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# I. ROSTER OF ELIGIBLE SCHOOLS

(Berkeley, Charleston and Dorchester Counties - By Level)

## Only Level I (Grade 6)

<table>
<thead>
<tr>
<th>School Name</th>
<th>School Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>E.G. Ellington Elementary School</td>
<td>Givhans Alternative Program</td>
</tr>
<tr>
<td>Jane Edwards Elementary School</td>
<td>Liberty Hill Academy</td>
</tr>
</tbody>
</table>

## Level I (Grade 6) & Level II (Grades 7-8)

<table>
<thead>
<tr>
<th>School Name</th>
<th>School Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laing Middle School of Science and Technology</td>
<td>Macedonia Middle School</td>
</tr>
<tr>
<td>Malcom C. Hursey Elementary School</td>
<td>Marrington Middle School of the Arts</td>
</tr>
<tr>
<td>Montessori Community School of Charleston</td>
<td>Morningside Middle School</td>
</tr>
<tr>
<td>C.E. Williams Middle School for Creative &amp; Scientific Arts</td>
<td>Oakbrook Middle School</td>
</tr>
<tr>
<td>Charleston Development Academy</td>
<td>Orange Grove Middle School</td>
</tr>
<tr>
<td>College Park Middle School</td>
<td>Philip Simmons Middle School</td>
</tr>
<tr>
<td>Deer Park Middle School</td>
<td>River Oaks Middle School</td>
</tr>
<tr>
<td>DuBose Middle School</td>
<td>Rollings Middle School of the Arts</td>
</tr>
<tr>
<td>East Cooper Montessori School</td>
<td>Sangaree Middle School</td>
</tr>
<tr>
<td>EXCEL Girls’ Academy at Morningside Middle</td>
<td>Sedgefield Middle School</td>
</tr>
<tr>
<td>Gregg Middle School</td>
<td>St. George Middle School</td>
</tr>
<tr>
<td>Hanahan Middle School</td>
<td>St. Stephen Middle School</td>
</tr>
<tr>
<td>Harleyville-Ridgeville Middle School</td>
<td>Simmons Pinckney Middle School</td>
</tr>
<tr>
<td>Haut Gap Middle School</td>
<td>Thomas C. Cario Middle School</td>
</tr>
<tr>
<td>James Simons Elementary School</td>
<td>Westview Middle School</td>
</tr>
<tr>
<td>Jerry Zucker Middle School of Science</td>
<td>Mt. Pleasant Middle School</td>
</tr>
</tbody>
</table>

## Levels III (Grades 9-10) and IV (Grades 11-12)

<table>
<thead>
<tr>
<th>School Name</th>
<th>School Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>James Island Charter High School</td>
<td>North Charleston High School</td>
</tr>
<tr>
<td>Oceanside Collegiate Academy</td>
<td>Philip Simmons High School</td>
</tr>
<tr>
<td>R.B. Stall High School</td>
<td>St. John’s High School</td>
</tr>
<tr>
<td>Septima P. Clark Corporate Academy</td>
<td>Stratford High School</td>
</tr>
<tr>
<td>Summerville High School</td>
<td>Timberland High School</td>
</tr>
<tr>
<td>Wando High School</td>
<td>West Ashley High School</td>
</tr>
<tr>
<td>Woodland High School</td>
<td>&quot;</td>
</tr>
</tbody>
</table>

## Levels I (Grade 6), II (Grades 7-8), III (Grades 9-10) and IV (Grades 11-12)

<table>
<thead>
<tr>
<th>School Name</th>
<th>School Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daniel Jenkins Academy</td>
<td>Givhans Alternative Program</td>
</tr>
<tr>
<td>Baptist Hill Middle High School</td>
<td>Liberty Hill Academy</td>
</tr>
<tr>
<td>Berkeley Alternative School</td>
<td>Military Magnet Academy</td>
</tr>
<tr>
<td>Charleston Charter School for Math &amp; Science</td>
<td>Palmetto Scholars Academy</td>
</tr>
<tr>
<td>Charleston County School of the Arts</td>
<td>&quot;</td>
</tr>
<tr>
<td>Cross High School</td>
<td>&quot;</td>
</tr>
</tbody>
</table>
II. AREAS OF COMPETITION

Eligible schools may compete in the following areas:

**TEAM COMPETITIONS** *(Medallions awarded to winners; points awarded to schools)*

*Please refer to competition guidelines for specific eligibility requirements.*

<table>
<thead>
<tr>
<th>Level I (Grade 6)</th>
<th>Level III (Grades 9 - 10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>Computer Programming</td>
</tr>
<tr>
<td>Science</td>
<td>Culinary</td>
</tr>
<tr>
<td>Social Studies</td>
<td>Mathematics</td>
</tr>
<tr>
<td></td>
<td>Science</td>
</tr>
<tr>
<td></td>
<td>Social Studies</td>
</tr>
<tr>
<td></td>
<td>Video/Film</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level II (Grades 7 - 8)</th>
<th>Level IV (Grades 11 - 12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>Computer Programming</td>
</tr>
<tr>
<td>Science</td>
<td>Culinary</td>
</tr>
<tr>
<td>Social Studies</td>
<td>Mathematics</td>
</tr>
<tr>
<td></td>
<td>Science</td>
</tr>
<tr>
<td></td>
<td>Social Studies</td>
</tr>
<tr>
<td></td>
<td>Video/Film</td>
</tr>
</tbody>
</table>

**INDIVIDUAL COMPETITIONS** *(Medallions awarded to winners; points awarded to schools)*

*Please refer to competition guidelines for specific eligibility requirements.*

<table>
<thead>
<tr>
<th>Level I (Grade 6)</th>
<th>Level III (Grades 9 - 10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composition</td>
<td>Automotive (10th grade)</td>
</tr>
<tr>
<td>Public Speaking</td>
<td>Computer Aided Design</td>
</tr>
<tr>
<td>Visual Arts</td>
<td>Composition</td>
</tr>
<tr>
<td></td>
<td>Horticulture</td>
</tr>
<tr>
<td></td>
<td>Medical Terminology</td>
</tr>
<tr>
<td></td>
<td>Public Speaking</td>
</tr>
<tr>
<td></td>
<td>Spanish (Beginning and Intermediate)</td>
</tr>
<tr>
<td></td>
<td>Visual Arts</td>
</tr>
<tr>
<td></td>
<td>Welding (10th grade)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level II (Grades 7 - 8)</th>
<th>Level IV (Grades 11 - 12)</th>
</tr>
</thead>
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<td>Automotive</td>
</tr>
<tr>
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<td>Visual Arts</td>
<td>Composition</td>
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<td></td>
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<tr>
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</tr>
<tr>
<td></td>
<td>Visual Arts</td>
</tr>
<tr>
<td></td>
<td>Welding</td>
</tr>
</tbody>
</table>
III. REGISTRATION INFORMATION

Registration steps for QUEST: TTC's Academic Competition:

1. Choose areas in which your school will compete.
2. Select team members and coaches.
3. Ensure that team members and coaches understand and follow rules governing the competition.
4. Ensure that students meet all eligibility requirements for competitions.
5. Each school has a QUEST Coordinator assigned by the principal. Ensure the school's QUEST coordinator registers students and coaches online at http://www.tridenttech.edu/academics/quest/ac_questReg.htm by WEDNESDAY, FEBRUARY 5, 2020. Registration information must include any special accommodations for students with disabilities. The online rosters will be used for creating QUEST Certificates and publishing QUEST Competition results. Please ensure names are spelled accurately.
6. Ensure all potential participants have submitted a signed Release of Liability form to TTC in the postage-paid envelope provided before FRIDAY, FEBRUARY 14, 2020. The Release of Liability form is available online at http://www.tridenttech.edu/academics/quest/index.htm. Students without a signed Release of Liability form will not be eligible to participate.
7. Ensure that coaches officially check in participants at the QUEST check-in desk in the lobby of Building 920 on the day of competition.
8. The cost of participation in QUEST is as follows: Level I and Level II is $60 per level and Level III and Level IV is $75 per level. Once you have registered all students, you will find your billing/payment information online at http://www.tridenttech.edu/academics/quest/ac_questReg.htm under “Competition Invoice.” A credit card payment option is available online through the “Competition Invoice.”

IV. GENERAL INFORMATION AND GUIDELINES

Students may participate in only one event. After registration deadline has passed, competitors in team competitions may not switch teams. Alternates should be utilized for this purpose on competition day with an Emergency Change of Roster at the Check-In desk.

1. School Competitions

   **Automotive** - the competition is individual, with a high school entering up to three participants from grades 10-12.

   **Computer Aided Design (CAD) and Horticulture** - the competition is individual, with a high school entering up to three participants from grades 9-12.

   **Composition** - the competition is individual, with a school entering up to three participants per level.

   **Computer Programming** - a high school may enter up to two teams of 2-3 members for each team from grades 9-12.
Culinary - a high school may enter up to two teams of 2-3 members for each team from grades 9-12.

