

WESTERN SCHOOL OF TECHNOLOGY AND ENVIRONMENTAL SCIENCE

Health Science Technology

The Health Science Technology Program offers students the opportunity to learn about the various types of careers found in the health care field. Students will apply knowledge of anatomy and physiology, medical terminology, medical office skills, basic health assessment procedures, medical mathematics, and technical communication skills necessary when caring for patients in need of health care. Students in this magnet program need to show proficiency in reading, math, critical thinking, and communication skills.

BCPS Magnet Transportation Information: Western School of Technology & Environmental Science (Southwest Area) Transportation is provided at community pick-up points only for students who are zoned for high schools in the Southwest or Northwest areas, as well as those who would otherwise attend Dulaney or Towson High School.

Open House: Thursday, November 3, 2011 6- 8 p.m.

2012-2013 Assessment Guidelines

Assessment Date: Saturday, January 21, 2012 *Assessments by appointment*

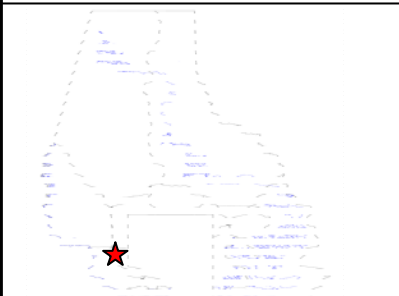
Assessment reminders will be mailed to all applicants.

Parents/Guardians of applicants who have NOT received notification at least five (5) days prior to the assessment date MUST contact the school to verify/schedule an appointment.

Parent(s)/guardian(s) should contact both the school and Magnet Office immediately if the applicant cannot attend or complete the scheduled assessment due to an unforeseen illness or emergency. Please be aware that assessments will not be rescheduled without documentation verifying the illness or emergency.

Inclement Weather Date: Saturday, January 28, 2012, at the previously scheduled appointment time

Inclement Weather: In the event that schools are closed due to inclement weather, weeknight magnet assessments will be postponed. Weekend magnet assessments will be postponed if the snow emergency plan is put into effect for Baltimore County. Postponed assessments will occur on the designated inclement weather date.

<p style="text-align: center;">Western School of Technology & Environmental Science 100 Kenwood Avenue Catonsville, MD 21228</p>	<p><u>Directions to Western:</u></p> <p>From the north:</p> <ul style="list-style-type: none"> • Take 695 West towards Glen Burnie to the Wilkens Avenue East Exit 12B. • Turn right on Wilkens Avenue, go under the beltway and turn left on Kenwood Avenue (there will be a sign to the Beltway Towson on Kenwood Avenue). • Stay on Kenwood Avenue past the entrance to the beltway. • Western will be at the top of the hill on your left. <p>From the south:</p> <ul style="list-style-type: none"> • Take 695 North towards Towson to the Exit 12C Wilkens Avenue Exit. • As you come off the exit, stay straight to the stop sign. • Turn left at stop sign on Kenwood Avenue.
	
<p style="text-align: center;"><u>Magnet Coordinator</u> Lisa Gleason 410-887-0849 lgleason@bcps.org</p>	

WESTERN SCHOOL OF TECHNOLOGY AND ENVIRONMENTAL SCIENCE

Health Science Technology

Prior to the Assessment

This MUST be completed prior to coming to the audition.

Complete the 2012-2013 Applicant Self-Evaluation included with these guidelines.

How to prepare for the test: Applicants can prepare for the test portion of the assessment by reviewing math and science concepts. Applicants will be asked practical questions that apply knowledge learned in middle school science, math, and English classes.

Sample test questions will be available at the Open House on November 3, 2011, and by request.

Prior to attending the assessment, student applicants may want to review:

Math Concepts: interpret information found on graphs, tables, or labels, to read calibrations on a ruler or tape measure, and standard math operations

Science Concepts: metric units of measure, the scientific method, and physical properties of substance

English Concepts: each question will be related to Health Science, but they will need to know the meaning of specific vocabulary terms. Additionally, other print sources are available in educational resource establishments that provide medical terminology.

On the Day of the Assessment

The assessment takes approximately 2 hours.

It is the responsibility of the parent(s)/guardian(s) to:

- ensure that the applicant attends the assessment on the scheduled date and time.
- contact the schools if scheduled magnet assessment appointments conflict.

