

GRADE 8

INTERMEDIATE-LEVEL TEST SCIENCE

PERFORMANCE TEST

Name _____

School _____

The questions on this test measure your knowledge and understanding of science.

The test has one part in this booklet.

You may use a calculator to answer the questions on the test if you wish.

You will have 15 minutes to answer the questions on this test

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO.

This booklet contains science performance task located at your station. At this station, you will have 15 minutes to finish your work. Continue working until you see the word “STOP” at the bottom of the page or until the 15 minutes are up. If you have extra time, check your work, or wait quietly.

Do not help other students or ask others to help you. Everyone should work alone. There must be no talking between students during this test.

Read the description of the station carefully. Read carefully all of the directions in the boxes. All of your answers must be recorded in this test booklet. After you complete the task at this station, please leave the station the way it is shown on the station diagram.

FOOD ENERGY

Food Energy is measured in Calories. The Calorie is defined as the amount of heat required to raise the temperature of 1 kg of water 1⁰C. A Calorie equals 1 kilocalorie (kcal) or 4.184 kilojoules (kJ).

You are going to calculate how much energy you expend throughout a normal day of your life. The following table lists the approximate amount of energy used in various exercises. Energy used is expressed in kcal/kg/h.

Activity	Energy Used (kcal/kg/h)
Laying down or sleeping	1.2
Sitting	1.5
Standing	2.1
Light housework	2.6
Walking 2.5 mph	3.1
Bicycling 2.5 mph	3.1
Bowling	4.0
Walking 4.0 mph	4.5
Volleyball	5.1
Tennis	6.2
Bicycling 13 mph	9.7
Running 10 mph	13.2

1. Determine your mass in kilograms. To do this, you must divide your weight in pounds by 2.2. Write this mass in the space below.

Your Weight in pounds: _____ lbs.

Divide this value by 2.2

Your Mass in kg: _____ kg

Multiply this figure by the figures for each exercise to obtain the amount of energy you would use in an hour. For example, a 60-kg student playing volleyball would use 60 kg x 5.1 kcal/kg/h = 306 kcal/h.

2. Using this table, estimate your own daily energy expenditure. List your activities for a 24-hour period. Calculate the kilocalories expended. (Estimate the energy expenditures for activities not listed in the table.)

Activity	Activity Number	Hours doing this activity (h)	Your Mass (kg)	Calories Burned

Total Calories Burned: _____