Engineering Design & Construction, a high school may enter up to two teams of 2-3 members for each team from grades 9-12.

In each level of Math, Science and Social Studies- a school may enter up to two teams of 1-3 members for each team.

Medical Terminology - the competition is individual, with a high school entering up to three participants per level from grades 9-12.

Public Speaking - the competition is individual, with a school entering up to two participants per level.

Visual Arts - the competition is individual, with a school entering up to three participants per level. Due to the nature of this competition, no alternates will be allowed.

Spanish - the competition is individual, with a high school entering up to three participants per level (Beginning or Intermediate) from grades 9-12.

Video/Film - a high school may enter up to two entries and entries may be submitted by individual participants or as a team of 1-4 participants from grades 9-12.

Welding - the competition is individual, with a high school entering up to three participants from grades 10-12.

2. Students taking Algebra in the 8th grade may compete in Level II Math.

In Math Level III, students from grades 9-12 who are currently enrolled in or whose last course completed was Geometry, Algebra I, Algebra II or General Mathematics may compete. Any points accumulated will be added to the other Level III (Grades 9-10) scores in order to determine school winners.

In Math Level IV, students from grades 9-12 who are currently enrolled in or whose last course completed was trigonometry or calculus may compete. Any points accumulated will be added to the other Level IV (Grades 11-12) scores in order to determine school winners.

3. In Beginning Spanish, students from grades 9-12 who are currently enrolled in or whose last course completed was Spanish I may compete.

In Intermediate Spanish, students from grades 9-12 who are currently enrolled in or who’s last course completed was Spanish II may compete.

4. All participants must wear the official QUEST T-shirt to participate, with the exception of Culinary participants. (See guidelines for Culinary competition.)

5. All competitions will begin promptly as scheduled. ANY STUDENT WHO ARRIVES LATE TO THEIR COMPETITION ROOM(S) WILL NOT BE ALLOWED TO PARTICIPATE IN THE EVENT. A Schedule of Events will be provided in the QUEST Program.

6. Coaches and guests are not permitted in the room at any time during a qualifying or individual competition with the exception of Video/Film, Visual Arts and Engineering Design & Construction.

7. All competitions must cease when the proctor, coordinator or moderator calls time. Violation will result in disqualification of the team or individual from that event.
8. No recorders, cameras or phones are allowed in competition rooms. Trident Technical College reserves the right to photograph or record for promotional purposes.

9. To minimize disruptions and protect the integrity of QUEST: TTC’s Academic Competition, activated electronic communication devices are not permitted in competition rooms.

10. If a participant leaves a competition room for any reason after a competition begins, he/she will not be allowed to return to the competition room; however, the participant will not be disqualified. Participants must turn in all competition materials prior to leaving the competition room.

11. No food or drinks are allowed in any classroom or lab. Smoking is prohibited inside buildings. In addition, the following are prohibited on TTC’s campuses: firearms of any kind, alcoholic beverages and animals. Service animals for participants with disabilities are exempt from this prohibition.

12. Appeals must be made to the Grievance Committee by a school coach, principal or the school’s QUEST coordinator within 15 minutes of the conclusion of an event. Decisions concerning appeals will be made by the Grievance Committee and will be final. Grievances may be filed at the check-in station.

13. If it is necessary to postpone the competition because of inclement weather or emergency, radio and television stations will be notified. Information may also be obtained from the College’s website at www.tridenttech.edu or from TTC’s Automated InfoLine at 843.574.6262, extension 9091.

V. CHECK-IN PROCEDURES

1. Coaches should report to the Check-In Center (Building 920-College Center) to check-in and verify a team roster AT LEAST 30 MINUTES BEFORE THE START TIME OF THE COMPETITION. The Check-In Center will be open from 6:30 a.m. until 3:00 p.m. to handle check-in and special problems. Student participants should not come to the Check-In Center; parents and students may not check-in competitors.

2. On competition day, if a serious emergency warrants a change to the roster, the coach or the school’s QUEST coordinator must come to the Check-In Center AT LEAST 30 MINUTES BEFORE THE START TIME OF THE COMPETITION to request a change. Emergency changes to the roster will only be allowed for QUALIFYING or INDIVIDUAL competitions excluding Video/Film, Visual Arts, and Engineering Design and Construction. Schools may not add any new students on the day of QUEST who have not already been registered on the QUEST website prior to the registration deadline (http://www.tridenttech.edu/academics/quest/ac_questReg.htm). If it is found that a student who is not on the official roster has participated in a competition, his/her school may be disqualified from that competition.

No student may compete in a FINAL competition if he/she has not competed in the qualifying round.

3. Please check the Schedule of Events for the beginning time and location for each event. Participants should be seated in the room 15 minutes before the competition begins. We ask that you arrive early so that rosters can be confirmed and participants can find their competition rooms.
VI. AWARDS

1. **Individual Awards** - All students who compete in any TEAM or INDIVIDUAL competition will receive a certificate of participation and an official QUEST T-shirt (which must be worn while competing, with the exception of Culinary participants).

   All participants placing first, second or third in any TEAM OR INDIVIDUAL competition will be awarded medallions.

2. **School Awards** - Throughout the day, schools will accumulate points for placing first, second or third in both TEAM and INDIVIDUAL competitions:

   **TEAM**
   - Computer Programming
   - Culinary
   - Engineering Design & Construction
   - Math
   - Science
   - Social Studies
   - Video/Film
   
   **INDIVIDUAL**
   - Automotive
   - Composition
   - Computer Aided Design
   - Horticulture
   - Medical Terminology
   - Public Speaking
   - Beginning Spanish
   - Intermediate Spanish
   - Visual Arts
   - Welding

   First Place  FORTY-FIVE (45) points
   Second Place  THIRTY (30) points
   Third Place  FIFTEEN (15) points
   First Place  FIFTEEN (15) points
   Second Place  TEN (10) points
   Third Place  FIVE (5) points

   At the end of the day, points will be totaled for each level of competition to determine the first, second and third place school winners. For each level of competition, plaques will be awarded to the second and third place winners, and a trophy will be awarded to the first place winner.

3. Upon the conclusion of each Awards Ceremony, all students placing first, second or third in INDIVIDUAL or TEAM competitions should remain in the area (Building 920-College Center) to have their photographs taken by Trident Technical College personnel.

4. Medallions, plaques and trophies will be awarded at the two Awards Ceremonies held in Building 920-College Center.

   Levels I (Grade 6) and II (Grades 7-8)  1:00 p.m.
   Levels III (Grades 9-10) and IV (Grades 11-12)  3:30 p.m.

5. Results of the qualifying competitions in Math, Science and Social Studies will be posted electronically in the Quest Nest. Results of all other competitions will be announced during the Awards Ceremonies. In addition, a listing of the overall QUEST school winners will be available through TTC’s website at http://www.tridenttech.edu within one week following the conclusion of Quest.
VII. COMPETITION GUIDELINES

**ALL NOTES AND/OR SCRATCHWORK BY PARTICIPANTS IN ANY COMPETITION WITH THE EXCEPTION OF VISUAL ARTS WILL BECOME THE PROPERTY OF TRIDENT TECHNICAL COLLEGE AND WILL NOT BE RETURNED. NO RECORDERS, CAMERAS OR ACTIVATED ELECTRONIC COMMUNICATION DEVICES ARE ALLOWED IN ANY COMPETITION INCLUDING FINAL ROUNDS. TRIDENT TECHNICAL COLLEGE RESERVES THE RIGHT TO PHOTOGRAPH OR RECORD FOR PROMOTIONAL PURPOSES**

A. AUTOMOTIVE

INDIVIDUAL COMPETITION

1. PARTICIPANTS

   Each school will be allowed up to three individual participants from grades 10-12.

2. WRITTEN COMPETITION

   A. All test questions will be multiple choice. There will be no penalty for incorrect answers. The score will be the number of correct answers.

   B. Test questions will be taken from existing ASE Certification exams in the following areas:

      1. Brake Systems
      2. Engine Performance
      3. Engine Repair
      4. Manual Transmissions
      5. Automatic Transmissions
      6. Electrical Systems
      7. HVAC
      8. Steering and Suspension

3. PRACTICAL COMPETITION

   Students will participate in four (4) hands-on exercises. A potential of 25 points per exercise can be earned.

4. SAFETY RULES/REGULATIONS

   A. Approved, shatter proof, clear eye protection is required at all times in the labs and shops.

   B. Approved work clothing and shoes are required: no open toed shoes, sandals, flip flops. No tank tops, shorts, loose clothing, ties and jewelry. Long hair should be pulled away from face, and tucked under a ball cap or other tight fitting head cover.

5. OVERALL WINNERS

   The overall winners will be determined by combining the scores from the written competition and the scores from the practical competition.
TIE BREAKER
In the event of an overall tie, participants will compete in a timed engine troubleshooting problem. The participant who properly analyzes and corrects the problem in the least amount of time will be named the overall winner.

