

APPENDIX C

FORMS FOR PAPER SUBMISSION

2017 Student Entry Form

Certification Statement Form

Continuation Project Form

2017 Reader's Evaluation Form

2017 Judge's Evaluation Form

VJAS Mentor and/or Research Facility Form

School & Individual Entry Forms - Instructions

2017 STUDENT ENTRY FORM

Category Code:

(MS=2 letters, HS=3 letters)

Multiple Author Paper Check Here

PAGE ONE

VJAS School Number

Each **student** (multiple authors included) must fill out this form completely and sign it. TYPE all information. This can be done on screen. Make sure all information prints. Staple pages ONE, TWO, THREE, FOUR, FIVE and SIX to **each** copy of your paper. (Rubber band all 5 copies together.) Signing this ENTRY FORM indicates understanding and acceptance of the official VJAS rules as set forth in the latest edition of the VJAS Handbook.

Entries must be received by VJAS at the VAS Office by **February 22, 2017**. USE FIRST CLASS MAIL, EXPRESS MAIL, or HAND DELIVER.

1. **Student's Name** (First, Middle, Last) _____ **Grade** _____
Home Address _____ City _____
Email _____, VA Zip _____
Telephone (____) _____ Parent's Name _____
2. **Name of Student Sponsor** _____
E-mail _____ Tel # [cell phone preferred] (____) _____
3. **Complete School Name** _____
School Address _____
City _____, VA Zip _____
School System _____ Tel # (____) _____
4. **Title of Paper** _____

If paper is a **continued project** then state second, third, etc. year of study. _____

5. **Check Category** (only one) in which paper belongs **and place the code at upper left.**

<i>MS: Grades 7-8 ONLY</i>	<i>HS: Grades 9-12 ONLY</i>	<i>HS: Grades 9-12 ONLY</i>
<input type="checkbox"/> AH - Animal & Human Sciences	<input type="checkbox"/> BOT - Botany	<input type="checkbox"/> MDH - Medicine & Health
<input type="checkbox"/> CS - Chemical Science	<input type="checkbox"/> CHM - Chemistry	<input type="checkbox"/> MCB - Microbiology & Cell Biology
<input type="checkbox"/> EE - Ecology & Earth Sciences	<input type="checkbox"/> EGR - Engineering	<input type="checkbox"/> PHY - Physics
<input type="checkbox"/> EM - Engineering & Mathematics	<input type="checkbox"/> ENV - Environmental & Earth Science	<input type="checkbox"/> PSY - Psychology
<input type="checkbox"/> HB - Human Behavior	<input type="checkbox"/> MSC - Math, Statistics & Computer Science	<input type="checkbox"/> ZOO - Zoology
<input type="checkbox"/> PS - Physical Science		
<input type="checkbox"/> PM - Plant Science & Microbiology		

6. **Check here** and complete ALL appropriate parts of the **Certification Statement Form** if vertebrate animals, human subjects, recombinant DNA, cells and/or tissues, pathogenic agents, toxic or controlled substances were used or if student had a mentor and/or worked in a research facility.
7. How many times previously have you presented at VJAS meetings? _____
8. If my paper is accepted, I agree to present my paper on in May 2017 at VCU.
Student's Signature* _____ Date _____
9. This paper has been reviewed to determine that the appropriate procedures were followed and valid safety precautions were taken and is therefore, recommended for reading.
Student Sponsor's Signature* _____ Date _____

***Failure to have both student and student sponsor [listed in 2 above] signatures will disqualify paper.**

SEND TO:

VJAS, c/o Virginia Academy of Science, 2500 W. Broad Street, Richmond, VA 23220

CERTIFICATION STATEMENT FORM – PAGE TWO (if applicable)

Directions: Check any of the certification boxes as applicable to the project.

Both the student and the student sponsor must sign at the bottom.

VERTEBRATE ANIMAL CERTIFICATION

I certify that the use of live vertebrates in the experimentation and observations covered by this paper was in accordance with the rules for the use of live vertebrates contained in the latest edition of the VJAS Handbook

HUMAN SUBJECT CERTIFICATION

I certify that the use of human subjects in the experimentation and observations covered by this paper was in accordance with the State of Virginia Regulations of the Board of Education Regarding Research involving Students and the rules for the use of humans contained in the latest edition of the VJAS Handbook, **that informed consent/assent/permission forms and/or parental permission were obtained, and that a sample Participant Consent Form is included in the Appendix of this paper.**

RECOMBINANT DNA CERTIFICATION

I certify that the use of recombinant DNA in the experiment and observations covered by this paper was in accordance with the revised NIH Guidelines for Research Involving Recombinant DNA Molecules and the rules for recombinant DNA contained in the latest edition of the VJAS Handbook.

