100 Kenwood Avenue Catonsville, MD 21228

Mechanical Construction/Plumbing Careers

Mechanical Construction/Plumbing Careers is an apprenticeship program that offers an intensive study of mechanical systems in commercial and residential buildings using a hands-on approach. Students will complete the Associated Builders and Contractors (ABC) national apprentice CORE Battery and Level I first year apprenticeship standards. Students should also have an interest in working with hand and power tools and be willing to work outside in a wide range of weather conditions. Applicants will be required to perform physical labor and lift heavy objects. They should be able to follow directions, work well both independently and as a team to complete the many practical projects that are required for the apprenticeship standards.

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 area.

Magnet Showcase Event: Thursday, October 11, 2018 6- 8 p.m.

2019-2020 Assessment Guidelines

Magnet Coordinators: Melissa Doscher 443-809-0840 mdoscher@bcps.org

Christopher Pagliarini 443-809-0840 cpagliarini@bcps.org

Assessment Date: Thursday, January 24, 2019 4-7 p.m.

Saturday, January 26, 2019 8 a.m. – 2 p.m.

Assessments by appointment only

Individual assessment appointments must be scheduled no later than Wednesday, November 21, 2018. Schedule your appointment online at the BCPS Magnet Programs' Web site (www.tinyurl.com/BCPSMagnet) or call BCPS Magnet Programs at 433-809-4127 (NOT BOTH).

<u>Applicants applying to more than one program only need one appointment</u> - applicants will have the opportunity to complete multiple program assessments on the same day. Applicants must **arrive at least 15 minutes before** the scheduled assessment. The first program assessment will take approximately 45 - 60 minutes to complete. Each additional program assessment will take an addition 20 - 30 minutes.

Unforeseen Illness or Emergency: Parent(s) must inform the school 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: January 31, 2019 (for January 24, 2019)

February 2, 2019 (for January 26, 2019)

Inclement Weather: In the event that school activities are cancelled due to inclement weather, magnet assessments will be postponed. Postponed assessments will occur on the designated inclement weather date. All emergency closing and cancellation information will be posted on the BCPS automated information line, (443) 809-5555. Closing and cancellation announcements may also be made through local media.



Directions to Western:

- From the north:

 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 at the light onto 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.

From the south:

- Take 695 North towards Towson to Exit 12C Wilkens Avenue Exit.
- Continue straight through the light off the exit. That is Kenwood Avenue.
- Western will be at the top of the hill on your left.

Mechanical Construction/Plumbing Careers

Prior to the Assessment

This MUST be completed prior to coming to the assessment day.

Complete the Applicant Self-Evaluation included with these guidelines.

Prior to attending the assessment, student applicants may want to review the following mathematical concepts in addition to any current course work:

Math Concepts: order of operations, operations with fractions, number patterns, simplifying expressions, solving equations, identifying functions, finding slopes and equations of lines, graphing linear equations, using the Pythagorean theorem, and understanding angle relationships with intersection lines

Language Arts Concepts: identifying main idea, answering questions based upon a reading passage, grammar, and punctuation

Magnet Specific Concepts: information or website links for the specific magnet concepts (included in this document)

On the Day of the Assessment

It is the responsibility of the parent(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

Individual assessment appointments must be scheduled no later than Wednesday, November 21, 2018. Schedule your appointment online at the BCPS Magnet Programs' Web site (www.tinyurl.com/BCPSMagnet) or call BCPS Magnet Programs at 433-809-4127 (NOT BOTH).

Students should plan to arrive at least 15 minutes prior to their assessment time and report to the front lobby of Western Tech. 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.

If the applicant cannot attend or complete the scheduled assessment due to an unforeseen illness or emergency, please contact Western School of Technology and Environmental Science at (443) 809-0840. Please be aware that assessments will not be rescheduled without documentation verifying the illness or emergency.

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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 math and language arts. That will take a total of 60 minutes to complete. In addition, for each magnet program the student applies to, the student will be required to take a 20 minute assessment. For example, if the student applies to three programs, the student will be testing for about 2.5 hours. If the student applies to two magnet programs the student will be testing for approximately 2 hours. If the student applies to one magnet the student will be testing for about 1.5 hours.

<u>Language Arts Assessment</u> (20 points): Applicants will complete a multiple choice assessment focusing on Language Arts concepts.

<u>Math Assessment</u> (20 points): Applicants will complete a multiple choice assessment that focuses on mathematical concepts.