Failure to attend an assessment WILL result in disqualification.

Registration Information

Applicants must attend the school-based assessment for the program to which they applied. All students will be contacted regarding a specific appointment time.

Students should plan to arrive at least 15 minutes prior to their assessment time and report to the front lobby of Western. Assessments will start at the designated time. Students should be accompanied by at least one parent/guardian. **There will be no assessment provided for applicants arriving after the assigned assessment time.** Parents may stay in a designated area during the assessment.

WESTERN SCHOOL OF TECHNOLOGY AND ENVIRONMENTAL SCIENCE

Health Science Technology

Assessment Description

Applicants will need to bring two #2 pencils to take the assessment. Applicants will take a multiple-choice test that focuses on basic concepts in science, math, and communication skills relating to the health care field. There will also be an assessment of vocabulary terms appropriate for 7th and 8th graders.

Vocabulary Assessment (20 points): Applicants will complete a vocabulary terminology assessment consisting of 20 selected response questions.

Practical Assessment (20 points): Applicants complete an assessment that focuses on the basic concepts in science, math, and communication skills relating to the health care field.

Documented testing accommodations, as appropriate to the assessment, will be provided.

Magnet Events

Magnet EXPO!	Saturday, September 24, 2011 Crowne Plaza Timonium	10 a.m. - 2 p.m.
Magnet Application Meetings	Tuesday, September 27, 2011 Woodlawn HS Auditorium	Program starts at 6 p.m.
	Wednesday, September 28, 2011 Kenwood HS Auditorium	Program starts at 6 p.m.
Application Deadline	Tuesday, November 30, 2011	

Application packets are available at www.bcps.org/offices/omp. Applications must be hand delivered or postmarked on or before **November 30, 2011**. Late applications are not processed

**WESTERN SCHOOL OF TECHNOLOGY AND ENVIRONMENTAL SCIENCE
HEALTH SCIENCE TECHNOLOGY PROGRAM**

Practice Materials for 8th Grade Assessment Fall 2011

Vocabulary: Students should be familiar with the following words:

- Alphabetical
- Amount
- Approximate
- Autonomy
- Benevolence
- Blood Cuff
- Blood Pressure
- Calculate
- Carbohydrates
- Challenge
- Competent
- Cooperation
- Definitely
- Discrete
- Disease
- Dosages
- Emergency
- Enthusiastic
- Estimate
- Facility
- Fats
- Immunization
- Insensitivity
- Insurance
- International
- Justice
- Local
- Microorganisms
- Minimize
- Misunderstanding
- National
- Ophthalmoscope
- Organize
- Otoscope
- Percentage
- Percussion Hammer
- Positive
- Prejudice
- Prevent
- Primarily
- Procedure
- Protein
- Pulse
- Punctuated
- Qualified
- Receipt
- Specify
- Speculum
- State
- Statistic
- Stethoscope
- Technology
- Temperature
- Treatment
- Unacceptable
- Veracity

Mathematical Computations: Students should be able to:

- Add without a calculator
- Subtract without a calculator
- Multiply without a calculator
- Divide without a calculator
- Determine percentage without a calculator

Scratch paper will be provided for calculations.

Charts, Grids, and Measurements: Students should be able to interpret charts, grids, and measurements to:

- Answer questions
- Tabulate amounts
- Identify readings

Sample Test Questions

Below are questions similar to those that will be seen on the 8th Grade Assessment Test.

1. The best way for a nursing assistant to greet a known patient, Mrs. Jones, who has just entered the medical facility for an appointment would be:
 - a. “Hey Mrs. Jones you look good today. Are you ready for your appointment?”
 - b. “Good morning, Mrs. Jones. I am Jane Smith, the health assistant. Will you please sign in.”
 - c. “You must be the 9:30 appointment. Please record your name on the Sign-In Sheet.”
 - d. “Please give me your insurance card and photo ID so I can check you in now.”