CELL AND TISSUE CERTIFICATION

I certify that the use of cell or tissue samples in the experimentation and observations covered by this paper was in accordance with the rules contained in the latest edition of the VJAS Handbook.

PATHOGENIC AGENTS TOXIC OR CONTROLLED SUBSTANCES CERTIFICATION

I certify that the use of pathogenic agents, toxic or controlled substances in the experimentation and observations covered in this paper was in accordance with the rules for pathogenic agents, toxic or controlled substances contained in the latest edition of the VJAS Handbook.

MENTOR and/or RESEARCH FACILITY CERTIFICATION

This is to certify that the student worked in a research facility or received significant help from a professional other than the student's teacher. For further information, see the VJAS Mentor and/or Research Facility Form. **Both the Student and the Student Sponsor at the student's school must sign below. In addition, the VJAS Mentor and/or Research Facility Form must be filled in and signed by the scientist supervising the student research and included in the student's paper.**

If any of the above certifications apply to the project, I have marked the appropriate certification boxes and signed below.

SIGNED: _____
Student

Date

Student Sponsor

Date

CONTINUATION PROJECT FORM
PAGE THREE
(if applicable)

IF this project has been submitted to the VJAS in a previous year, all aspects of this form MUST be completed and included with the other entry forms.

Title of Project:

How many times have you entered a project under a similar research topic? _____

How does the current year's project document new and different research?

List the titles and year of your past research papers:

- 1. _____

- 2. _____

- 3. _____

- 4. _____

2017 READER'S EVALUATION FORM

Category Code
(MS=2 letters, HS=3 letters)

PAGE FOUR

VJAS School Number

Title of Paper (Typed by student)

Components	Characteristics of “Outstanding” Paper	Outstanding	Good	Average	Below Average
Abstract (10)	<ul style="list-style-type: none"> Concise statement of the problem, approach, key results, and conclusion 	10 9	8 7 6	5 4 3	2 1
Introduction (20)	<ul style="list-style-type: none"> Clear statement of rationale (reason) for project Clear statement of problem to be addressed Sufficient explanation of background concepts Reflects accepted practices in the STEM discipline Based upon a variety of strong valid references 	20 19 18 17	16 15 14 13 12 11	10 9 8 7 6 5	4 3 2 1
Methods and Materials (15)	<ul style="list-style-type: none"> Clear explanation of procedure which includes materials and equipment used Includes safety precautions which are consistent with risk analysis Appropriate use of materials, equipment, and technology Design which is consistent with the STEM discipline 	15 14 13	12 11 10 9	8 7 6 5 4	3 2 1
Results (15)	<ul style="list-style-type: none"> Contains sufficient trials, design iterations, or proofs Collected over an appropriate time period Appropriately uses data tables, graphs, or other visual presentations Appropriately uses statistical and/or other analytical methods Addresses unexpected events or data Verbally summarizes key findings 	15 14 13	12 11 10 9	8 7 6 5 4	3 2 1
Discussion and Conclusion (15)	<ul style="list-style-type: none"> Relates major findings to problem investigated Uses STEM literature to explain findings Articulates strengths, weaknesses, and improvements needed Describes applications of research and potential future projects 	15 14 13	12 11 10 9	8 7 6 5 4	3 2 1
General Assessment of Paper (10)	<ul style="list-style-type: none"> Consistent with reporting procedures in the STEM discipline Clearly communicates the chain of reasoning followed throughout the project Contains few spelling or grammatical errors Appropriately credits sources 	10 9	8 7 6	5 4 3	2 1
Quality of Project (15)	<ul style="list-style-type: none"> Addresses high quality problem which is important for the STEM discipline Seeks to solve a problem whose results are not obvious to the student given their educational background Shows ingenuity in design, methodology, or analysis Strong evidence that student did the work and understands the project 	15 14 13	12 11 10 9	8 7 6 5 4	3 2 1

GRAND TOTAL = _____ / 100 Maximum Points

CIRCLE the characteristics which need to be improved. Write comments below or on the reverse side.

2017 JUDGE'S EVALUATION FORM

Category Code
(MS=2 letters, HS=3 letters)

PAGE FIVE
Title of Paper (Typed by student)

VJAS School Number

Judge: Please reference the supplemental instructions for a detail explanation of criteria and scoring ranges. Remember, the form will be returned to the student. Double-check your calculations and comments (may use reverse side).

