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| --- | --- | --- | --- | --- |
| **STEM** | **HUMANITIES** | **PERFORMING ARTS** | **VISUAL ARTS** | **BUSINESS** |
| Architecture\* | Music Composition\* | Dance: Ballet | Drawing\* | Entrepreneurship\* |
| Biology/Microbiology\* | Original Essay\* | Dance: Contemporary | Filmmaking | Hospitality Management |
| Chemistry/Biochemistry\* | Playwriting\* | Dance: Modern | Painting\* |  |
| Computer Science\* | Poetry—Written\* | Dance: Traditional | Photography\* |  |
| Earth and Space Sciences\* | Short Story\* | Music: Instrumental— Classical | Sculpture\* |  |
| Engineering\* |  | Music: Instrumental— Contemporary |  |  |
| Mathematics\* |  | Music: Vocal—Classical |  |  |
| Medicine and Health\* |  | Music: Vocal—Contemporary |  |  |
| Physics\* |  | Dramatics |  |  |
|  |  | Oratory |  |  |
|  |  | Poetry—Performance |  |  |

***\*If meeting in-person, this competition is closed to the public until student interviews are complete.***

# ENTREPRENEURSHIP\*



### ENTREPRENEURSHIP

Refers to owning, organizing, and managing your own business by providing a necessary product or service.

### REQUIREMENTS:

1. The contestant is required to make a verbal and visual presentation, **not to exceed five (5) minutes**, explaining their business plan. Product demonstrations are not required but can be offered at the requests of the judges. Demonstrations should not exceed a second set of five (5) minutes, inclusive of questions and answers.
2. A visual presentation in the form of a Canva/Keynote/PowerPoint presentation, or physical display.
3. Familiarity with their business/brand’s industry and general business terms related to their product/service. General business understanding including, but not limited to marketing, product development process, financials, target market, etc. are required.
4. One, typed 8-1⁄2-inch by 11-inch double spaced business plan must accompany the entry. The business plan, which should be a **minimum of ten (10) pages and not to exceed twenty (20) pages**, should include a cover page, executive summary, company description, marketing plan, management plan and a financial plan, in addition to any supporting documents (i.e. graphs, photographs, statistical data).
5. The student’s name, page number and branch must be at the top of each page. The plan must be submitted on or before the specified deadline for judges’ pre competition.
6. Contestants are required to have personally written the business plan and have been involved with the production of any prototype product or service trials.
7. One point will be deducted from the contestants overall score for each second over the presentation and/or demonstration time.
8. Contestants must submit **three (3**) copies of their business plan.

#### Contestants will be judged by the following criteria:

* **Written Business Plan**
  + Marketing Plan (including where you plan to market/promote your product/service, content creation strategy, campaign ideas, advertising plans (15 pts.)
  + Management Plan/Personnel Profiles (10 pts.)
  + Financial Plan (including cash profit & loss statement, budget, financial projects for the next 2 years) (15 pts.)
  + Market, Research, & Analysis (including target customer/audience, industry research/data, product/service research/data) (10 pts.)
  + Government Requirements (5 pts.)
  + Product/Service Knowledge (including pricing, product functionality/service description) (10 pts.)
  + Customer Service Plan (including how you will handle returns, customer complaints, and general customer outreach) (5 pts.)
  + Creativity/Originality (5 pts.)
* **Oral Presentation**
  + Comfort Level of Product/Service Knowledge (10 pts.)
  + Social Responsibility/Contribution to the Community (5)
  + Presentation Style (5 pts.)
* **Visual Presentation** (5)

# MUSIC COMPOSITION\*

The science or art of arranging music by ordering tones or sounds in succession, in combination or in temporal relationships to produce a composition having unity and continuity.

### REQUIREMENTS:

1. The top page must include the contestant’s name, page number .
2. The composition must be neatly and precisely written on music manuscript paper, in such a manner that any trained musician could perform the composition. Before submission, all electronically generated manuscripts (Finale, Sibelius, etc.) must be proofread to ensure proper quantization in the final print generated composition. All submissions must show competency in writing for the chosen medium.
3. The contestant must bring a copy of the CD or some accepted format for the judges to be able to hear the composition onsite at the Local competition.
4. Contestants must submit **three (3) copies** of the composition.
5. The composition must **not exceed five (5) minutes**.
6. Students are allowed to perform their piece without an infringement on their interview time.

