

Middle School: Level 1

Themes, Updates, Clarification and General Notes

**KANSAS DIGITAL SUBMISSIONS ARE DUE:
BY 11:59 PM CST on March 8th, 2024**

ALL Digital Submissions, MUST be saved as a PDF document.
PDFs with URL links are acceptable **IF** they are directing to a site that is hosting a submission for an event such as the link for Webmaster, Video Game Design, Digital Video Production, etc.

DO NOT submit a PDF with a link to a google drive or other protected file format, it must be accessible and downloadable by professionals outside a school district or local group

Events with a digital submission:

<i>Biotechnology</i>	<i>Data Science and Analytics</i>	<i>Promotional Marketing</i>
<i>Career Prep</i>	<i>Digital Photography</i>	<i>STEM Animation</i>
<i>Children's Stories</i>	<i>Mass Production</i>	<i>Video Game Design</i>
<i>Community Service Video</i>	<i>Microcontroller Design</i>	<i>Vlogging</i>
<i>Construction Challenge</i>	<i>Off the Grid</i>	<i>Website Design</i>

Advisor Project Submission Link:

<http://judgespro.registermychapter.com/org/jpks-state/conf/jpks-state>

Student/Team Captain Project Submission Link:

<http://judgespro.registermychapter.com/org/jpks-state/conf/jpks-state/student>

*- National Qualifying Event

!- Early and digital submission

%- State level alternation to the event

!Biotechnology*

KANSAS Digital Submission Due Date: 11:59 PM CST on March 8th
Include Images of Display (and Model/Prototype as applicable) in Portfolio

Theme: Removal of pollutants from the land OR production of biodegradable, disposable plastic for the storage of food

Items Judged

Tier 1- Display

Tier 2- Documentation

Semifinal Presentation/Interview

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!Career Prep

KANSAS Digital Submission Due Date: 11:59 PM CST on March 8th

Upload Cover Letter and Job Specific Resume as per guidelines in Event Guide

Theme: Select a career from one (1) of the following career clusters:

- Information Technologies
- Transportation
- Distribution & Logistics
- Manufacturing
- Agriculture, Food & Natural Resources

Items Judged

Cover Letter

Job Specific Resume

Semifinal Mock Interview

Challenging Technology Issues*

MUST place in the top 3 to be eligible to compete in this event at the National Level

Topics:

- *Free internet access*
- *Reality television*
- *Setting the minimum age to own a smartphone at 16*
- *Artificial Intelligence*
- *Digital Learning*

Items Judged

Pro Side Presentation

Con Side Presentation

Participation

Chapter Team

The Navy-Blue Blazer with TSA patch is REQUIRED for this event.

Participants in this event will compete as the same team of six (6) in both the preliminary (written exam) and the semifinal (oral presentation) rounds.

%Kansas Quirk: The test is completed according to published schedule which may be prior to the start of the conference.

Items Judged

Written Test

Business Meeting Demonstration

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!Children's Stories*

KANSAS Digital Submission Due Date: 11:59 PM CST on March 8th

Include Images of Physical Storybook in Portfolio

Theme:

Students will write and illustrate a book that promotes leadership and perseverance. The book should be geared towards students in kindergarten to 2nd Grade.

Items Judged

Tier 1- Storybook

Tier 2- Documentation Portfolio

Semifinalist Reading and Interview

Coding

Teams will take a written test to determine semifinalist.

To prepare for MS Coding competition, teams should have knowledge of concepts (software development, computer science, and coding topics) that will be on the Coding written test. They also should be familiar and comfortable with using the Scratch programming language.

Scratch is a free visual programming language available from the MIT Media Lab (<https://scratch.mit.edu/download>). An offline version of the Scratch tool should be downloaded and available on each team's laptop.

Teams that advance to the semifinalist level, based on written test performance, will perform a challenge using the Scratch programming language. Semifinalist teams will receive the challenge on site and will have two hours to complete it. (PLEASE NOTE: Semifinalist teams MUST have a version of this program available for offline use, as there will be no Internet access available during the semifinalist level of the competition.)

Examples of the types of challenges students may be asked to complete can be found at this link: <https://scratch.mit.edu/starter-projects>

%Kansas Quirk: The test is completed according to published schedule which may be prior to the start of the conference.

Items Judged

Written Test

On-Site Problem- Objective

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!Community Service Video

KANSAS Digital Submission Due Date: 11:59 PM CST on March 8th

Include link to Video in the Portfolio

Items Judged

Video Production

Video Effectiveness

Semi-Finalist Presentation/Interview

Computer Aided Design (CAD) Foundations*

Items Judged

Layout

Software Utilization

!Construction Challenge

KANSAS Digital Submission Due Date: 11:59 PM CST on March 8th

Include Images of Model/Display in Portfolio

Items Judged

Tier 1- Model/Prototype/Display

Tier 2- Documentation Portfolio

Semi-Finalist Presentation/Interview

Cybersecurity

Problem Statement:

Employees at Corp Inc. are being targeted by hackers using brute force attacks on the passwords resulting in important information being leaked.

%Kansas Quirk: The test is completed according to published schedule which may be prior to the start of the conference.