All winners for these competitions will be announced at the appropriate Awards Ceremony.

B. COMPOSITION

INDIVIDUAL COMPETITION

1. PARTICIPANTS

Each school will be allowed up to three individual participants per level.

2. PROCEDURES

A. The actual time for the competition at each level will be one hour. Additional time is allowed for dissemination of topic cover sheets, paper and pencils.

B. Proctors will determine the exact beginning and ending times for the one hour writing period. This period will fall within the hour and fifteen minutes assigned to the event.

C. Proctors may not answer participants’ questions after the one hour writing period has begun.

D. Participants will write on an assigned topic. Two (2) choices will be given. No resources may be used. Scoring will be determined using the National Council of Teachers of English guidelines for its "Achievement Awards in Writing" program.

3. COMPOSITION TYPES

<table>
<thead>
<tr>
<th>Level I (Grade 6)</th>
<th>Level II (Grades 7 - 8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students will be asked to write a descriptive paragraph.</td>
<td>Students will be asked to write a narrative essay.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level III (Grades 9-10)</th>
<th>Level IV (Grades 11-12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students will be asked to write an expository essay.</td>
<td>Students will be asked to write a persuasive essay.</td>
</tr>
</tbody>
</table>

4. EVALUATION

National Council of Teachers of English (NCTE) Guidelines

Judges will consider the following questions in evaluating the effectiveness of each piece:

- Does the student show some depth of thought in the quality and presentation of ideas?
- Even if the thought is relatively commonplace, has the student made the idea his or her own?
- Is the student clear about subject and audience?
- In exposition, does the student demonstrate logical thinking?
- Does the student guide readers through the main points of the paper with appropriate transitions and illustrations?
- Does the student provide sufficient detail and examples to convince the reader?
- In more imaginative writing, does the student maintain consistent patterns of detail?
- Does the student demonstrate a command of sentence structure?
- Does the student show a command of vocabulary and use a variety of sentence patterns?
- Does the student demonstrate specificity, aptness, and freshness in the use of language?

5. OVERALL WINNERS

All winners for these competitions will be announced at the appropriate Awards Ceremony.

C. COMPUTER AIDED DESIGN (CAD)

INDIVIDUAL COMPETITION

1. PARTICIPANTS

Each high school will be allowed up to three individual participants from grades 9-12.

2. PROCEDURES - DRAWING ACTIVITY

A. Competitors will answer a series of multiple-choice questions that will test their knowledge of Autodesk’s Inventor and standard drafting practices. The competition will require the construction or editing of parts and assemblies using the current version of Inventor software. No special software configurations will be allowed.

Competitors are expected to have a working knowledge of Inventor operations, including constraining/dimensioning sketches, creating/editing sketched features, creating/editing placed features, creating/editing drawing views, and creating/documenting assemblies.

Each individual will use one computer with a current version of Inventor. No special templates, menus or routines will be allowed during the competition. The use of books, reference materials, and calculators is prohibited during the competition.

A typical competition will consist of the following steps:
- General Knowledge
  - The layout and dimensioning of multi-view drawings.
  - Use of Inventor tools and operations.
- iProperties – Mass, Area, Volume, and Center of Gravity questions
  - (Note: To display the physical properties of a part or assembly – right-click the part or assembly name in the browser and select “iProperties” from the shortcut menu. When the dialog box appears, select the “Physical” tab, set the “Required Accuracy” to “Very High”, and select the “Update” button.)
    - Create parts and assemblies and prove their correctness by determining its physical properties.
    - Edit existing parts and assemblies and prove their correctness by determining its physical properties.
- Measure Tools – Distance, Angle, Loop, and Area questions
  - (Note: The measure tools can be accessed from the Inspect or Tools tab of the Ribbon.)
    - Create parts and assemblies and prove their correctness by measuring features
• Edit parts and assemblies and prove their correctness by measuring features

B. Any electronic files needed for the competition will be provided and opened from the hard drive. Although it will not be necessary, files may be saved to the hard drive if desired. Storing to any removable storage devices will not be allowed. No plotting operations will be performed.

3. SCORING

Each drawing will be scored according to the following guidelines:

A participant may score a total of one-hundred (100) points for correctly answering all questions. The competition will consist of fifty (50) multiple choice questions worth two (2) points each. Although the difficulty or time needed to answer a question may vary greatly, each question is weighted the same. Final scores will determine winners, with any tie scores broken based on answers provided to key questions.

4. OVERALL WINNERS

All winners for this competition will be announced at the final Awards Ceremony.

D. COMPUTER PROGRAMMING

TEAM COMPETITION

1. PARTICIPANTS

Each high school will be allowed up to two teams of 2-3 participants from grades 9-12.

2. PROCEDURES - PROGRAMMING ACTIVITY

A. A total of five (5) computer programming problems will be given to each team to code and execute using Java (preferred) or C++. (based on the school’s registration)

Competitors programming in Java will be allowed to write, compile, and execute using either the Eclipse IDE or the TextPad utility. Therefore, competitors are encouraged to be familiar with one of these applications prior to taking part in the competition.

Competitors programming in C++ should familiarize themselves with the setup of a solution and project using the Visual Studio IDE prior to taking part in the competition.

B. Teams will submit a flash drive (supplied by the proctor) with the completed program to the judges as they are completed during the competition.

3. SCORING - PROGRAMMING ACTIVITY

Each program will be weighted depending on its complexity.

Each submitted program will be evaluated for quality standards and awarded a score between zero (0) and ten (10) points. Teams will be awarded a program value of forty (40) points for a correct solution minus five (5) points for each incorrect solution of that problem previously submitted. The total value will be multiplied by the weight listed on the program sheet. The winner will be the team with the highest number of total points accumulated at the end of the competition. In the case of a tie, the team with the highest accumulated quality standard score will win.
If an incorrect program is turned in it will be returned with the message, "INCORRECT". Five (5) points are deducted from the program score for each incorrect submission. A correct program will be returned with the message, "CORRECT."

Scoring Formula

\[(\text{program value} - 5X + \text{quality standards score}) \times \text{weight} = \text{total point total}\]

where X represents the number of incorrect submissions of the program solution.

Example #1 - For a correct program with a weight of 1.3 and a maximum of 10 quality standard points, and 0 program errors, the maximum attainable score would be \((40-(0\times5) + 10) \times 1.3 = 65\).

Example #2 - For a correct assignment that incurred two incorrect submissions with a weight of 1.3 and 7 quality standard points, the maximum attainable score would be \((40-(2\times5) + 7) \times 1.3 = 48.1\).

Team members may work together or divide work among them. Each team will be supplied two computers. Only one computer can be used to write code while the other can be used for research.

Reference materials can also be brought by the competitors to aid in the coding of the programs.

4. PROGRAMMING QUALITY STANDARDS

Writing a good computer program is more than merely arriving at the correct answer. The code must be efficient and easily maintained. To encourage quality programming techniques, the following guidelines have been developed and will be used to judge the programs submitted during the QUEST competition:

A. Each program must have a documentation section that includes the program number and team name (School Name).

B. Each program must have only one exit point, which is at the end of main.

C. Descriptive variable names must be used.

D. Each variable must be initialized by your program before it is referenced.

E. A function/method must be used if the directions specify that you are expected to perform a particular task in a function.

F. No GOTO statements - explicit or implied - are to be used.

G. Unnecessary and misleading lines of code must be eliminated.

H. Avoid redundant code where possible.

I. You may anticipate some programs for which you are directed to use a specific control structure, and others in which it is left to you to decide the best control for that particular problem.

J. Remember, it is always a good idea to test your program on a wide variety of data. For instance, when processing numerical data, try different signs and magnitudes, integers and floating points, as well as zero. In other words, try to make your own program fail.

5. OVERALL WINNERS

All winners for this competition will be announced at the final Awards Ceremony.
E. CULINARY ARTS

TEAM COMPETITION

Please reference Registration Information, General Information and Guidelines and Check-In Procedures in the front of this Handbook.

Event Schedule

<table>
<thead>
<tr>
<th>Time of Events</th>
<th>Culinary Competition Location and Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 a.m. to 7:30 a.m.</td>
<td><strong>Check-In:</strong> Coaches check in participants</td>
</tr>
<tr>
<td>7:00 a.m. to 8:00 a.m.</td>
<td><strong>Culinary 119 and 121:</strong> Product Check-In for Culinary Teams. Teams are given stations and set-up for the competition.</td>
</tr>
<tr>
<td>8:00 a.m. to 8:25 a.m.</td>
<td><strong>Mandatory Judges’ Meeting:</strong> Participants meet the Judges.</td>
</tr>
<tr>
<td>8:30 a.m. to 9:30 a.m.</td>
<td><strong>Staggered team start. Two teams every 15 minutes, Culinary labs 119 &amp; 121</strong></td>
</tr>
<tr>
<td>11:00 a.m. to 12:00 p.m.</td>
<td><strong>Teams Present Products to the Judges:</strong> Judges evaluate.</td>
</tr>
<tr>
<td>11:30 a.m. to 12:30 p.m.</td>
<td><strong>Teams clean station and kitchen</strong></td>
</tr>
<tr>
<td>12:00 p.m. to 1:00 p.m.</td>
<td><strong>Teams Taste Products and Clean Up area</strong></td>
</tr>
</tbody>
</table>

Winners will be announced during the final Awards Ceremony in the College Center.