**Contestants will be judged by the following criteria:**

* + Creative sense (10)
  + Form (20)
  + Harmonic and rhythmic interest (20)
  + Strength of melodic line (20)
  + Use of theory (20)
  + Quality of transcript (10)

# ORIGINAL ESSAY\*



### ORIGINAL ESSAY

A brief examination of a subject in evaluative or analytical prose usually expressing a personal view or interpretation of a topic or issue.

### REQUIREMENTS:

1. The original essay written only by the contestant should be submitted on or before the specified deadline. The top of each page must include the contestant’s name, page number.
2. The essay must be typed and double-spaced; **not to exceed 6,000 words.**
3. The contestant must be prepared to answer questions by the judges.
4. Contestants must submit **three (3)** copies of the essay.

#### Contestants will be judged by the following criteria:

**General Merit (25)**

* + Ideas – advances (or considers) existing knowledge while offering a fresh or novel analysis.
  + Organization, clarity, and flow
  + Wording— effective use of language, claims, and argumentation
  + Flavor – (author’s) voice/perspective, (emotive?) style, depth, creativity

**Mechanics (25)**

* + Proper usage
  + Punctuation/Capitalization
  + Spelling

**Overall Effect (50)**

* + Convincing and compelling
  + Resonance (motivation, inspiration, provocation, etc.)
  + Topic/issue significance
  + Educational value (teaches readers something new)

# PLAYWRITING\*

A literary composition developed for the stage.

### REQUIREMENTS:

1. The play must be an original (written only by the contestant).
2. The play must be typed and double spaced, **not to exceed twenty (20) pages**.
3. One-page synopsis must be included.
4. The top of each page must include the contestant’s name, page number.
5. The contestant must be prepared to answer questions by the judges.
6. Contestants must submit three (3) copies of the play.

#### Contestants will be judged by the following criteria:

* + - Characterization (10) – Is there a protagonist of some type? Is there an antagonist? Are the characters in the play developed? Are the roles defined?
    - Clarity (10) – Is the author’s theme and purpose clearly stated?
    - Content (25) – Is the subject matter or situation of the play relevant, creative, and/or controversial?
    - Dialogue (10) – Is the word usage or phrasing consistent with the character? Does the dialogue advance the plotline or develop the character’s background?
    - Mechanics (10) – Is the manuscript clearly typed? Are there errors in spelling and/or grammar?
    - Plot (25) – Has the storyline been clearly defined? Has the action of the play been chronologically developed? Is there evidence of:
      * Exposition
      * Complication
      * Climax
      * Conclusion
* Style (10) – Has the playwright established a definitive method or style?

# POETRY—PERFORMANCE

An original poem or prose, written by the contestant, performed as a monologue or exchange involving extemporization.

### REQUIREMENTS:

1. The top of each page must include the contestant’s name, page number.
2. Poems should be typed, using 12 point **Times New Roman, Verdana, Georgia, or Comic Sans.** Please no other fancy typefaces or graphics. Poems should retain original form that they were created in and do not have to be double-spaced. Individual poems may be free verse or rhymed metrical poetry containing stanzas. Poems should **not exceed 3 pages.**
3. The contestants must perform their work before a panel of judges. The performance must not exceed **three (3) minutes**. (Contestants not adhering to the maximum time requirement are subject to point deduction and/or disqualification.)
4. Contestants must submit three (3) copies of the original poem.

#### Contestants will be judged by the following criteria:

* + Emotional/Physical Presence (20)- Is the poet emotionally connected to the topic they are presenting? Is the poet demonstrating eye contact, body language and poise?
  + Original Thought (20) - Has the poet tackled an interesting subject or created something new with their work, or are they simply parroting belief systems or ideas that they have heard from someone else.
  + Voice and Articulation (20) – Does the poet exhibit appropriate volume, pace, rhythm, intonation and proper pronunciation?
  + Structure or Form, and Overall Presentation (20) - How is the poem constructed? Are there appropriate line and stanza breaks? Does the poem have a strong title? Does the poem contain appropriate grammar and punctuation?
  + Evidence of Understanding/Accuracy (20) – Does the poet comprehend the material they’re presenting and makes the audience understand? Does the poet miss written words or mispronounce words during their recitation?

