductive systems	20 lessons
		<i>H. Sci Curri Pg 139</i>		
		Puberty & Menstrual Cycle, Pregnancy & Birth H. Sci Curri Pg 140	Describe secondary sexual characteristics of males and females. Identify and adopt practices that promote health and hygiene of reproductive organs. Explain the fertile years. Use calendar to determine the next ovulated period. Stages of the menstrual cycle. Recognize and explain the relationship between emotional state & healthy/regular menstrual cycle. Make an annotated diagram of a foetus in amniotic fluid. Describe the position of foetus in uterus prior to birth. Evaluate the importance of amniotic fluid. Define fertilization, conception, zygote, embryo, foetus, gestation. State the functions of amniotic sac, amniotic fluid, placenta, and umbilical cord. Explain the role of ante and postnatal care in preserving the health of mother and child. Deficiency in ante and postnatal care has a higher risk for illness in mother and/or child. Breast milk gives nutrients, antibodies, prevents diarrhea, bonding and shrinkage of uterus (weight loss) for mother. Twins Fraternal Vs. Identical.	
		Sexual Transmitted diseases	Sexual Transmitted diseases / infections Causes symptoms and treatment.	