2. Which of the following responses would be the best way to answer the telephone when working in Dr. Smith's office setting?
- "Please hold."
 - "We are very busy right now. Please call back at a later time."
 - "Hello, this is Dr. Smith's office. How may I help you?"
 - "Thank you for calling. It was a pleasure speaking with you."
3. When ending a telephone call, the best way to respond is:
- "Have a good day."
 - "It was my pleasure helping you. Please call us again if we can be of any assistance. Have a nice day."
 - "Take care. Bye now."
 - "Ok. Bye."
4. The best way for a health assistant to minimize the spread of disease is by:
- Removing the trash cans from all of the patient rooms daily.
 - Having all of the patients wear isolation gowns.
 - Handwashing before and after every patient contact.
 - Immunizing all patients against Influenza (the flu).
5. A patient's insurance policy indicates that the patient must pay 25% of the fee for an office visit. If the fee for today's visit is \$80, how much is the patient's portion of the fee?
- \$40.00
 - \$20.00
 - \$16.00
 - \$12.00
6. If a patient must pay 10% of their outstanding medical bill before they can be seen, and they currently owe the medical facility \$4,632.00, how much must they pay?
- \$4.63
 - \$32.00
 - \$46.32
 - \$463.20
7. If 5% of the total cost is needed to cover associated fees, and the total cost is \$129.00, the patient must be prepared to pay:
- \$3.23
 - \$6.45
 - \$12.90
 - \$28.80
8. Using the last name (which is underlined) of each patient, what is the correct alphabetical filing order for the following four patients' names?
- Nancy Schuab Amanda Wright Shauntia Grayson Jamie Philipps
- Amanda Write
Jamie Philipps
Nancy Schuab
Shauntia Grayson
 - James Philipps
Shauntia Grayson
Amanda Wright
Nancy Schuab
 - Shauntia Grayson
Jamie Philipps
Nancy Schuab
Amanda Wright

9. What is the correct numeric order for the following numbers?

1,350 2,550 1,421 2,225

- | | | | | | | | |
|----|-------|----|-------|----|-------|----|-------|
| a. | 2,225 | b. | 1,350 | c. | 2,550 | d. | 1,350 |
| | 1,350 | | 1,421 | | 2,225 | | 1,421 |
| | 2,550 | | 2,550 | | 1,350 | | 2,225 |
| | 1,421 | | 2,225 | | 1,421 | | 2,550 |

10. Organize the following numbers from smallest to largest:

9,000,000 7,999,000 7,010,000 9,012,000

- | | | | | | |
|----|-----------|----|------------|----|-----------|
| a. | 9,012,000 | b. | 7, 010,000 | c. | 7,999,000 |
| | 9,000,000 | | 7,999,000 | | 7,010,000 |
| | 7,999,000 | | 9,000,000 | | 9,012,000 |
| | 7,010,000 | | 9,120,000 | | 9,000,000 |

11. Select the best sentence below.

- a. The patient was saw by Dr. Phillips.
- b. The clinic schedules all Obstetrics Patients in Tuesday afternoons.
- c. The doctor will give the patient the lab test results at the patient's next visit.
- d. The patient indicated he weren't feeling well today.

12. Which of the following words is spelled correctly?

- a. Emergincy
- b. Emergency
- c. Emergencey
- d. Emirgency

13. Which of the following words is spelled correctly?

- a. Definitely
- b. Definitaly
- c. Definetly
- d. Definatly

14. Select the best sentence from among the four choices listed below:

- a. The nurse's office is located on the first floor.
- b. The nurse's office are on the first floor.
- c. The nurse's office is over to the first floor.
- d. The nurse office is at the first floor entrance.

15. Which of the following sentence is punctuated correctly?

- a. Dr. Sellers has clinic hours on Monday Wednesday, and Friday.
- b. Dr Sellers has clinic hours on Monday, Wednesday; and Friday
- c. Dr. Sellers has clinic hours on Monday, Wednesday, and Friday.
- d. Dr. Sellers' has clinic hours on Monday; Wednesday; and Friday.