# POETRY—WRITTEN\*



A composition, marked by language chosen for its sound, beauty and evocative power.

### REQUIREMENTS:

1. The top of each page must include the contestant’s name, page number.
2. Poems should be typed, using 12 point **Times New Roman, Verdana, Georgia, or Comic Sans.** Please no other fancy typefaces or graphics. Poems should retain original form that they were created in and do not have to be double-spaced. Individual poems may be free verse or rhymed metrical poetry containing stanzas. Poems should **not exceed 3 pages**.
3. The contestants will be interviewed about their work by a panel of judges.
4. Contestants must submit three (3) copies of the original poem.

#### Contestants will be judged by the following criteria:

* + Emotional Connection (20)- Is the poet emotionally connected to the topic they are writing about and does the poem elicit an emotional response from the reader?
  + Original Thought (20) - Has the poet tackled an interesting subject or created something new with their work, or are they simply parroting belief systems or ideas that they have heard from someone else.
  + Sequential Development (20) - Does the poem follow a distinct path or does it wander without every really getting to the point. Are there too many things going on in the poem? Is there a strong ending, or is it forced?
  + Structure or Form, and Overall Presentation (20) - How is the poem constructed? Are there appropriate line and stanza breaks? Does the poem have a strong title? Does the poem contain appropriate grammar and punctuation?
  + Use of language as it relates to theme (20) - Does the poet use figurative language including vivid imagery, similes, metaphors, hyperbole, or idiom? Is the voice active, are the senses engaged?

**SHORT STORY**

# SHORT STORY\*

A narrative examination of a subject in fictional or nonfictional prose usually expressing a personal view or interpretation of an issue or topic.

### REQUIREMENTS:

1. The short story written only by the contestant should be submitted on or before the specified deadline.
2. The top of each page must include the contestant’s name, page number.
3. The Short Story should have a single-story line without subplots, no more than three or four characters, a single viewpoint, and a short time scale. The story must be typed, double spaced and between **1500 and 3000** words.
4. The contestant must be prepared to answer questions by the judges.
5. Contestants must **submit three (3)** copies of the short story.

#### Contestants will be judged by the following criteria:

General Merit (25)

* + Ideas – originality or a unique perspective (on an existing idea), single storyline, no subplots, short time frame
  + Organization and clarity – consistent writing style, mood/tone, and space
  + Wording – strategic and intentional use of language (e.g., for expression, realism, authenticity, emphasis, cultural or social commentary)
  + Flavor – (author’s) voice/perspective, style, depth/provocation, creativity

Mechanics (25)

* + Proper usage
  + Punctuation/Capitalization/Spelling
  + Short story five elements: plot, setting, characters (3-4 max), effective implementation of POV (e.g., first person, third person, etc.)

Overall Effect (50)

* + Minimal background, concise dialogue, no lengthy preamble
  + Natural ending achieving any (or all) of the following elements: plot alignment, authenticity, consistency, emotional resonance, reader satisfaction, and surprise within expectations.

# DANCE: BALLET

To perform a series of rhythmic and highly technical patterned bodily movements usually performed to music using grace and precision.

### REQUIREMENTS:

1. The solo performance must **not exceed five (5) minutes**. (Contestants not adhering to the maximum time requirement are subject to point deduction and/or disqualification.)
2. Costumes are optional, but should be appropriate to the choreography performed.
3. The theme and/or type of the performance must be identified to the judges prior to the presentation. Types include: Classical Ballet, Contemporary Ballet, Neo-classical Ballet, or Story Ballet.
4. The piece must be performed in ballet slippers/flats, or pointe/demi pointe shoes. Bare feet are only acceptable for Contemporary Ballet.

#### Contestants will be judged by the following criteria:

* + - Technical Proficiency/Skill (25)
      * Alignment, strength, endurance, flexibility, coordination
    - Clarity and Consistency in Style (25)
    - Phrasing/Dynamics/Musicality (25)
    - Clarity of Intent/Interpretation of Choreography (25)

# DANCE: CONTEMPORARY

To perform a series of rhythmic and technical patterned bodily movements usually performed to music.