Overview: Each participating school may have up to two teams consisting of 2-3 participants currently enrolled or previously enrolled in a culinary course from grade 9-12. Each team will compete in the culinary competition. Students will prepare all their mise en place in the morning and finish all items in 2.5 hours based on start times. Teams are encouraged to practice all products before the day of QUEST in order to become familiar with them.

Culinary Competition

1. RULES

A. Each team will prepare 2 entrees to consist of the classical Chicken Chasseur (recipe provided) and 12 cupcakes. Each cupcake will be decorated with an appropriate icing and appropriate garnish of choice. The idea is to decorate the cupcakes consistently and creatively.

B. Each team will have 2.5 hours to create and bake their 12 cupcakes and prepare and cook their two-chicken chasseur recipe. The cupcakes will be prepared in the convection oven set at 325° Farenheight. Each team will be given two tables and one range to cook their chicken dish and produce their cupcakes.

C. Each team is responsible for their own equipment, pans, and ingredients. The College will provide sauté pans, mixers, cutting boards, and towels. All other small wares must be provided by the student team.

D. Product Check-In: All items supplied by the team will be checked in during check-in times: 7:00 a.m. to 8:00 a.m. in the College’s kitchens (119 & 121) in Building 920. Products will be checked for appropriate temperature kept outside of the food danger zone. Any product not temped or stored correctly will be discarded. Substitute products will not be allowed. No commercially prepared canned or jarred products or pre-prepared cake mixes or icings will be allowed. Produce may not be pre-cut or cooked prior to the competition.
E. Students will have 30 minutes prior to cooking to set their mise en place.

F. Student teams will not be able to prepare, cook or assemble any food until their time is called. Students will have to stop preparing, cooking, or finishing products at the end of their 2.5-hour time frame. Judges will keep the time clock for start and finish for each team.

G. The order for teams to begin will be drawn arbitrarily at the judges’ meeting. The names of the participating schools will be placed in a bowl and a non-judge will draw names in order to pick the order of competitors.

2. PROFESSIONALISM, SANITATION & UNIFORMS

A. Students must arrive as a team dressed in full culinary uniform. This will include: hat (baseball hats will be permitted), chef jacket, long dark pants, an apron, and black non-skid, closed-toe shoes. The College will provide side towels.

B. No nail polish shall be worn during the competition. Long hair will be pulled away from face and tucked under cap.

C. Students will work as a team of professionals without the aid of their instructors.

D. Proper sanitation will be maintained throughout the competition. Cold food presented cold should be handled with gloves. Sanitizer will be used when cleaning the station. Hand washing should be done periodically.

3. JUDGING

A. There will be three judges for the competition. Two chicken dishes (separate plates) and 12 cupcakes (presented on a platter) will be presented to the judges for tasting. The judges will taste one chicken dish and three cupcakes. The remaining chicken dish and cupcakes will be left for display.

B. Each judge will evaluate on the following: **Chicken Chasseur**: 10 pts cooking technique and 20 pts for taste. For the **Cupcakes**: 10 points technique; 10 points, creativity; and 15 points flavor and taste. The remaining points will include 10 points - Organizational skills, 15 points -safety and sanitation, and 10 points -professionalism for a total of 100 points.

C. The Chicken Chasseur score will be added together with the cupcake score to determine the competition’s overall winners for the gold, silver, and bronze medallions.

### Chicken Chasseur

Serves 2

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicken Breast (Boneless or Frenched)</td>
<td>2 - 6-8 oz. ea.</td>
</tr>
<tr>
<td>S &amp; P</td>
<td>to taste</td>
</tr>
<tr>
<td>Flour</td>
<td>for dredging</td>
</tr>
<tr>
<td>Clarified butter</td>
<td>1 oz.</td>
</tr>
<tr>
<td>Shallots, minced</td>
<td>¼ cup</td>
</tr>
<tr>
<td>Garlic, minced</td>
<td>1 clove</td>
</tr>
<tr>
<td>White wine</td>
<td>½ cup</td>
</tr>
<tr>
<td>Mushrooms, sliced</td>
<td>2 oz.</td>
</tr>
<tr>
<td>Chicken Demi</td>
<td>4 oz.</td>
</tr>
<tr>
<td>Concassee Tomatoes</td>
<td>1 ea.</td>
</tr>
<tr>
<td>Fresh Tarragon, chopped</td>
<td>1 tsp.</td>
</tr>
<tr>
<td>Parsley, chopped</td>
<td>1 tsp.</td>
</tr>
<tr>
<td>Whole butter</td>
<td>2 oz.</td>
</tr>
<tr>
<td>Salt &amp; pepper</td>
<td>to taste</td>
</tr>
</tbody>
</table>

1. Season and lightly flour the chicken breasts. Shake off excess.
2. Sauté breast, skin side down first in hot clarified butter or oil. Brown on both sides and remove.
3. Add the shallots and sauté for 1 minute. Add the garlic and sauté for 20-30 seconds.
4. Add the wine and reduce au sec.
5. Add the tomatoes and tarragon and simmer for 1 minute.
6. Add the chicken demi and add the chicken back to the pan. Reduce the sauce to nape.
7. Remove the chicken to a plate; making sure it is cooked all the way. Finish the sauce with Monte au Beurre and adjust the seasoning.

F. ENGINEERING DESIGN AND CONSTRUCTION

TEAM COMPETITION

MOUSETRAP POWERED CAR GUIDELINES

1. PARTICIPANTS

Each high school will be allowed up to two teams (2 mousetrap powered cars) of 2-3 participants for each car. Each participant must be from grades 9-12.

2. COMPETITION

Practice the steps of the Engineering Design Method (define the problem, gather information, generate multiple solutions/brainstorming, analyze options, select an option and implement, evaluate and improve). Below are the constraints:

A. Teams (2-3 participants) must use only the parts supplied in one (1) project bag: 1 mousetrap, 4 eye hooks, 6 balloons, 2 Bic pens, 2 soda can pop tops, string, 4 CD/DVDs).

B. “Car” may only be powered by mousetrap provided. No other devices for storing potential energy may be used for power (such as rubber bands or additional balloons). MAY NOT alter or modify operational aspects of the mousetrap in any way. Drilling or other attachment method to the wood base of the mousetrap is acceptable. Designs with modifications to the mousetrap other than for the purpose for attachment will be disqualified. No adhesives (glue or tape) are allowed.

C. Each entry must be a three (3) or four (4) wheeled vehicle designed and built by the team participants. Wheels can be modified.

D. Each vehicle will measure not more than ten (10) inches by five (5) inches.

3. DEMONSTRATION

A. Teams will briefly present/explain their design to the engineering judge.

B. Cars will be allowed two (2) runs and will be evaluated on the distance travelled for the better of the two runs. The distance of the run will be measured in feet and inches to the front of the car. Failed starts will be measured as zero (0) feet.

C. The mousetrap car will not be allowed to contact walls or any other fixed surface to impart motion to the vehicle. If the mousetrap car contacts the wall, the point of contact will be considered the distance travelled.
4. PROCEDURES

A. Only teams registered for the Engineering Design & Construction Competition will be allowed to build and demonstrate a mousetrap car.

B. **Cars must be built and demonstrated at Building 800, Room 830 between 11:00 a.m. and 12:00 p.m. on SATURDAY, MARCH 7, 2020.** All registered participants must be present at the time of demonstration.

C. Cars will be tested starting at 1:00 p.m. All registered participants must be present at the time their car is demonstrated.

5. OVERALL WINNERS

All winners for this competition will be announced at the final Awards Ceremony.

6. ENTRY PICK-UP

Participants may pick up their car from Building 800/Room 830 at the conclusion of the competition.

G. HORTICULTURE

INDIVIDUAL COMPETITION

1. PARTICIPANTS

   Each school will be allowed up to three individual participants from grades 9-12.

2. WRITTEN COMPETITION

   A. All test questions will be multiple choice. There will be no penalty for incorrect answers. The score will be the number of correct answers.

   B. Test questions will be equally divided among the following topics:

      1. Botany
      2. Insect and Disease
      3. Pesticide and Fertilizer
      4. Propagation and Greenhouse

3. GREENHOUSE PRACTICAL COMPETITION

   A. Student will identify the following:

      1. Trees and shrubs
      2. Insects and diseases
      3. Turfs
      4. Annuals and perennials

   A word bank of answers will be provided that will include both botanical and common names.
4. **OVERALL WINNERS**

The overall winners will be determined by combining the scores from the written competition and the scores from the greenhouse competition.