16. A medical secretary maintains the accounts and writes the paychecks for a large medical office. There are 22 people on the payroll.
Eight people earn \$8 per hour.
Seven people earn \$10 per hour.
Seven people earn \$15 per hour.
- If everyone works 40 hours per week, what is the total amount of money needed for the payroll each week?
- a. \$1,320.00
 - b. \$7,920.00
 - c. \$9,560.00
 - d. \$15,680.00
17. The stomach is part of the _____ System.
- a. Respiratory
 - b. Digestive
 - c. Cardiovascular
 - d. Urinary
18. You ordered supplies from Orthopedic Medical Supply Company, Inc. When you receive your invoice (bill) for the supplies, the amount of the order is \$1,212.00. Your medical practice is entitled to a 15% discount since you are paying the invoice within ten days of receipt. What is the amount your order will be discounted?
- a. \$12.12
 - b. \$121.20
 - c. \$18.18
 - d. \$181.80
19. The temperature needed to freeze water is:
- a. 26⁰ F
 - b. 28⁰ F
 - c. 32⁰ F
 - d. 36⁰ F
20. A medical instrument used to listen to body sounds is known as a:
- a. speculum
 - b. stethoscope
 - c. radiometer
 - d. percussion hammer
21. Medical providers routinely use computers in their routines. The purpose of using Microsoft Word is to:
- a. Create a document
 - b. Create a presentation
 - c. Create a graph
 - d. Create an email

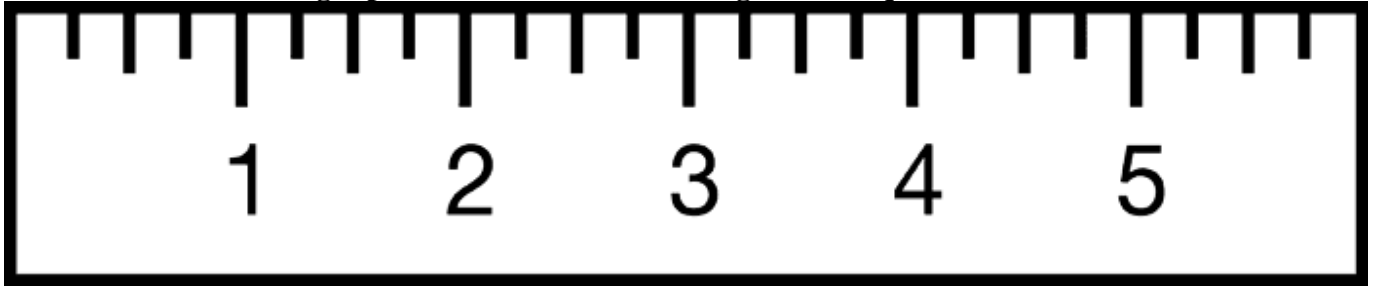
22. If you needed to prepare a presentation for your co-workers, you could use:
- Microsoft Word
 - Microsoft PowerPoint
 - Microsoft Excel
 - Microsoft Outlook
23. Which of the following statements best reflects a positive work attitude?
- “I did it yesterday. It’s his turn.”
 - “I’m sorry, but that’s not my responsibility.”
 - “It’s not my fault my supervisor didn’t show me how to do it right.”
 - “Please show me how to do this works and I will redo it so it is corrected.”
24. The term that best describes the health care worker who is qualified and capable of performing a task is:
- competent.
 - discrete.
 - enthusiastic.
 - team player.
25. The local organization that promotes health and prevents disease by educating community members, advocating for healthy lifestyles, linking people to resources, and treating various health conditions is known as the:
- World Health Organization
 - Maryland Occupational Safety and Health
 - The Centers for Disease Control and Prevention
 - Baltimore County Health Department
26. The basic principle in health care that describes acts of independence and freedom of one’s actions is known as:
- autonomy
 - veracity
 - justice
 - benevolence
27. When you are preparing to go for a job interview, you should wear:
- a simple dress or suit
 - a uniform
 - party clothes
 - whatever clothing is most comfortable
28. Messages are carried to and from the brain by:
- nerves
 - arteries
 - veins
 - the umbilical cord
29. The previous “Food Pyramid” and the current “My Plate” are used as guides for:
- preparing low fat diets
 - selecting foods that will lower cholesterol
 - determining the number of calories needed to lose weight
 - selecting food for a well-balanced diet