### REQUIREMENTS:

1. The solo performance must **not exceed five (5) minutes**. (Contestants not adhering to the maximum time requirement are subject to point deduction and/or disqualification.)
2. Costumes are optional, but should be appropriate to the choreography performed.
3. The theme and the dance form of the performance must be identified to the judges prior to the presentation. Dance forms include: Broadway/Musical Theater, Hip-Hop, Jazz, Lyrical, and Tap.
4. Aerobic exercises, miming, cheerleading and drill team routines may not be used.

#### Contestants will be judged by the following criteria:

* + - Technical Proficiency/Skill (25)
      * Alignment, strength, endurance, flexibility, coordination
    - Clarity and Consistency in Style (25)
    - Phrasing/Dynamics/Musicality (25)
    - Clarity of Intent/Interpretation of Choreography (25)

# DANCE: MODERN

To perform a series of rhythmic and patterned bodily movements usually performed to music that focuses on the dancer’s interpretations using their emotions and moods to develop choreography.

### REQUIREMENTS:

1. The solo performance **must not exceed five (5) minutes**. (Contestants not adhering to the maximum time requirement are subject to point deduction and/or disqualification.)
2. Costumes are optional, but should be appropriate to the choreography performed.
3. The theme of the performance must be identified to the judges prior to the presentation.
4. Each performance must derive from Dunham, Graham, Horton, Humphrey, Limon, or other modern techniques.

Contestants will be judged by the following criteria:

* + - Technical Proficiency/Skill (25)
      * Alignment, strength, endurance, flexibility, coordination
    - Clarity and Consistency in Style (25)
    - Phrasing/Dynamics/Musicality (25)
    - Clarity of Intent/Interpretation of Choreography (25)

# DANCE: TRADITIONAL

To perform a series of rhythmic and patterned bodily movements usually performed to music to reflect the life of the people of a certain region or country.

### REQUIREMENTS:

1. The solo performance must **not exceed five (5) minutes**. (Contestants not adhering to the maximum time requirement are subject to point deduction and/or disqualification.)
2. Costumes are optional, but should be appropriate to the choreography performed.
3. The theme and the dance form (African, Cuban, Afro-Latin, etc.) of the performance must be identified to the judges prior to the presentation.

Contestants will be judged by the following criteria:

* + - Technical Proficiency/Skill (25)
      * Alignment, strength, endurance, flexibility, coordination
    - Clarity and Consistency in Style (25)
    - Phrasing/Dynamics/Musicality (25)
    - Clarity of Intent/Interpretation of Choreography (25)

The art of staging or acting plays.

# DRAMATIC ARTS: ACTING

### REQUIREMENTS:

1. The performance must be a **minimum of three (3) minutes and maximum of five (5) minutes**. (Contestants not adhering to the minimum and maximum time requirements are subject to point deduction and/or disqualification.)
2. All material must be from a published play. Students should not perform poems, sermons, stand- up routines, or excerpts from movies.
3. The selection must be of literate quality.
4. The material must be memorized.
5. Costumes, makeup, and small/minimal props are optional, but not required.
6. Puppetry, oratory, and forensic pieces may not be used.
7. Monologues from Musical Theatre is permitted, however accompanying songs may not be used as part of the piece.

#### Contestants will be judged by the following criteria:

* + Projection (10)
  + Structure (10pts): Does the performance have transitions/beats and a clear beginning, middle, climax, and end?
  + Memorization (10)
  + Movement (10): Is the blocking clear and does the actor commit to and follow through with his/her movements and gestures?
  + Emotional Connection and Honesty (10): Are you really "selling" that you are becoming this character or are you simply "play-acting"?
  + Imagination and Creativity (15): Are you bringing something different to the piece or are you just reciting lines?
  + Stage Presence (10)
  + Character Work (10)
  + Specificity of Acting Choices (10): Clear pursuit of Actions/Objectives
  + Creation of the Space (5)

# MUSIC: INSTRUMENTAL—CLASSICAL

The art of performing with a device used to produce music with tones of the late 18th and 19th centuries characterized by an emphasis on balance, clarity, and moderation.