<u>Practical Assessment</u> (20 points): Applicants will complete a multiple choice assessment that focuses on the basic concepts related to the specific magnet.

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

Magnet Application Deadline

Friday, November 16, 2018

Applications are available on the BCPS Magnet Programs' Web site (www.tinyurl.com/BCPSMagnet) beginning at 12:00 noon on Monday, September 17, 2018. Applications must be submitted on or before **Friday, November 16, 2018**. Late applications are not processed.

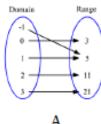
You are encouraged to **apply online** on the BCPS Magnet Programs' Web site (www.tinyurl.com/BCPSMagnet) or **submit a paper application**.

- Online applications may be submitted until 1:00 p.m. on Friday, November 16, 2018. To apply online, you will need an active email account.
- Paper applications must be postmarked on or before Friday, November 16, 2018.

Mechanical Construction/Plumbing Careers

A Sample of Mathematics Problems

- 1. Evaluate the expression. $\frac{2}{3} \frac{1}{7}$
- 2. Evaluate the expression. $6 \div 1 3 + 2 \cdot 3$
- Find the 6th term in the sequence 1,4,9,16,....
- 4. Solve for x. 4 8x = 20
- 5. Find the slope of 4y 2x = 8
- 6. Solve for *x*. $\frac{2}{5} = \frac{6}{x}$
- 7. Solve for x. 4x 2 = 2x + 8
- 8. Find a line that is perpendicular to $\frac{1}{2}x y = 3$ and passes through the point (1,1).
- 9. Which relations are functions?





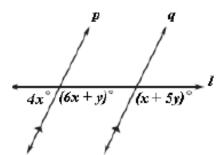
x	-3	-2	-1	0	1	2	3
y	1	-2	2	4	-3	-2	-1

Α.

B.

C.

Find the value of x and y.



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A Sample of Mathematics Problems Solutions

1. Evaluate the expression.
$$\frac{2}{3} - \frac{1}{7} = \frac{11}{21}$$

2. Evaluate the expression.
$$6 \div 1 - 3 + 2 \cdot 3 = 9$$

Since each number is being squared, the 6^{th} term is $6^2 = 36$

4. Solve for x.
$$4 - 8x = 20$$
 $x = -2$

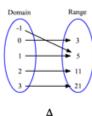
5. Find the slope of
$$4y - 2x = 8$$
 $m = \frac{1}{2}$

6. Solve for x.
$$\frac{2}{5} = \frac{6}{x}$$
 $x = 15$

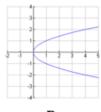
7. Solve for x.
$$4x-2=2x+8$$
 $x=5$

8. Find a line that is perpendicular to
$$\frac{1}{2}x - y = 3$$
 and passes through the point (1,1). $y = -2x + 3$

9. Which relations are functions? A and C only; B is not a function



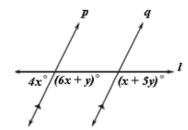
A.



В.

C.

10. Find the value of x and y. $x = 16^{\circ}$ and $y = 20^{\circ}$



Mechanical Construction/Plumbing Careers

Language Arts Practice Assessment

Directions: Read the following passage and use it to answer questions 1-3.

School Photographer

By Kristine O'Connell George

When I am behind my camera lens
I can make people stand closer,
wrap their arms around each other,
even get them to smile.
When I am behind my camera lens
I see things others don't.
I can record a single moment
that distorts or tells the truth.
When I am behind my camera lens
I can see everything
except my own self, hiding
behind my camera.

- 1. Why does the speaker feel hidden?
 - a. No one can see her
 - b. She is looking through the camera
 - c. There is no one around
 - d. Other people are standing in front of her
- 2. In line 6, when the speaker says, "I see things others don't," she most likely means
 - a. People often overlook what's around them
 - b. People don't pay attention when their picture is taken
 - c. Cameras are the most accurate form of record keeping
 - d. The camera lens is like a microscope
- 3. In the first four lines, the speaker likes being a photographer because she
 - a. Likes to take pictures of her friends
 - b. Gets to make other people do things
 - c. Enjoys the feel of the camera in her hands
 - d. Wants to become a better school photographer

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Questions 4-6 are not based on a reading.

4.	Choose the word or group of words that means the same, or about the same	, as
	the underlined word.	

Mr. Martinez told Dave to <u>enunciate</u> the word carefully, so everyone in the audience would hear it clearly. <u>Enunciate</u> means ______.