30. The name of the class of medications that kill bacteria is:
- Beta Blockers
 - Steroids
 - Antibiotics
 - Antiarrhythmics
31. In the middle ages, thousands of people were killed by a disease carried by fleas from rats called:
- Leprosy
 - West Nile Virus
 - Malaria
 - Bubonic Plague
32. The health assistant has been assigned to work with an 88-year-old patient who is hard of hearing in the right ear. Which of the following steps would help the health assistant communicate more effectively with this patient?
- Stand on the left side of the patient and scream loudly into his left ear.
 - Stand in front of the patient and speak low, slow, and clear so he will be able to read your lips.
 - Stand across the room and use hand gestures and sign language.
 - Stand on the right side of the patient and scream loudly into the right ear.
33. The health assistant has been assigned to help the physician as she diagnoses problems of the lungs. The health assistant knows that lung related issues are problems of the:
- Respiratory System
 - Digestive System
 - Nervous System
 - Urinary System
34. An effective way to get a two-year old pediatric patient to cooperate with medical care and treatments would be to:
- Have the parent tightly restrain the child's arms and legs with a belt.
 - Proceed with the procedures without explaining what will be done.
 - Show the child how the procedure will be done on a teddy bear or doll first.
 - Tell the child that anyone who will not cooperate gets a shot.
35. The health assistant has just taken the height on a patient as $74\frac{1}{2}$ inches. If one foot equals 12 inches, then how tall is this patient in feet and inches?
- 5 feet and $2\frac{1}{2}$ inches
 - 5 feet and $4\frac{1}{2}$ inches
 - 6 feet and $2\frac{1}{2}$ inches
 - 6 feet and $4\frac{1}{2}$ inches
36. The health assistant has just taken the weight on a patient as 92.1 kilograms. If 1 kilogram equals 2.2 pounds, then how much does this patient weigh in pounds?
- 41.86 pounds
 - 46.05 pounds
 - 184.2 pounds
 - 202.62 pounds

37. Which of the following medication dosages is the largest?

- a. 0.575 milligrams
- b. 0.7 milligrams
- c. 0.27 milligrams
- d. 0.175 milligrams

Please refer to the following tape measure when answering the next question.



38. Each division on this tape measure is broken down into a fractional unit of:

- a. Eighths
- b. Fourths
- c. Sixteenths
- d. Thirds

39. The health assistant has been requested to assist the physician with specimens of the skin for testing. The skin is part of the:

- a. Respiratory System
- b. Nervous System
- c. Integumentary System
- d. Immune System

40. The health assistant takes the patient's pulse for 30 seconds and obtains a rate of 42 beats. What would this patient's pulse rate be for one full minute?

- a. 68
- b. 74
- c. 84
- d. 164

41. The doctor instructs the health assistant to give 3 ounces of orange juice to a diabetic patient. The bottle of orange juice contains a total of 240 milliliters. If 1 ounce equals 30 milliliters, then how many milliliters should the health assistant pour into a cup for this patient?

- a. 60 milliliters
- b. 90 milliliters
- c. 120 milliliters
- d. 150 milliliters

42. The doctor told the patient she is to avoid protein-based meals for the next two days. The patient should be advised to avoid:

- a. Pasta, bread, rice
- b. Turkey, beef, tuna
- c. Carrots, cucumbers, lettuce
- d. Oranges, grapefruit, tangerines