### REQUIREMENTS:

1. The musical selection must be one specifically written for solo performances. The performance may be an excerpt and may **not exceed five (5) minutes**. (Contestants not adhering to the maximum time requirements are subject to point deduction.)
2. Contestants must submit three (3) copies of the sheet music for their performance.
3. If the selection chosen is written with piano accompaniment, it must be performed in that manner.
4. The composition to be performed must be consistent with the nature of the instrument and the level of musical proficiency of the performer.
5. The selection of music and instrument is solely the decision of the contestant.
6. The only instrument provided for the performance will be a piano.
7. Live accompaniment is permitted for this competition.

**Contestants will be judged by the following criteria:**

* + - Interpretation, Expression, Tempo, Phrasing, and Historically appropriate style (20)
    - Intonation and touch (piano) (20)
    - Stage presence, choice of music (20)
    - Technique, articulation, Breathing, Rhythm, Facility and Accuracy (20)
    - Tone quality, Beauty, Control, Characteristic timbre (20)

# MUSIC: INSTRUMENTAL—CONTEMPORARY

The art of performing with a device used to produce music with the tones of the present.

### REQUIREMENTS:

1. The musical selection must be one specifically written for solo performances and **may not exceed five (5) minutes**. (Contestants not adhering to the maximum time requirement are subject to point deduction.)
2. The selection performed should feature a solo performance. The contestants must provide additional musicians if they are needed for their performance. Contestants can also bring an accompanist.
3. The only instrument provided for performance will be a piano. Contestants must provide additional instruments/equipment as needed.
4. The selection of music and instrument is solely the decision of the contestant.
5. Examples of contemporary music are R&B, Broadway, Jazz, Gospel, Blues, etc.
6. Live accompaniment is permitted for this competition.

#### Contestants will be judged by the following criteria:

* + - Effectiveness of style, Improvisation (20)
    - Intonation, Touch (piano) (20)
    - Stage presence, Choice of music (20)
    - Technique, Articulation, Breathing, Tonality, Rhythm, Facility (20)
    - Tone quality, Beauty, Control, Characteristic timbre (20)

# MUSIC: VOCAL—CLASSICAL

The art of performing with the human voice rhythmic tones or sounds of the late 18th and 19th centuries characterized by an emphasis on balance, clarity, and moderation.

### REQUIREMENTS:

1. Only one (1) song is to be performed, and it must **not exceed five (5) minutes**. (Contestants not adhering to the maximum time requirement are subject to disqualification.)
2. Competitors should not perform to a CD. Contestants can also bring an accompanist.
3. Contestants must submit three (3) copies of their sheet music.
4. The material must be memorized.
5. Costumes are not required.
6. Live accompaniment is permitted for this competition.
7. The only instrument provided for performance will be a piano.

#### Contestants will be judged by the following criteria:

* + Choice of Music (10)
  + Diction (25)
    - Correctness of pronunciation
  + Interpretation (10)
    - Expression
    - Phrasing
    - Historically appropriate style
    - Tempo
  + Intonation (10)
  + Stage presence (10)
  + Technique (10)
    - Breathing
    - Posture
    - Rhythm
    - Accuracy
  + Tone quality (25)
    - Beauty of sound
    - Control

# MUSIC: VOCAL—CONTEMPORARY



The art of performing with the human voice rhythmic tones or sounds to produce music with the tones of the present.

### REQUIREMENTS:

1. Only one (1) song is to be performed, and it must **not exceed two and a half (2.5) minutes**. (Contestants not adhering to the maximum time requirement are subject to point deduction.)
2. Musical accompaniment must be provided by the contestant either live or using a standard CD. The CD should contain only the instrumental version of the song. Contestants are encouraged to have backup CD.
3. Contestants can also bring an accompanist.
4. The material must be memorized.
5. Costumes are not permitted.
6. Examples of contemporary music are R&B, Broadway, Jazz, R&B, Gospel, Blues, etc.
7. Live accompaniment is permitted for this competition.
8. The only instrument provided for performance will be a piano.