- a. examine
- b. write
- c. pronounce
- d. describe
- 5. Choose the word or group of words that means the same, or about the same, as the underlined word

School was closed due to the adverse weather conditions. Adverse means

- a. windy
- b. difficult
- c. slippery
- d. snowy
- 6. Choose the word or group of words that means the same, or about the same, as the underlined word

These directions will tell you how to operate the toy.

In which sentence does the word <u>operate</u> mean the same thing as in the sentence above?

- a. Carol knows how to operate that computer
- b. The doctor will operate on my grandfather tomorrow
- c. It's sometimes hard to operate a business
- d. This engine doesn't operate well at all

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Reading:

Read the following passage from "Dear Mr. President Thomas Jefferson Letters from a Philadelphia Bookworm", a novel that takes place when President Jefferson was in office. The girl writing the letter had recently moved from Philadelphia to Pittsburgh. Questions 7 – 10 are based on this passage.

from Dear Mr. President Thomas Jefferson Letters from a Philadelphia Bookworm

By Jennifer Armstrong

At the beginning of the 1800's, America was still a brand-new country. Its citizens were still learning who they were and where they might go in their new surroundings. To lead them, they had one of the most talented and brilliant presidents this country has ever seen: Thomas Jefferson. He was not only a statesman and politician. He was not only the man who drafted our revolutionary Declaration of Independence. He was also a musician, a scientist, an inventor, an engineer, an architect, a gardener, a family man, a friend, and a philosopher. Perhaps no other president in American history has come close to his incredible range of interests, skills, and talents. In addition to being the third president of the United States, Thomas Jefferson was the president of the American Philosophical Society in Philadelphia. Philadelphia was the largest, most intellectual, and most sophisticated city in America at that time. The American Philosophical Society included some of the country's most respected scientists and thinkers.

Imagine, then, a girl named Amelia Hornsby living during the early 1800's in Philadelphia. In this city, she would have rubbed elbows with some of the brightest lights in the country. She would have received a good education in Philadelphia, which had very progressive ideas about schooling. And she would have taken an active and lively interest in the current events and political affairs of her day, even writing to the president if she felt it was her duty. Imagine Amelia writing to President Jefferson.

November 30, 1806

Pittsburgh
To Mr. Thomas Jefferson, President
Washington, D.C.

Dear Sir,

We have by now read many of the reports ourselves, as they have been published in the Gazette. Of much interest here at Pittsburgh was the news, brought to us by a member of this college, of having attended the public auction in Saint Louis where Captains Lewis and Clark sold off so many of the items employed on their tour. This colleague of my father's, one Landau Herrick, bought for himself the

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rifle carried by Pvt. Cruzatte; and as we understand, it was this rifle by which Captain Lewis was accidently shot and wounded. It is a souvenir of considerable value to Mr. Herrick and of interest to us all. We will be very eager to know if Capts. Lewis and Clark and their entourage will be stopping at Pittsburgh. The news informs us that they make very slow progress indeed, as they are stopped at every town and settlement and hailed as returning heroes. I imagine they will be heartily sick of balls and banquets before they take another step. Yet, if they do come to Pittsburgh, we shall not fail to celebrate these titans of exploration.

How sorry I was to learn that Sacagawea must stay with her husband, Charbonneau, with the Mandan. What puzzles me is the report that Charbonneau was paid in excel of \$500 for his services to the Corps of Discovery; but nowhere have I found a report of any payment rendered to Sacagawea. I should be most interested to hear at what value her services were placed. For inasmuch as she did most swiftly and expertly guide the company across the Rocky Mountains and to the Colorado River, thence to the sea, her services would seem invaluable.

And inasmuch as I must consider some employment for myself beyond being my father's hostess (for he is to marry a widow lady of this town), I should like to know how highly a woman might be compensated for hard work. I do not propose that I should be a wilderness guide. But it has been suggested to me that a person of my education and attainments might do well as a teacher for young ladies; and as this suits my temper very well, I think I may try it when I am of suitable years.

Respectfully yours,

Amelia Hornsby

P.S. I hope that the Negro slave York was not also denied his fair portion of reward?

A.H.

Read the passage from "Dear Mr. President *Thomas Jefferson Letters from a Philadelphia Bookworm*", a novel that takes place when President Jefferson was in office. Amelia Hornsby has grown up in Philadelphia but has recently followed her father, a doctor, to Pittsburgh. Then answer the following:

- 7. Amelia's letter can best be described as:
 - a. a personal reflection to events
 - b. a narrative of an unusual situation
 - c. an exploration of a plan for the future
 - d. an explanation of a particular time period

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Which of these questions is NOT answered by the details and events in this passage?