**TIE BREAKER**

Specific questions throughout the test have been designated as tie breakers. In the event of a tie, the number of correctly answered tie breakers will be used to determine the highest scoring teams.

All winners for these competitions will be announced at the appropriate Awards Ceremony.

**H. MATHEMATICS**

**TEAM COMPETITION**

1. **PARTICIPANTS**
   
   Each school will be allowed up to two teams of 1-3 participants per level.

2. **AREAS OF COMPETITION** (*percentages given are approximate*)

<table>
<thead>
<tr>
<th>Level I (Grade 6)</th>
<th>Level III (Grades 9-10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25% Number and numeration systems</td>
<td>30% Geometry</td>
</tr>
<tr>
<td>15% Numerical and algebraic concepts and operations</td>
<td>30% Algebra I</td>
</tr>
<tr>
<td>15% Patterns, relationships, and functions</td>
<td>30% Algebra II</td>
</tr>
<tr>
<td>15% Geometry and spatial sense</td>
<td>10% Miscellaneous Mathematical Topics</td>
</tr>
<tr>
<td>15% Measurement</td>
<td></td>
</tr>
<tr>
<td>15% Probability and statistics</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level II (Grades 7-8)</th>
<th>Level IV (Grades 11-12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25% Numerical and algebraic concepts and operations</td>
<td>30% Algebra</td>
</tr>
<tr>
<td>15% Number and numeration systems</td>
<td>25% Geometry</td>
</tr>
<tr>
<td>15% Patterns, relationships, and functions</td>
<td>20% Trigonometry</td>
</tr>
<tr>
<td>15% Geometry and spatial sense</td>
<td>15% Calculus</td>
</tr>
<tr>
<td>15% Measurement</td>
<td></td>
</tr>
<tr>
<td>15% Probability and statistics</td>
<td>10% Miscellaneous Mathematical Topics</td>
</tr>
</tbody>
</table>

3. **PROCEDURES**

   **A. QUALIFYING COMPETITION**

   A qualifying test will be administered to all teams. Each team will be given test copies for all team members and one official team answer sheet. No calculators may be used in Levels I and II. In Levels III and IV, each competitor should bring a scientific/graphic calculator. No computer algebra systems (symbolic manipulation calculators) will be allowed. Graphic calculators similar to the TI-83, TI-84, TI-85, or TI-86 can be used. Excluded calculators include the TI-89 and TI-92 and others that operate similarly. Also, personal communication devices such as cellular phones, pagers and other text messaging devices are prohibited in the competition rooms. Questions about any other calculator should be directed to Cara Smyczynski, Department Head of Mathematics, at cara.smyczynski@tridenttech.edu. Trident Technical College will provide paper and pencils.

   Each team will have thirty (30) minutes to complete the team answer sheet. Proctors will determine the exact beginning and ending times for the thirty (30) minute testing period. This period will fall within the forty-five (45) minutes assigned to the event. Team members may work together or divide
the test among them. However, only the official team answer sheet will be used to determine the team score.

In all levels, all questions will be multiple choice with an answer sheet. All questions count equally unless there is a tie. There will be no penalty for incorrect answers. The score will be the number of correct answers.

TIE BREAKER
Several questions throughout the test have been designated as tie breakers. In the event of a tie, the number of correctly answered tie breakers will be used to determine the highest scoring teams.

B. FINAL COMPETITION

Based on the results of the qualifying competition, the final competition will be held among the three highest scoring teams to determine first, second and third place. The time limit for this competition will be approximately thirty (30) minutes, and the competition will be open to the public. Once the competition has begun, people may leave the room but may not re-enter until the competition concludes.

The moderator will determine the exact beginning and ending time for the thirty (30) minute final competition. This period will fall within the forty-five (45) minutes assigned to the event.

No calculators may be used in Levels I and II. In Levels III and IV, each team member should bring a scientific/graphic calculator. No computer algebra systems (symbolic manipulation calculators) will be allowed. Graphic calculators similar to the TI-83, TI-84, TI-85, or TI-86 can be used. Excluded calculators include the TI-89 and TI-92 and others that operate similarly. Also, personal communication devices such as cellular phones, pagers and other text messaging devices are prohibited in the competition rooms. Questions about any other calculator should be directed to Cara Smyczynski, Department Head of Mathematics, at cara.smyczynski@tridenttech.edu. Trident Technical College will provide paper and pencils.

In the final competition, teams will compete using buzzer systems. The moderator will read a question and will cease talking immediately when a team member pushes his/her buzzer. If the correct answer is not provided within five (5) seconds, the other two teams will have a chance to buzz in. The moderator will reread a question only when the original reading was interrupted by the buzzer. **A team may only buzz in once for each question.** The total amount of time allowed for any team to buzz in is sixty (60) seconds.

If no team buzzes in within sixty (60) seconds, “time” will be called and the moderator will continue to the next question. If the moderator determines that no attempt is being made by any team to answer a question, he/she may discard that question and continue the competition.

The student who pushes the buzzer must provide the answer before his/her light goes out [within five (5) seconds] but may confer with his/her team members before pushing the buzzer. No prompting by other team members will be allowed once the student has pushed the buzzer.

Each correct answer is worth ten (10) points.

A five (5) point penalty will be assessed each time a buzzer is accidentally pushed during the competition or for giving a wrong answer to a question. Holding a buzzer down will automatically lock a team out.

In the event the moderator is uncertain of a participant's answer, he/she will ask for a decision from the judges. All decisions by the judges will be final.

A ten (10) point penalty will be assessed by the judges or the moderator for each act of unsportsmanlike conduct or interruptions by a team member or coach. If a team member is found
to be cheating, the team member will automatically be disqualified. However, the remaining team members may compete.

In the event a competition ends in a tie, there will be a three (3) minute overtime. In the event of equipment malfunction, the competition will be completed by reading questions alternately to each team. If a team does not answer or answers incorrectly, that question will be discarded, and the next team will be asked a new question. Points will be awarded for correct answers, but no penalty will be given for incorrect answers.

All winners for these competitions will be announced at the appropriate Awards Ceremony.

All spectators in all final competitions are asked to remain quiet and will be asked to leave if they disrupt the competition in any way. This includes gesturing to the participants.

I. MEDICAL TERMINOLOGY

INDIVIDUAL COMPETITION

PARTICIPANTS
Each school will be allowed up to three individual participants from grades 9-12.

WRITTEN COMPETITION

Test questions will be divided among the following topics:

1. Musculoskeletal System
2. Cardiopulmonary System
3. Gastrointestinal System
4. Urinary System
5. Other Body Systems (Neurological, Endocrine, Integumentary, Ophthalmic, Otolaryngeal Systems)

Each participant will be given a test copy and an official answer sheet. Trident Technical College will provide paper and pencils.

Each participant will have sixty (60) minutes to complete the answer sheet. Proctors will determine the exact beginning and ending times for the sixty (60) minute testing period. All test questions will be multiple choice. There will be no penalty for incorrect answers. The score will be the number of correct answers. All questions count equally unless there is a tie.

TIE BREAKER

Several questions throughout the test have been designated as tie breakers. In the event of a tie, the number of correctly answered tie breakers will be used to determine the highest scoring participant.

OVERALL WINNERS

All winners for these competitions will be announced at the appropriate Awards Ceremony.
J. PUBLIC SPEAKING

INDIVIDUAL COMPETITION

1. PARTICIPANTS

Each school will be allowed up to two individual participants per level.

The public speaking competition rooms are not available for participants to use for practice purposes at any time.

_All spectators are asked to remain quiet during the competition and will be asked to leave if they disrupt the competition in any way including gestures to competitors. Any participant who is asked to leave will be disqualified from the competition._

2. TOPIC

Levels I and II:
Participants will deliver an extemporaneous self-prepared speech on an assigned subject. The subject for public speaking participants in grades 6-8 is:

Many people have been calling for an increased focus on STEM studies. Is there a topic that is missing or should be emphasized in elementary or middle school?

Levels III and IV:
Participants will deliver an extemporaneous self-prepared speech on an assigned subject. The subject for public speaking participants in grades 9-12 is:

_In recent academic literature, researchers have predicted a future decrease in college enrollment due to a noticeable decline in birth rates that began in 2008. What strategies would you recommend to promote academic engagement and encourage learning beyond high school graduation?_

3. PROCEDURES

Students may not speak from a manuscript. _Only ONE 5" x 8" (or smaller) note card may be used during the speech_. Students using more than one 5" x 8" note card will be disqualified.

Participants will deliver an extemporaneous speech based on their understanding and investigation of the assigned subject. The length of the speech is two (2) to four (4) minutes. At the end of two (2) minutes the speaker will be given a cue. At the end of four (4) minutes the student will be cued and the speech stopped at the conclusion of the sentence. The student is expected to speak for 2-4 minutes.