**Contestants will be judged by the following criteria:**

* + Choice of Music (15)
    - Matched to vocal ability
  + Interpretation (20)
    - Expression, Phrasing, Style
    - Tempo
    - Arrangement
  + Stage Presence (15)
    - Comfort on and control of stage, posture
    - Rapport with audience
  + Technique (25)
    - Breathing
    - Posture
    - Rhythm
    - Accuracy
  + Tone Quality (25)
    - Beauty of sound
    - Control
    - Intonation and Diction

# ORATORY



The art of effective written, and oral presentation to persuade or inform. (This is not a dramatic presentation.)

### REQUIREMENTS:

1. Only one (1) speech is to be presented, and it must **not exceed five (5) minutes**.
2. The selection of the speech is the decision of the contestant; it should be an original piece written by the contestant.
3. The speech is not to be presented as a dramatic presentation.
4. Costumes and props are not permitted.
5. The material must be completely memorized.

***Contestants will be judged by the following criteria:***

* + Delivery (25)
    - Speech Clarity
    - Diction
    - Pronunciation
    - Enunciation
    - Gestures
    - Emphasis
    - Memorization
    - Tempo
    - Time
  + Interpretation (25)
    - Content
    - Subject Adherence
    - Theme
    - Logic and Color
    - Emotion/Connection
  + Platform Presence (25)
    - Poise
    - Appeal
    - Impression
    - Attitude and Effect
    - AudienceEngagement
  + Projection (25)
    - Voice
    - Emphasis
    - Tone
    - Pitch
    - Volume

## ARCHITECTURE\*



Plans for and models of structures and outdoor spaces.

Examples may include but are not limited to**:** Building designs, landscape designs, interior designs, urban plans. Can include 2D work such as hand-drawn sketches, computer-aided designs, blueprints, and floor plans, OR 3D work such as scale models made from foam core, balsa wood, cardboard, wooden blocks, polystyrene, found or reused objects, etc.

### REQUIREMENTS:

1. Only one (1) original project may be submitted. The project must be the creation of the competing contestant, rather than a replication of another architect’s design.
2. Submit one copy of a double-spaced paper to accompany the project. The content of the paper, which should **not exceed five (5) pages**, should include overall statement of goals and processes, design objectives, the history of the project and execution of the project. The student’s name, page number must be on the top of each page.
3. Blueprints of the project must be 24 x 36 inches in length or width. The contestant must also submit a site plan, floor plan, a minimum of two (2) elevations and a section of the design at appropriate scale.
4. Contestants are required to conduct a **minimum five (5) minutes oral presentation**, explaining his/her project. This time limit does not include the time required for the judges to ask questions and the contestant to respond to the judges.
5. Contestants are required to construct a scaled model of his or her project. (ACT-SO will provide Display tables and electricity.)

#### Contestants will be judged by the following criteria:

* Complexity of Project/Originality (15)
* Planning and Space Concepts (10)
* Aesthetics (10)
* Consistency and Validity of Design Concepts (10)
* Drawings (15)
  + Quality of line work
  + Organization of drawings
* Model (10)
  + Workmanship, Scale
* Site Analysis/Design (15)
* Construction Materials/Methods of Construction (5)
* Written Statement (5)
  + Explaining Project, Establishing Parameters
  + Identifying Project Limitations and Design Objectives
* Verbal Presentation (5)

# BIOLOGY/MICROBIOLOGY\*



The science of life or of the origin, structure, reproduction, growth and development of living organisms collectively.

*Projects in this category could involve the biology of organisms from the macroscopic scale to the microscopic scale (e.g., bacteria, viruses, protozoa, fungi, yeast, genes, etc.)*

# CHEMISTRY/BIOCHEMISTRY\*

The science that deals with the composition, structure and properties of chemical processes and phenomena of substances and the transformation that they undergo.

*Projects in this category could involve physical chemistry, organic chemistry, inorganic chemistry, materials, plastics, fuels, pesticides, metallurgy, soil chemistry, etc. This category also includes the chemistry of life processes such as molecular biology, molecular genetics, enzymes, photosynthesis, blood chemistry, protein chemistry, food chemistry, hormones, etc.*

# COMPUTER SCIENCE\*



The science that deals with the theoretical aspects of computers including storage and the transformation of data using computers.