- a. What happened to Amelia's mother?
 - b. What is Amelia's attitude toward Sacagawea?
 - c. How concerned is Amelia with current events?
 - d. Why is Amelia interested in the purchase of Pvt. Cruzatte's rifle?
 - 8. Read this sentence from paragraph 2 of the letter.

"Yet, if they do come to Pittsburgh, we shall not fail to celebrate these titans of exploration."

The word in paragraph 2 that most helps a reader understand the meaning of **titans** is:

- a. entourage
- b. progress
- c. heroes
- d. banquets
- 9. Read the passage from "Dear Mr. President Thomas Jefferson Letters from a Philadelphia Bookworm", a novel that takes place when President Jefferson was in office. Amelia Hornsby has grown up in Philadelphia but has recently followed her father, a doctor, to Pittsburgh. Then answer the following:

Read this sentence from paragraph 4 of the letter.

"But it has been suggested to me that a person of my education and attainments might do well as a teacher for young ladies; and as this suits my temper very well, I think I may try it when I am of suitable years."

In this sentence, the word **suitable** suggests:

- a. advanced
- b. appropriate
- c. matching
- d. noticeable

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Grammar and Punctuation

For items 11 – 25 examine the sentences carefully. Select the sentence, word, or phrase that is correct according to the rules for standard written English punctuation and grammar.

- 11. A. When two people date steadily and restrict their social activities.
 - B. When two people date steadily, they restrict their social activities.
 - C. When two people date steadily and they restrict their social activities.
- 12. A. I will be happy to babysit, you seem too tired.
 - B. I will be happy to babysit. You seem too tired.
 - C. I will be happy to babysit you seem too tired.
- 13. A. Memorizing rules is not as important as to understanding the principles behind them.
 - B. To memorize rules is not as important as understanding the principles behind them.
 - C. Memorizing rules is not as important as understanding the principles behind them.
- 14. A. He wants everything, but he didn't want to work for it.
 - B. He wants everything, but he doesn't want to work for it.
 - C. He wants everything, but he wouldn't work for it.
- 15. A. Looking through the gunsight, the deer ran away.
 - B. I saw the deer looking through the gunsight run away.
 - C. Looking through the gunsight, I saw the deer run away.

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- 16. A. Finding a nice place to take his wife out for dinner for their anniversary was difficult.
 - B. Finding a nice place to take his wife out for dinner for their anniversary.
 - C. Finding a nice place to take his wife out for dinner for their anniversary and having a difficult time succeeding.
- 17. A. If one is to earn a raise, he/she should work more diligently.
 - B. If one is to earn a raise, you should work more diligently.
 - C. If one is to earn a raise, they should work more diligently.
- 18. A. Frank refused to work hard, he was fired.
 - B. Frank refused to work hard he was fired.
 - C. Frank refused to work hard, so he was fired.
- 19. A. The stew was thick, cold and did not have any taste.
 - B. The stew was thick, cold and you couldn't taste anything
 - C. The stew was thick, cold and tasteless.
- 20. A. Ellen has often threatened to commit suicide.
 - B. Ellen has threatened to commit suicide often.
 - C. Ellen has threatened to often commit suicide.

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- 21. A. The man who was continually interrupting the speaker and upsetting the audience.
 - B. The man was continually interrupting the speaker and upsetting the audience.
 - C. The man continually interrupting the speaker and upsetting the audience.
- 22. A. Cigarettes have been related to cancer, but millions of people continue to smoke.
 - B. Cigarettes have been related to cancer, millions of people continue to smoke.
 - C. Cigarettes have been related to cancer however millions of people continue to smoke.
- 23. A. If a tourist wants to enjoy a visit to Denmark, they should learn Danish.
 - B. If a tourist wants to enjoy a visit to Denmark, he/she should learn Danish.
 - C. If a tourist wants to enjoy a visit to Denmark, you should learn Danish.
- 24. A. He is always talking and his sister listened.
 - B. He always talks and his sister listens.
 - C. He always talked and his sister listens.
- 25. A. In the fight, the dog lost both his collar and broke his leg.
 - B. In the fight, the dog both lost his collar and his leg was broken.
 - C. In the fight, the dog both lost his collar and broke his leg.