Section I. VJAS RESEARCH PAPER SCORES (100 Points Maximum)

- A. Abstract _____ / 10 Points Maximum
- B. Introduction _____ / 20 Points
- C. Methods and Materials _____ / 15 Points
- D. Results – Data Presentation _____ / 10 Points
- E. Results – Data Analysis _____ / 10 Points
- F. Discussion and Conclusion _____ / 15 Points
- G. Strength of Literature Cited _____ / 10 Points
- H. General Assessment of Paper _____ / 10 Points

Add A + B + C + D + E + F + G + H
Section I Subtotal _____ / 100

Section II. QUALITY OF RESEARCH SCORES (50 Points Maximum)

- A. Quality of Problem _____ / 10 Points Maximum
- B. Validity of Approach for Discipline _____ / 15 Points
- C. Communication of Reasoning Used _____ / 15 Points
- D. Evidence of Creative and Innovative Thought _____ / 10 Points

Add A + B + C + D
Section II Subtotal _____ / 50

Section III. ORAL PRESENTATION SCORES (50 Points Maximum)

- A. Clarity of Oral Presentation _____ / 15 Points Maximum
- B. Comprehensive Overview of Project _____ / 20 Points
- C. Responses to Judges Questions _____ / 15 Points

Add A + B + C
Section III Subtotal _____ / 50

GRAND TOTAL & FINAL SCORE: Section I + II + III = _____ / 200 Maximum Points

VJAS MENTOR AND/OR RESEARCH FACILITY FORM – PAGE SIX
(if applicable)

This form must be completed by the scientist supervising the student research conducted in a research institution (e.g., college/university, medical center, NIH, correctional facility, etc.) or industrial setting.

Paper Title _____

To be completed by the Scientist (NOT the Student or Student Sponsor) after experimentation has been completed. **Please DO NOT identify student by name.**

The student conducted research at my institution: (check one)

- A. Only to use the equipment B. To perform experiment(s)

If B is checked, the following questions must be answered.

1) How did the student get the idea for her/his project? (e.g. Was the project assigned, picked from a list, an original student idea, etc.?)

2) What did the student do that showed creativity and ingenuity? (Did the student create or show creativity in experimental design, development of techniques or equipment, arrive at own conclusions, etc.)

3) Did the student work on the project as a part of a research group? Yes No

If yes, how large was the group and what kind of research group was it (students, group of adult researchers, etc.)

4) What specific procedures did the student actually perform? How independently did the student work? Please list and describe. (Do not list procedures student only observed.)

Scientist's Printed Name _____

Signature _____ Title _____

Institution _____ Date Signed _____

Institutional Address (street or PO Box, city, state, zip) _____

Phone (_____) _____ e-Mail _____

2017 School & Individual Entry Forms Instructions

A **School Entry Form** or **Individual Entry Form** must be completed when submitting papers for the Research Symposium. These entry forms are Excel Spreadsheets that will be emailed (as attachments) in late January or early February to the Head Sponsors of all 2016-2017 VJAS Member Schools and to the Parents/Guardians of all 2016-2017 VJAS Individual Members.

- **School Entry Form** is for listing papers submitted by students attending VJAS Member Schools.
- **Individual Entry Form** is for listing papers submitted by VJAS Individual Members (i.e., home-school students or students who attend a school that is not a VJAS School Member for the current year).

Directions:

- The **Head Sponsor** (of a VJAS Member School) should complete the School Entry Form.
 - The **Parent/Guardian** (of a VJAS Individual Member) should complete the Individual Entry Form.
1. Complete the Excel spreadsheet (that was sent to you via email) according to the instructions provided on the form. In the event that you did not receive this form, or cannot locate it, please contact the VAS Office at vasoffice@vacadsci.org.
 2. Please rename the completed file “name_entry_form” using the school name (for school member) or “last name entry form” (for individual member). (Examples: “WakefieldHS_Entry_Form” or “Smith_Entry_Form”)
 3. Please make a hard (paper) copy and enclose it with your student paper(s), and
 4. **Email a copy of the completed Excel file by **February 22, 2017** to the VAS Office at vas@smv.org.**

Importance: These forms are used to generate the VJAS Program.

The information, as you submit it, is copied and pasted into our other forms that are ultimately used to generate the VJAS Program. Therefore, ALL submitted information should be accurate. In particular, please make sure of the following:

1. The complete first and last name of each student is given and **is the same as the name listed on the Student Entry Form** attached to the paper. Make sure that the spelling is correct. **Do not use nicknames.**
2. The exact title of the paper is given and is the **same as the title listed on the Student Entry Form** attached to the paper. Make sure that the spelling is correct.