4. CRITERIA

A. Topic - A clearly focused appropriate thesis is presented.

B. Content - The thesis is supported with clear reasoning and evidence. The content is substantive. Facts, testimony, examples and/or narratives are used to illustrate and develop the thesis.

C. Organization - A clear pattern or framework structures the material of the speech. Introduction, body and conclusion are included. Transitions are smooth and effective. The speech is unified and coherent.
D. **Language** - The language is standard or idiomatic as appropriate. Vocabulary is appropriate and clear. Grammar is used correctly. Fillers such as "okay," "you know" and "uh" are not to be used.

E. **Delivery** - Both vocal and physical attributes contribute to delivery. The speaker's voice is appropriate and varied in pitch, rate and volume. The voice is fluent, audible and expressive. Enunciation is clear. The speech has been rehearsed, but does not sound memorized or read. Delivery is extemporaneous. Posture and gestures enhance the speech. Eye contact is maintained with the audience throughout the speech.

F. **Time** - For the timing component, speeches which fall within two (2) to four (4) minutes receive the maximum five (5) points. Speeches which fail to fall within the two (2) to four (4) minute time frame receive the minimum 1 point.

5. **EVALUATION**
A numerical rating from 1 - 5 will be awarded to each speaker on the first five criteria described above (Topic, Content, Organization, Language and Delivery). A numerical rating of 5 or 1 will be awarded for the time criterion.

5. Outstanding
4. Superior
3. Good
2. Average
1. Poor

**TIPS FOR PARTICIPANTS**
- When determining your topic, brainstorm for ideas relating to the assigned subject.
- Consider your own experiences, interviews, current publications and classroom discussions among your possible sources.
- Construct an outline of main ideas and supporting points rather than writing out the entire speech. Working from an outline makes the speech spontaneous and allows good eye contact. Writing the entire speech encourages both reading and memorization which will be penalized in the delivery portion of the criteria. Strive for extemporaneous, conversational style. **Only one 5” x 8” note card can be used during the speech.**
- Practice your speech so it will meet the time requirements.
- Develop an attention-getting opener and conclude with a lasting thought.
- Public speaking competitions generate a great deal of tension. To reduce this, practice as much as possible speaking before classmates and other groups. Think of the audience as friendly and interested. Build self-confidence.
- Work to cut down on fillers such as "you know," "ok" and "uh."
- Strive to use correct grammar.
- Do **not** include your name or the name of your school in the speech.
- Plan to cite sources within your speech.
- Make the speech your own creative product by using several sources and your own unique approach to the material.
- Visual aids are permitted but not required. Participants should be cautioned that too many poorly planned and/or poorly executed visual aids may detract from the speech rather than enhance it. Visual aids that require a darkened room or an electrical power source are not permitted.

6. OVERALL WINNERS

All winners for these competitions will be announced at the appropriate Awards Ceremony.

K. SCIENCE

TEAM COMPETITION

1. PARTICIPANTS - Each school will be allowed up to two teams of 1-3 participants per level.

2. AREAS OF COMPETITION (percentages given are approximate)

<table>
<thead>
<tr>
<th>Level I (Grade 6)</th>
<th>Level III (Grades 9-10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50% Physical Science</td>
<td>35% Physical Science</td>
</tr>
<tr>
<td>25% Life Science</td>
<td>35% Biology</td>
</tr>
<tr>
<td>25% Earth Science</td>
<td>15% General Science</td>
</tr>
<tr>
<td></td>
<td>15% Earth Science</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level II (Grades 7-8)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>50% Life Science</td>
<td>40% Biology</td>
</tr>
<tr>
<td>50% Earth Science</td>
<td>30% Chemistry</td>
</tr>
<tr>
<td></td>
<td>30% Physics</td>
</tr>
</tbody>
</table>

3. PROCEDURES

A. QUALIFYING COMPETITION
   A qualifying test will be administered to all teams. Each team will be given test copies for all team members and one official team answer sheet. No calculators may be used. Trident Technical College will provide paper, pencils and a periodic table of the elements.

   Each team will have thirty (30) minutes to complete the team answer sheet. Proctors will determine the exact beginning and ending times for the thirty (30) minute testing period. This period will fall within the forty-five (45) minutes assigned to the event. Team members may work together or divide the test among them. However, only the official team answer sheet will be used to determine the team score.

   The qualifying test questions will be multiple choice. All questions count equally unless there is a tie. There will be no penalty for incorrect answers. The score will be the number of correct answers.

   TIE BREAKER
   Several questions throughout the test have been designated as tie breakers. In the event of a tie, the number of correctly answered tie breakers will be used to determine the highest scoring teams.

B. FINAL COMPETITION
   Based on the results of the qualifying competition, the final competition will be held among the three highest scoring teams to determine first, second and third place. The time limit for this competition will be approximately thirty (30) minutes, and the competition is open to the public. Once the
competition has begun, people may leave the room but may not re-enter until the competition concludes.

The moderator will determine the exact beginning and ending time for the thirty (30) minute final competition. This period will fall within the forty-five (45) minutes assigned to the event.

**No calculators may be used.** Trident Technical College will provide paper, pencils and a periodic table of the elements.

In the final competition, teams will compete using buzzer systems. Unless otherwise stated, ten (10) seconds will be allowed for participants to buzz in before the moderator moves on to the next question.

The moderator will read a question and will cease talking immediately when a team member pushes his/her buzzer. If the correct answer is not provided within five (5) seconds, the other two teams will have a chance to buzz in. The moderator will reread a question only when the original reading was interrupted by the buzzer. **A team may only buzz in once for each question.**

The student who pushes the buzzer must provide the answer before his/her light goes out [within five (5) seconds] but may confer with his/her team members before pushing the buzzer. No prompting by other team members will be allowed once the student has pushed the buzzer. All correct answers will be worth ten (10) points.

A five (5) point penalty will be assessed each time a buzzer is accidentally pushed during the competition or for giving a wrong answer to a question. Holding a buzzer down will automatically lock a team out.

In the event the moderator is uncertain of a participant's answer, he/she will ask for a decision from the judges. All decisions by the judges will be final.

A ten (10) point penalty will be assessed by the judges or the moderator for each act of unsportsmanlike conduct or interruptions by a team member or coach. If a team member is found to be cheating, the team member will automatically be disqualified. However, the remaining team members may compete.

In the event a competition ends in a tie, there will be a three minute overtime. In the event of equipment malfunction, the competition will be completed by reading questions alternately to each team. If a team does not answer or answers incorrectly, that question will be discarded, and the next team will be asked a new question. Ten (10) points will be awarded for correct answers, but no penalty will be given for incorrect answers. Detailed analysis questions will not be included.

All winners for these competitions will be announced at the appropriate Awards Ceremony.

*All spectators in all final competitions are asked to remain quiet and will be asked to leave if they disrupt the competition in any way. This includes gesturing to the participants.*

**L. SOCIAL STUDIES**

**TEAM COMPETITION**

1. **PARTICIPANTS** – Each school will be allowed up to two teams of 1-3 participants per level.
2. AREAS OF COMPETITION *(percentages given are approximate)*

<table>
<thead>
<tr>
<th>Level I (Grade 6)</th>
<th>Level III (Grades 9-10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>60% Ancient Cultures to 1600</td>
<td>60% Global Studies</td>
</tr>
<tr>
<td>30% U.S. History</td>
<td>20% U.S. History</td>
</tr>
<tr>
<td>10% Geography</td>
<td>20% Geography &amp; Current Events</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level II (Grades 7-8)</th>
<th>Level IV (Grades 11-12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>40% Contemporary Cultures since 1600</td>
<td>30% U.S. History &amp; Constitution</td>
</tr>
<tr>
<td>40% SC &amp; U.S. History</td>
<td>30% U.S. Government &amp; Economics</td>
</tr>
<tr>
<td>20% Geography &amp; Current Events</td>
<td>20% Global Studies</td>
</tr>
<tr>
<td></td>
<td>20% Geography &amp; Current Events</td>
</tr>
</tbody>
</table>

3. PROCEDURES

A. QUALIFYING COMPETITION
   A qualifying test will be administered to all teams. Each team will be given test copies for all team members and one official team answer sheet. Trident Technical College will provide paper and pencils.

   Each team will have thirty (30) minutes to complete the team answer sheet. Proctors will determine the exact beginning and ending times for the thirty (30) minute testing period. This period will fall within the forty-five (45) minutes assigned to the event. Team members may work together or divide the test among them. However, only the official team answer sheet will be used to determine the team score.

   The qualifying test questions will be multiple choice. All questions count equally unless there is a tie. There will be no penalty for incorrect answers. The score will be the number of correct answers.

   TIE BREAKER
   Several questions throughout the test have been designated as tie breakers. In the event of a tie, the number of correctly answered tie breakers will be used to determine the highest scoring teams.