*This category pertains to the study and development of computer hardware, software engineering, Internet networking and communications, graphics (including human interface), simulations/virtual reality or computational science (including data structures, encryption, coding and information theory).*

# EARTH AND SPACE SCIENCES\*



The body of sciences that include geology, mineralogy, physiographic, oceanography, meteorology, climatology, astronomy, speleology, seismology, geography, etc.

*Projects in this category could also be concerned with environmental science such as the study of pollution (air, water, and land) sources and their control as well as ecology.*

## ENGINEERING\*



Technology. Projects that directly apply scientific principles to manufacturing and practical uses.

*Projects in this category could involve civil, mechanical, aeronautical, chemical, electrical, photographic, sound, automotive, marine, heating, refrigerating, transportation, and environmental engineering; electronics; etc.*

# MATHEMATICS\*



The science of numbers and their operations, interrelations, combinations, generalizations, and abstractions of spaced configurations and their structure. Development of formal logical systems or various numerical and algebraic computations and the application of these principles.

*Projects in this category could involve calculus, geometry, number theory, statistics, complex analysis, probability, etc.*

# MEDICINE AND HEALTH\*



The study of diseases and health of humans and animals.

*Projects in this category could involve dentistry, pharmacology, pathology, ophthalmology, nutrition, sanitation, dermatology, allergies, speech and hearing, etc.*

# PHYSICS\*



Theories, principles and laws governing energy and the effect of energy on matter.

*Projects in this category could involve solid state physics, optics, acoustics, particle physics, nuclear physics, atomic energy, superconductivity, fluid and gas dynamics, thermodynamics, semiconductors, magnetism, quantum mechanics, biophysics, etc.*

**The following requirements apply to Biology/Microbiology; Chemistry/Biochemistry; Computer** **Science; Earth and Space Sciences; Engineering; Mathematics; Medicine and Health; and Physics.**

1. Only one (1) project can be entered per competition.
2. Submit one copy of a double-spaced scientific paper to accompany the project to be submitted. The content of the paper, which should **not exceed five (5) pages**, should include: a short introduction describing the background and purpose of the work, an experimental section including both methods and results, and a concluding section discussing the results and their implications. Tables, graphs, charts, maps, photographs, raw statistical data, etc. should be included whenever possible. They must also include references used and acknowledgements of any individuals who served as direct academic resources. The student’s name, page number must be on the top of each page. Supporting documents must be submitted with the scientific paper.
3. The contestant is to make an oral presentation (**minimum 5 minutes**). This time limit does not include the time required for judge’s questions and contestant to responses.
4. Contestants are responsible for providing their own equipment.
5. Contestants must provide a display board for each qualifying entry. No display boards are permitted to appear in more than one competition. Additionally, the content of each display board must be relevant to the competition. Items used for demonstrations can be transferred if needed.

(if applicable).

1. STEM projects will be judged by the following criteria:
   * Quality of Research
     + Scientific Approach/Method (20)
     + Validity of Information (10)
     + Validity of Conclusion(s) (10)
   * Depth of Understanding Oral Presentation
     + Knowledge Gained and Creativity (20)
     + Thoroughness & Individual Work (20)
   * Written Report (10)
   * Visual Presentation (10)

**Science Written Projects – Proper Formatting**

**Science papers should be presented in the following format**:

**TITLE PAGE**

**CONTENT OF PAPER**

**ACKNOWLEDGE- MENTS PAGE**

**REFERENCES**

**SUPPORTING DOCUMENTS TITLE PAGE**

**SUPPORTING DOCUMENTS**

**SCIENCE VERIFICATION FORM**

# DRAWING\*

The art of representing forms and figures on a surface by means of lines executed by hand or computer (digital) generated processes.

### REQUIREMENTS:

1. Only one (1) project can be submitted.
2. ACT-SO will provide easels.
3. The contestant is required to make an oral presentation, which will **not exceed three**

**(3) minutes**, explaining the methods or techniques used in developing the project.

1. The submission should be **no larger than 36 inches by 48 inches**. Framing is optional.
2. The oral presentation must not exceed three (3) minutes.

#### Contestants will be judged by the following criteria:

* Composition (20)
* Line/Form (20)
* Presentation (20)
* Technique/Craftsmanship (20)
* Theme (20)

# FILMMAKING



The art and process of making motion pictures.