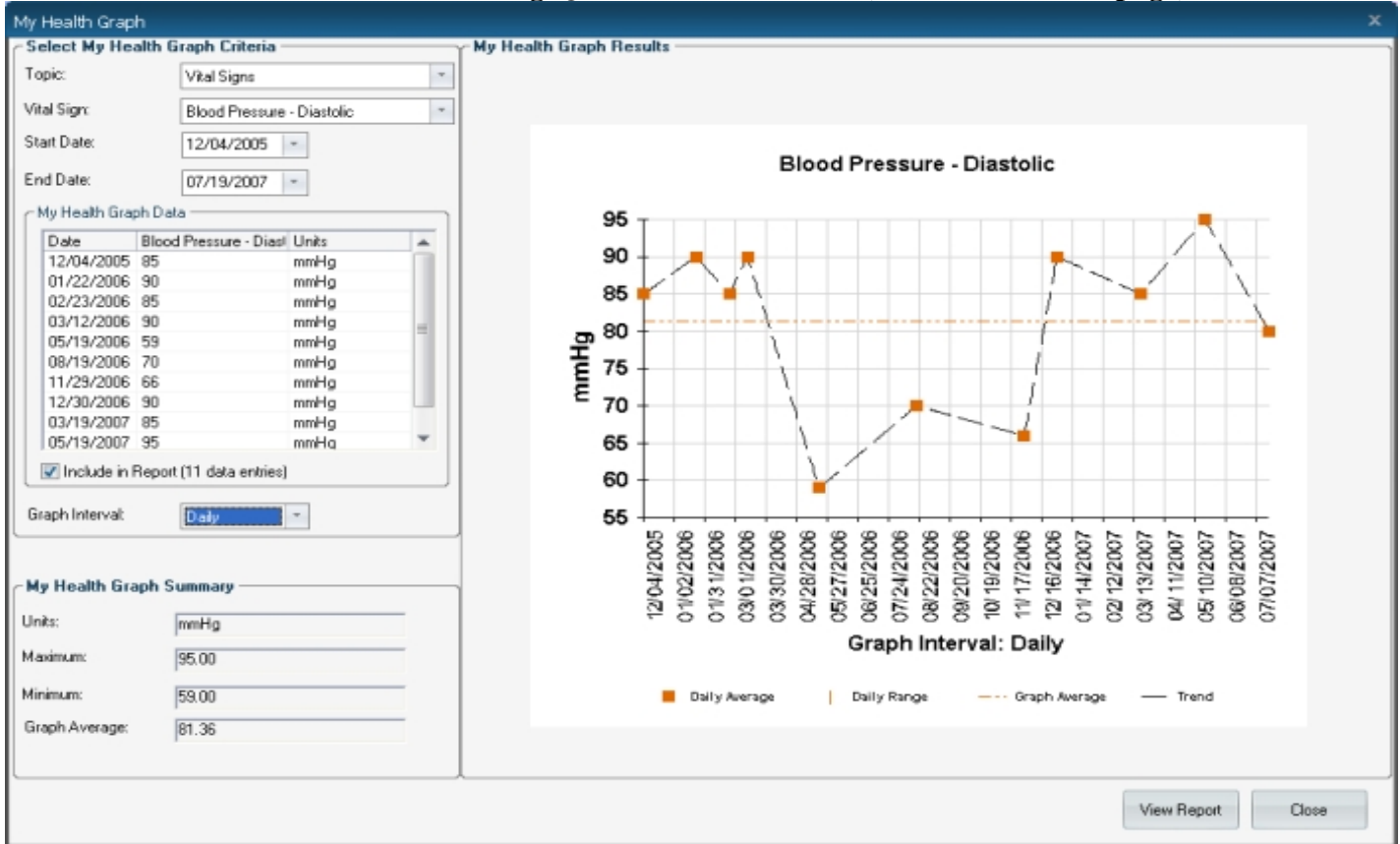
Please refer to this blood pressure dial when answering Questions #43.



43. The health assistant obtained the patient's blood pressure using the gauge found above. If each small line is 2 millimeters of mercury pressure and each long line represents 10 millimeters of mercury pressure, then what is the reading found at the needle mark on this gauge?

- a. 100
- b. 120
- c. 122
- d. 124

The graphic chart found below contains the graph for a patient's diastolic blood pressure readings. Please refer to this chart when answering Questions #44 and #45 (found on the next page).



Please refer to the graphic chart found above for these questions.

44. What is the above patient's diastolic blood pressure on 12/16/2006?
- 60
 - 65
 - 70
 - 90
45. What is the lowest diastolic blood pressure reading found on this patient's graphed record?
- 50
 - 60
 - 90
 - 95

Answers:

- | | | | | |
|------|-------|-------|-------|-------|
| 1. b | 10. b | 19. c | 28. a | 37. b |
| 2. c | 11. c | 20. b | 29. d | 38. b |
| 3. b | 12. b | 21. a | 30. c | 39. c |
| 4. c | 13. a | 22. b | 31. d | 40. c |
| 5. b | 14. a | 23. d | 32. b | 41. b |
| 6. d | 15. c | 24. a | 33. a | 42. b |
| 7. b | 16. c | 25. d | 34. c | 43. b |
| 8. c | 17. b | 26. a | 35. c | 44. d |
| 9. d | 18. d | 27. a | 36. d | 45. b |

WESTERN SCHOOL OF TECHNOLOGY & ENVIRONMENTAL SCIENCE
APPLICANT SELF-EVALUATION 2012-2013
Health Science Technology

DO NOT include this worksheet with your application.