B. FINAL COMPETITION
   Based on the results of the qualifying competition, the final competition will be held among the three highest scoring teams to determine first, second and third place. The time limit for this competition will be approximately thirty (30) minutes, and the competition is open to the public. Once the competition has begun, people may leave the room but may not re-enter until the competition concludes.

   The moderator will determine the exact beginning and ending time for the thirty (30) minute final competition. This period will fall within the forty-five (45) minutes assigned to the event.

   Trident Technical College will provide paper, pencils and a periodic table of the elements.

   In the final competition, teams will compete using buzzer systems. Unless otherwise stated, ten (10) seconds will be allowed for participants to buzz in before the moderator moves on to the next question.

   The moderator will read a question and will cease talking immediately when a team member pushes his/her buzzer. If the correct answer is not provided within five (5) seconds, the other two
teams will have a chance to buzz in. The moderator will reread a question only when the original reading was interrupted by the buzzer. **A team may only buzz in once for each question.**

The student who pushes the buzzer must provide the answer before his/her light goes out [within five (5) seconds] but may confer with his/her team members before pushing the buzzer. No prompting by other team members will be allowed once the student has pushed the buzzer.

All correct answers will be worth ten (10) points.

A five (5) point penalty will be assessed each time a buzzer is accidentally pushed during the competition or for giving a wrong answer to a question. Holding a buzzer down will automatically lock a team out.

In the event the moderator is uncertain of a participant's answer, he/she will ask for a decision from the judges. All decisions by the judges will be final.

A ten (10) point penalty will be assessed by the judges or the moderator for each act of unsportsmanlike conduct or interruptions by a team member or coach. If a team member is found to be cheating, the team member will automatically be disqualified. However, the remaining team members may compete.

In the event a competition ends in a tie, there will be a three minute overtime. In the event of equipment malfunction, the competition will be completed by reading questions alternately to each team. If a team does not answer or answers incorrectly, that question will be discarded, and the next team will be asked a new question. Ten (10) points will be awarded for correct answers, but no penalty will be given for incorrect answers. Detailed analysis questions will not be included.

All winners for these competitions will be announced at the appropriate Awards Ceremony.

*All spectators in all final competitions are asked to remain quiet and will be asked to leave if they disrupt the competition in any way. This includes gesturing to the participants.*

M. SPANISH

BEGINNING SPANISH AND INTERMEDIATE SPANISH

INDIVIDUAL COMPETITION

1. PARTICIPANTS

Each school will be allowed up to three individual participants in each competition.

A. In Beginning Spanish, students from grades 9-12 who are currently enrolled in or whose last course completed was Spanish I may compete.

B. In Intermediate Spanish, students from grades 9-12 who are currently enrolled in or whose last course completed was Spanish II may compete.

2. PROCEDURES

A. The actual time for the competition at each level will be one hour. Additional time is allowed for dissemination of tests, pencils, and paper which will be provided by Trident Technical College.
B. Proctors will determine the exact beginning and ending times for the one hour testing period. This period will fall within the hour and fifteen minutes assigned to the event.

C. The competition will test each participant's ability to:

**Beginning Spanish**
- Match a written question with its logical written reply.
- Complete a paragraph by choosing the correct response from a list of multiple choice verb conjugations.
- Answer multiple choice questions based on a reading passage.
- Complete a listening exercise.

**Intermediate Spanish**
- Match a written question with its logical written reply.
- Complete a sentence by choosing the grammatically correct response from a list of multiple choices.
- Answer multiple choice questions based on a reading passage.
- Complete a listening exercise.

3. **CONTENT**

The Spanish competition will follow the specifications for the National Spanish Examinations for 2018.

**Beginning Spanish**
A. NOUNS - gender and number, diminutive ending –*ito*, use of *de* + noun for possession
B. ADJECTIVES - gender and number, position, possessive (short forms), ordinal numbers 1st – 10th, cardinal numbers 1-100.
C. ARTICLES - definite and indefinite, with days of the week, with title, contractions “al” and “del”
D. PRONOUNS - subject, direct object, indirect object (used with gustar)
E. PREPOSITIONS - simple prepositions (de, en, a, con, para, sin, según, entre), personal a
F. VERBS – subject-verb agreement, present tense, negation, ser vs. estar, idiomatic uses of tener (with calor, hambre, años), helping verbs: tener que, poder, querer, hacer used in weather expressions, present progressive, expressing the future with ir + a + infinitive
G. ADVERBS - adverbs of affirmation (si, cómo no, por supuesto), adverbs of negation (no, nada), adverbs of time (tarde, siempre, ahora, hoy), adverbs of place (aquí, allí)
H. CONJUNCTIONS - simple conjunctions (y, o)
I. INTERJECTIONS - simple interjections (¡Ay!, ¡Oye!)
J. OTHER - question words, word order of questions

**Intermediate Spanish**

Everything for Beginning Spanish, AND:

A. NOUNS - gender and number of nouns ending in -dad, -ción, -ma, -pa
B. ADJECTIVES - comparative and superlative (including mejor, peor, mayor, menor), the suffix -ismo, ordinal numbers above 10th, cardinal numbers above 100, demonstrative, possessive (long forms), adjectives of quantity

C. ARTICLES - use of definite articles with parts of the body, omission of articles, use of ningún, algún, and their forms

D. PRONOUNS - indirect object, interrogative, demonstrative, reflexive, prepositional

E. VERBS - preterite, imperfect, present perfect, commands, future, helping verbs: acabar de, necesitar, deber, aprender a, tratar de, hacer to express duration of time, conocer vs. saber

F. ADVERBS - the suffix -mente, negative words

G. PREPOSITIONS - simple prepositions (sin, contra, desde, durante, entre, menos), compound prepositions (antes de, cerca de, debajo de, etc…)

I. CONJUNCTIONS - use of e instead of y, use of u instead of o, pero vs. sino

4. OVERALL WINNERS

All winners for these competitions will be announced at the final Awards Ceremony.

N. VIDEO/FILM

TEAM COMPETITION

1. PARTICIPANTS

Each high school will be allowed up to two teams (2 videos) of 1-4 participants. Each participant must be from grades 9-12. Due to the nature of this competition, no alternates will be entered on the official rosters.

2. COMPETITION

A. Assignment:
   Short form video or film project illustrating the topic of “Mistaken Identity,” the project may be a newscast, sportscast, feature story, animation or documentary completed as part of a class or extra-curricular activity.

B. Guidelines:
   Project must be no more than 5 (five) minutes total running time.
   Format: USB Flash Drive; must be playable in Quick Time Player on a computer.

3. REQUIREMENTS

A. All team members must be registered on the official Quest website to be eligible. Completed entries must be submitted to the Vice President of Academic Affairs’ Office (Building 100/Room 210) no later than 4:30 p.m. on Friday, February 14, 2020. Entries will be accepted between 8:00 a.m. and 4:30 p.m. Monday through Friday. The entries will be on display in Building 920-College Center on the day of the competition.

B. The Video/Film Special Competition Entry Form must be filled out completely and submitted with the USB Flash Drive. The entry form must include the student director’s name, director’s grade level, teacher’s name, title of entry and the names of the three additional registered participants, if
applicable. The Video/Film Special Competition Entry Form is available to print from http://www.tridenttech.edu/academics/quest/index.htm, the QUEST website.

4. SCORING:

   A. The judges will use the film criteria checklist to score the video.

   B. The Criteria Checklist is based on the following five (5) categories:

      1. **Image Quality**:
         - Framing is appropriate to the content/intent of the story.
         - Camera movement is skillful and effective for the content/intent of the story.
         - Lighting is appropriate to the content/intent of the story.

      2. **Sound Quality**:
         - Sound quality is “clean”.
         - Sound levels are consistent.
         - Sound levels are appropriate for the content/intent of the story.

      3. **Editing Quality**:
         - Edits are logical and appropriately paced
         - Edits are “clean”.
         - Editing style is appropriate for the content/intent of the story

      4. **Effectiveness of Storytelling**
         - Images, sound and editing are conceived in an innovative way to imaginatively tell the story.
         - The story is engaging and fun to watch

      5. **Originality of Concept**
         - The overall approach to the project is fresh and inventive.

   C. A numerical rating from 1 – 5 will be awarded to each category. Once each category is numerically ranked, the judges’ scores will be added together for one final combination score

      5. **Outstanding**
      4. **Superior**
      3. **Good**
      2. **Average**
      1. **Poor**

5. OVERALL WINNERS

   The overall winners will be determined by the highest numerical combination score from the criteria checklist. All winners for this competition will be announced at the final Awards Ceremony.

6. ENTRY PICK-UP

   Participants may pick up their entry from the College Center in Building 920-College Center at the conclusion of the Final Awards Ceremony. Identification will be required to release the video. Entries will be available for pick-up until 4:00 p.m. on Saturday, March 7, 2020. Entries that are not picked up will be sent to the school along with the QUEST certificates before the end of the academic year.