### REQUIREMENTS:

1. Only one (1) film is to be entered.
2. The running time of the film must **not exceed five (5) minutes.**
3. Only one (1) film is to be entered in DVD format.
4. The running time for the film must not exceed five (5) minutes excluding closing credits.
5. A playback unit will be provided.
6. Two (2) copies of the film should be submitted.
7. The contestant must shoot all footage. The use of stock footage, or any other footage not shot by the contestant will result in immediate disqualification. Written permission or purchased/licensed material cannot be used.
8. A storyboard or project theme must be associated with the film. Digitally rendered or manually produced storyboards can be submitted.

**Please Note: Storyboards are NOT stills taken from the film; rather they are original drawings, sketches, etc. completed PRIOR to the execution of the film.**

***Do not simply burn a Quick Time or AVI file to a disc as data. This may render your film unplayable. Make sure your disc plays in a standard DVD player before you submit your entry.***

#### Contestants will be judged by the following criteria:

* + Creative (25)
    - Storyboard (10) - how effectively did the competitor

execute the ideas presented on the storyboard in their piece?

* + - Originality (15)- Did the competitor try to challenge him/herself to do something different and interesting. Did they have a new and interesting way of retelling an old story/concept? Creativity of approach or concept
  + Production (35)
    - Direction/Structure (25) – the use of camera, choice of shots to help convey the story, framing, camera movement, clarity of story
  + Use of light (10) – Are actors and/or environment lit effectively
  + Sound (15)
    - Use of audio effects/music (10)
    - Audibility (5) – Is dialogue audible.
  + Post Production (25)
    - Editing (20)– Approach in editing to tell the story more effectively.
    - Titles (5)

# PAINTING\*



Art created by applying pigment on a two-dimensional surface with a brush, knife, or hand and/or the manipulation of digital processes with a computer

Examples include but are not limited to: Oil, acrylic, watercolor, gouache, tempera, ink, encaustic, fresco, spray paint, etc. applied on canvas, canvas board, paper, mixed media or any flat surface.

### REQUIREMENTS:

1. Only one (1) project can be entered.
2. ACT\_SO will provide easels.
3. The contestant is required to make an oral presentation, which will **not exceed three (3) minutes**, explaining the methods or techniques used in developing the project.
4. The contestant must be available to answer questions from the judges.
5. The submission should be **no larger than 36 inches by 48 inches**. Framing is optional.

#### Contestants will be judged by the following criteria:

* Color (20)
* Composition (20)
* Craft (20)
* Line/Form (20)
* Theme (20)

# PHOTOGRAPHY\*



The process, art and technique of capturing images with an analog or digital camera

Examples include but are not limited to: Black and white photographs, color photographs, digital or analog photographs, photograms, other experimental photography, etc.

### REQUIREMENTS:

1. No more than six (6) photographs can be submitted or one (1) collage of work.
2. The photographs and/or mounting boards must be no larger than **20x16 inches and mounted on white, black, or gray color boards.**
3. The contestant is required to make a **minimum three (3) minute oral presentation**, explaining the methods or techniques used in developing the project.
4. ACT-SO will provide display tables.
5. All photos must be the contestants’ original work. Contestants entering unoriginal work will be disqualified.
6. Composite images, and photomontages are permitted, however, each element of the composite image/photomontage must be the student’s original photograph. Digital composites are allowed.

#### Contestants will be judged by the following criteria:

* Choice of Medium (15)
* Cleanness (15)
* Composition (20)
* Effective use of Light (35)
* Viewer Involvement (15)

# SCULPTURE\*



The art of making three-dimensional forms or designs.

### REQUIREMENTS:

1. Only one (1) project can be entered.
2. ACT\_SO will provide display table space.
3. Each contestant is required to make an oral presentation explaining the methods or techniques used in developing the project **not to exceed three (3) minutes**.
4. Craft projects (i.e. ceramics, macramé, etc.) will not be accepted.

Contestants will be judged by the following criteria:

* Concept (20)
* Composition (20)
* Craftsmanship (20)
* How well the medium was applied (20)
* Dimensional Form (20