Important: All applications must be postmarked by the application deadline of **November 30, 2011**. Incomplete applications will not be considered for admission.

Admission Criteria

Magnet Program	Admission Criteria
Health Science Technology	<ul style="list-style-type: none"> ✓ Algebra I or higher in grade 8 ✓ B average (2.5 or better) in English/Language Arts, Mathematics, Social Studies and Science ✓ Satisfactory Attendance (94% or higher) ✓ Performance on Magnet Assessments (practicum and vocabulary test)

Magnet Assessment Date

On January 21, 2012 from 8 a.m. – 2 p.m. all assessments by appointment, (inclement weather date: January 28, 2012), all applicants will be required to attend the assessment held at Western School of Technology and Environmental Science. Applicants should be accompanied by at least one parent/guardian. All applicants will be contacted regarding a specific appointment time.

Placement Prior to the Lottery

According to Superintendent's Rule 6400, *at the high school level where the number of qualified applicants exceeds the number of available seats, up to 20% of the seats may first be filled with candidates who show exceptional commitment and promise in the specialized program as evidenced by their performance on the approved magnet assessment(s). The remaining seats will be filled using the centralized random lottery selection process from the remaining pool of qualified applicants.* Specifically, applicants who earn the highest combined scores on the program assessments may fill up to 20% of the seats available in the magnet program.

Qualifying for Admission

The applicant must earn at least 80 points from the stated criteria in order to qualify for admission.

How to Calculate Your Grade Average

Convert your marking period grades to points (A=4, B=3, C=2, D=1, E=0). Then divide by the number of marking periods.

Subject	Last Year's Report Card				Current Year's Report Card	Total Points	Total Marking Periods (4 or 5)	Grade Average
	1 st marking pd. grade/points	2 nd marking pd. grade/points	3 rd marking pd. grade/points	4 th marking pd. grade/points (if applicable)	1 st marking pd. grade/points			
English/Lang Arts								
Math								
Science								
Social Studies								

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Criteria		Scoring		My information	My Score
Admission Criterion #1 Math Enrollment	Algebra I	Algebra I and higher	10 points	My current math course is _____ (record math course here)	_____/10 pts
		Algebraic Thinking 2	5 points		
		Pre-Algebra, Math 8, or below	0 points		
Admission Criterion #2 Grade Average (see "How to Calculate Your Grade Average")	"B" average or higher (2.5 or higher)	English/LA, Mathematics, Social Studies and Science: Score 10 points each for a grade average equaling "B" or higher (2.5 or higher) Score 0 points for each grade average less than "B" (less than 2.5)		English/Lang. Arts Average: _____	_____/10 pts
				Mathematics Average: _____	_____/10 pts
				Science Average: _____	_____/10 pts
				Social Studies Average: _____	_____/10 pts
Admission Criterion #3 Attendance	94% Attendance Total unexcused absences in Grade 7 -plus- first quarter/ trimester in Grade 8	Total unexcused absences in Grade 7 -plus- first quarter/trimester in Grade 8 = 14 days or less.	10 points	Total unexcused absences in Grade 7 (all quarters/trimesters) = ____ days -plus- Total unexcused absences in Grade 8 (first quarter/trimester only) = ____ days Total unexcused absences = ____ days	_____/10 pts
		Total unexcused absences in Grade 7 -plus- first quarter/trimester in Grade 8 = 15 days or more.	0 points		
Admission Criterion #4 Vocabulary Assessment	Score on assessment determines total points earned.	Applicants may earn up to 20 points.		To be determined on January 21, 2012.	_____/20 pts
Admission Criterion #5 Practical Assessment	Score on assessment determines total points earned.	Applicants may earn up to 20 points.		To be determined on January 21, 2012.	_____/20 pts
Points to Qualify	80 points	My Score:			_____/100 pts

DO NOT include this worksheet with your application.

FOR STUDENT SELF-ASSESSMENT USE ONLY – does not indicate qualification for programs.