Entry forms are available online at http://www.tridenttech.edu/academics/quest/index.htm.
O. VISUAL ARTS

INDIVIDUAL COMPETITION

1. PARTICIPANTS

Each school will be allowed up to three individual participants per level. Due to the nature of this competition, no alternates will be entered on the official roster.

2. COMPETITION

A. Selected poem:

_Thirteen Ways of Looking at a Blackbird_
_by Wallace Stevens_

Among twenty snowy mountains,
The only moving thing
Was the eye of the blackbird.

I was of three minds,
Like a tree
In which there are three blackbirds.

The blackbird whirled in the autumn winds.
It was a small part of the pantomime.

A man and a woman
Are one.
A man and a woman and a blackbird
Are one.

I do not know which to prefer,
The beauty of inflections
Or the beauty of innuendoes,
The blackbird whistling
Or just after.

Icicles filled the long window
With barbaric glass.
The shadow of the blackbird
Crossed it, to and fro.
The mood
Traced in the shadow
An indecipherable cause.

O think men of Haddam,
Why do you imagine golden birds?
Do you not see how the blackbird
Walks around the feet
Of the women about you?

I know noble accents
And lucid, inescapable rhythms;
But I know, too,
That the blackbird is involved
In what I know.

When the blackbird flew out of sight,
It marked the edge
Of one of many circles

At the sight of blackbirds
Flying in a green light,
Even the bawds of euphony
Would cry out sharply.

He rode over Connecticut
In a glass coach.
Once, a fear pierced him,
In that he mistook
The shadow of his equipage
For blackbirds.

The river is moving.
The blackbird must be flying.

It was evening all afternoon.
It was snowing
And it was going to snow.
The blackbird sat
In the cedar-limbs.

B. Description

The artist's task is to translate a concept into tangible images by telling a story and arousing the viewer's interest and curiosity. A variety of media and methods of expression may be used to communicate ideas and create desired effects. Different types of art may be found in magazines, newspapers, books, brochures, greeting cards and posters. Art may also be found on billboards, CD covers, product packaging and storyboards. Your task is to create an artwork that will accompany the selected poem.

3. PROCEDURES - DRAWING ACTIVITY

A. Be sure to analyze the meaning of the poem. The style, imagery choice, etc. is open to your artistic interpretation. You may incorporate text into your artwork if desired.

B. Guidelines

1. All artwork must be matted or mounted with black, gray, white or cream board.

2. Format may be vertical or horizontal.

3. Size (Entries that do not conform to the following artwork size and finished board size will not be judged.)
   a. Artwork Size: Not to exceed 11” x 14”.
      (Artwork may be smaller if desired or image area may be circular if desired.)
   b. Required Finished Board Size: 14” x 17”.
      (This is to include the mounting or matting. The artwork MUST be mounted or matted to a finished size of 14” x 17”.)
4. No glass, no shrink-wrap, no acetate overlay or frames will be allowed in competition.

C. MEDIUM

Please choose from the following:

- pencil
- acrylic
- color pencil
- photography
- pen & ink
- computer graphics
- pastel
- airbrush
- watercolor
- mixed media
- marker

**NO OIL PAINT OR OIL STICK**
*Use fixative on artwork if necessary.*

4. REQUIREMENTS

A. Artwork and presentation techniques will be completed prior to the QUEST competition date. Artwork must be submitted to the Vice President for Academic Affairs' office (Building 100 Room 210) no later than 4:30 p.m. on **Friday, February 14, 2020**. Entries will be accepted between 8:00 a.m. to 4:30 p.m., Monday through Friday. The artwork will be on display in Building 920-College Center on the day of the competition.

B. The Visual Arts Entry form must be adhered to the back, centered on the finished artwork. The entry form must include the student’s name, address, phone number, school name, grade level, teacher's name and title of poem. The Visual Arts Entry Form is available on the QUEST website ([http://www.tridenttech.edu/academics/quest/index.htm](http://www.tridenttech.edu/academics/quest/index.htm)) to print.

5. SCORING - DRAWING ACTIVITY

A. The judges will use the Visual Arts Criteria Checklist to score artwork.

B. Criteria Checklist is based on the following five (5) categories:

1. **Competition Requirements** - Artwork demonstrates that the student has carefully followed the competition instructions.
2. **Craftsmanship** - Artwork demonstrates the student's proficiency with materials and tools according to the competition guidelines.
3. **Presentation** - Artwork is clean, properly sized and aligned.
4. **Creativity/Originality** - Artwork demonstrates a unique, engaging idea or expression.
5. **Interpretation of the Text** – Selected poem “*Thirteen Ways of Looking at a Blackbird*”.

C. A numerical rating from 1-5 will be awarded to each category. Once each category is numerically ranked, the judges’ scores will be added together for one final competition score.

- **Outstanding**
- **Superior**
- **Good**
- **Average**
- **Poor**
6. OVERALL WINNERS

The overall winners will be determined by the highest numerical combination score from the criteria checklist. All winners for these competitions will be announced at the appropriate Awards Ceremony.

7. ENTRY PICK-UP

Participants may pick up their entry from the College Center in Building 920-College Center at the conclusion of the appropriate Awards Ceremony. Identification will be required to release artwork. Entries will be available for pick-up until 4:00 p.m. on SATURDAY, MARCH 7, 2020. Entries that are not picked up will be sent to the school along with the QUEST certificates before the end of the academic year.

P. WELDING

INDIVIDUAL COMPETITION

1. PARTICIPANTS

Each high school will be allowed three individual participants from grades 10-12.

2. WRITTEN COMPETITION

A. All test questions will be multiple choice. There will be no penalty for incorrect answers. The score will be the number of correct answers.

B. Test questions will test knowledge in the following areas:
   1. Safety
   2. Metallurgy
   3. Weld Testing (Inspection)
   4. Welding Symbols
   5. Welding Processes and Applications
   6. Cutting Processes and Applications

3. PRACTICAL COMPETITION

A. Competitors will be required to weld using the Shielded Metal Arc Welding process and demonstrate skills by:
   1. Producing welds using E-6010 and/or E-7018 electrodes.
   2. Producing groove and/or fillet welds in any position on any joint design in accordance with a welding procedure.

B. Points will be awarded for integrity and appearance of root pass, filler passes, cover passes, and observance of weld shop safety procedures.

C. Coaches and spectators will not be permitted in the welding lab during the competition.

4. EQUIPMENT REQUIREMENTS

A. All participants must provide their own safety equipment and welding gear to include: Safety glasses with side shields *(Prescription glasses can be used only if they are equipped with side*
shields. If not, they must be covered with goggles), leathers, welding shield with #10 or #11 filter lens, leather welding gloves, welder's cap, chipping hammer and wire brush.

B. Participants must further be attired in a long sleeve cotton shirt, long cotton trousers or denim jeans and high top leather boots. No tennis shoes or shorts will be permitted. Any disregard for safety rules and regulations will result in disqualification.

5. OVERALL WINNERS

The overall winners will be determined by combining the scores from the written competition and the scores from the practical competition.

TIE BREAKER
In the event of an overall tie, competitors will be required to compete in an oxyacetylene cutting competition, in accordance with a cutting procedure.

All winners for this competition will be announced at the final Awards Ceremony.

This area intentionally left blank.
VIII. Thornley Campus Map

Building 400  Welding
Building 500  Science QUALIFYING and FINAL
Building 510  Social Studies QUALIFYING
Building 620  Horticulture
Building 700  Computer Aided Design (CAD)
              Program Displays
Building 800  Automotive
              Engineering Design & Construction
              Math QUALIFYING
Building 920  Awards Ceremonies
              Check-in Center
              Computer Programming
              Concession Stands
              Culinary Arts
              First Aid Center
              Lost & Found
              Math FINAL
              Medical Terminology
              Photo Shoot Location
              Program Displays
              QUEST Nest (student/coach meeting room)
              Social Studies FINAL
              Beginning Spanish and Intermediate Spanish
              Video/Film
              Visual Arts
Building 950  Bookstore
Building 970  Public Speaking
              Composition
For further information, please contact

Gentry Burks at 843.574.6057 (gentry.burks@tridenttech.edu)

Or

Michelle Mikkelsen at 843.574.6887 (michelle.mikkelsen@tridenttech.edu)

It is the policy of Trident Technical College that no discrimination on the grounds of race, color, disability, religion, gender, sexual orientation, age, marital status, veteran status, gender identity, pregnancy, or national or ethnic origin will exist in any area of the College. The College will make all decisions regarding recruitment, hiring, training, promotions, and all other terms and conditions of employment without discrimination on the above grounds or on other factors, which cannot lawfully be the basis for an employment decision.

Trident Technical College reaffirms its policy of administering all its educational programs and related supportive services and benefits in a manner which does not discriminate because of a current student's, or prospective student's race, color, disability, religion, gender, sexual orientation, age, marital status, gender identity, pregnancy, or national or ethnic origin, or other characteristics which cannot lawfully be the basis for provision or denial of services.
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