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Answer Key

- 1. B
- 2. A
- 3. B
- 4. C
- 5. B
- 6. A
- 7. A
- 8. A
- 9. C
- 10.B
- 11.B
- 12.B
- 13.C
- 14.B
- 15.C
- 16.A
- 17.A
- 18.C
- 19.A
- **20.** A
- 21.B
- 22. A 23. B
- 24.B
- 25.C

Western School of Technology and Environmental Science Assessment Guidelines 2019-2020

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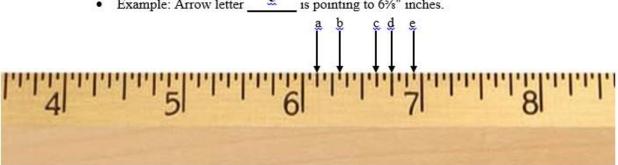
Study Guide

Mathematical Computations in Construction (without a calculator):

- · Adding & Subtracting Whole Numbers
- Multiplying Whole Numbers & Decimals (Example: 9.25 × 7 = 64.75)
- Dividing Whole Numbers (Example: 160 ÷ 5 = 32)
- Inches to Feet Conversions (Example: How many inches are in a foot? 12 inches)
- Addition & Subtraction of Tape Measure Fractions (Example: $5\frac{1}{8} + 2\frac{3}{4} = 7\frac{7}{8}$) (Example: $27\frac{3}{8} - 13\frac{3}{4} = 13\frac{5}{8}$)

Identifying Tape Measure Measurements to the nearest 1/16th inch

Example: Arrow letter _____ is pointing to 65s" inches.



General Hand Tool Knowledge

- Example: A socket set is used to
 - a) check electrical sockets
 - b) tighten or loosen nuts and bolts
 - c) check brake pads
 - d) sharpen tools
 - e) change light bulbs

General Plumbing Knowledge

Example: Which copper fitting below is a cross tee?











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APPLICANT SELF-EVALUATION DO NOT include this worksheet with your application.

Important: All applications must be postmarked by the application deadline of

Friday, November 16, 2018. Incomplete applications will not be considered for admission.

Magnet Program	Evaluation Components
Mechanical Construction and Plumbing	 ✓ 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, language and math test)

Magnet Assessment Date

On Thursday, January 24, 2019 or Saturday, January 26, 2019 all assessments by appointment, (inclement weather date: January 31, or February 2, 2019), 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.

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 available seats will first be filled by applicants who score 80% or higher in the total evaluation and who earn the highest scores on the magnet assessment(s). The remaining seats will be filled using the centralized random lottery selection process from the remaining pool of applicants.

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

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APPLICANT SELF-EVALUATION

DO NOT include this worksheet with your application.

Assessment Information:

- All assessments must be scheduled by November 21, 2018.
- It is the responsibility of the parent to ensure that the student is on time and prepared for each assessment.
- Failure to attend and complete an assessment will disqualify the applicant and admission in to the magnet program will be denied.

Evaluation Components	Scoring	My Information	My Score
Math Enrollment Algebra I preferred	Algebra I or higher—10 points Pre-Algebra, Grade 8 Math, or equivalent—5 points Below Pre-Algebra or Grade 8 Math—0 points	My grade 8 math course is: (record math course here)	/ 10 pts
Grade Average 2.5 (B) average or higher preferred	2.5 (B) average or higher—5 points each Less than 2.5 (B) average—0 points each	English/Lang. Arts Avg: Social Studies Avg: Math Avg: Science Avg:	/ 5 pts / 5 pts / 5 pts / 5 pts
Attendance 94% preferred	Total unexcused absences in prior year + Unexcused absences in first quarter/trimester of current year = 14 days or less—10 points Total unexcused absences in prior year + Unexcused absences in first quarter/trimester of current year = more than 14 days—0 points	Total unexcused absences in prior year (all quarters/trimesters) = days + Unexcused absences in current year (first quarter/trimester only) = days Total unexcused absences = days	/ 10 pts
Language Assessment Score determines total points earned	Applicant may earn up to 20 points	To be determined on scheduled assessment date Assessment appointment must be scheduled by Nov. 21, 2018	/ 20 pts
Practical Assessment Score determines total points earned	Applicant may earn up to 20 points	To be determined on scheduled assessment date Assessment appointment must be scheduled by Nov. 21, 2018	/ 20 pts
Math Assessment Score determines total points earned	Applicant may earn up to 20 points	To be determined on scheduled assessment date Assessment appointment must be scheduled by Nov. 21, 2018	/ 20 pts
		Total Score:	/ 100 pts