Items Judged

Written Test

Semifinal Presentation/Interview

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!Data Science and Analytics*

KANSAS Digital Submission Due Date: 11:59 PM CST on March 8th

Include Images of Display in Portfolio

Topic:

Predicting a specific animal's behavior from tracking GPS data or data concerning an animal's behavior.

Items Judged

Tier 1- Display

Tier 2- Documentation Portfolio

Semifinal Presentation

!Digital Photography*

KANSAS Digital Submission Due Date: 11:59 PM CST on March 8th

Upload Portfolio as per guidelines in Event Guide

Theme: Editorial/Commercial Photography

Students must submit a portfolio of four (4) digital photographs for a magazine spread (genre of their choice) with one being vintage in appearance.

Items Judged

Digital Photographic Portfolio Album

Semifinal Challenge

Semifinal Presentation/Interview

Dragster

Please read event guide carefully for onsite procedures.

There are no Special Design Challenge Requirements.

Items Judged

Tier 1- Preliminary Dragster Qualifying Race/ Post Race Inspection

Tier 2- Dragster Construction (including drawing)

Semifinal Interview

Semifinal Race

Electrical Applications

Check event guide for required toolbox items

%Kansas Quirk: The test is completed according to published schedule which may be prior to the start of the conference.

Items Judged

Written Test

Semifinal Solution to On-site Problem

Essays on Technology*

Topic: Technology refers to methods, systems, and devices which are the result of scientific knowledge being used for practical purposes.

Subtopics:

- The three greatest examples of technology in our lives.
- Important technology examples for learning.
- Technologies that should receive the greatest funding and testing for future development.

%Kansas Quirk: Contestants should be prepared to upload or bring their completed outline to conference. Specific details will be communicated to the Chapters involved with the event.

Items Judged

Detailed Outline

Essay

Flight

Students are to bring a completed glider, portfolio, safety glasses, toolbox and building materials to competition. All contestants will fly the pre-built glider. The average of best 3 flight times (out of 4) will determine contestants moving on to the semifinalist portion.

Semifinalist will have 45 minutes to construct a new glider; and then will fly the new glider.

UPDATE 9/27/23

Page 172

Stabilizer - MAX 150mm or 5 7/8"

Fin - MAX 76mm or 3"

1/3/24

PRECONFERENCE

A. Documentation Portfolio

*f. A detailed **illustration** demonstrating compliance with the rules and features, including design principles used in building and adjusting gliders, must be included on 11" x 17" paper (may be folded to fit in the sheet protector)*

Items Judged

Tier 1- Flight Times

Tier 2- Semifinal Documentation Portfolio

Semifinal Flight Times

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Forensic Technology

Teams should have the necessary supplies to make a presentation on each of the three Forensic Science concepts.

Be familiar with, and be able to demonstrate, the following forensic concepts:

1. Forensic Entomology
2. Forensic Anthropology
3. Digital Forensics

%Kansas Quirk: The test is completed according to published schedule which may be prior to the start of the conference.

Items Judged

Written Test

Skill Demonstration

Invention Innovations

Theme: A device that promotes school safety (e.g., security, monitoring, sensing)

UPDATE: 9/5/23

PRELIMINARY ROUND

B. Entries are evaluated by the judges with neither students nor advisors present based on the following criteria:

1. Judges score the static display criteria to determine the top twenty-four (24) preliminary contestants, which will not be posted.
2. Judges score the model/prototype criteria of those top twenty-four (24) contestants to determine the top twelve (12) semifinalists.

Items Judged

Tier 1- Static Display

Tier 2- Model/Prototype

Semifinal Sales Pitch Presentation/Interview

Junior Solar Sprint

[AEOP JSS Website Link](#)

Items Judged

Documentation Portfolio

Display and Model

Preliminary Junior Solar Sprint Time Trial/ Post Race Inspection

Semifinal Car Builder Interview

Semifinal Race

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Leadership Strategies*

%Kansas Quirk: The use of preliminary rounds depends on the number of entries in the event. Specific details will be communicated to the Chapters involved with the event.

UPDATE: 9/27/23

Teams will supply their own pens/pencils for the preparation room.

Items Judged

Presentation

!Mass Production

KANSAS Digital Submission Due Date: 11:59 PM CST on March 8th

Upload Portfolio as a Multi-Page PDF include Images of the Prototype Product

Theme: A traveling game (a game that can be played in the car on a road trip)

UPDATE: 11/13/23

A. Documentation Portfolio:

1.k. Photographic Verification - photographic or digital images that verify the mass production of three (3) identical copies of the product including the prototype and photographic or digital images that document the team project with a photo timeline; maximum five (5) pages.

Items Judged

Tier 1- Prototype

Tier 2- Documentation Portfolio

Semifinal Presentation/Interview

Mechanical Engineering

Problem Statement: Start line to full stop finish line distance is 10 feet.

Items Judged

Entry Performance

Placement from Best of Two Runs

Interview

Portfolio Contents

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Medical Technology*

Theme – Emergency Medicine and Disaster Response: technologies that improve emergency medical services and aid in disaster response situations.

UPDATE: 9/5/23: PRELIMINARY ROUND

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2. Judges score the model/prototype criteria of those top twenty-four (24) contestants to determine the top twelve (12) semifinalists.

Items Judged

Tier 1- Display

Tier 2- Model/Prototype

Semifinal Presentation/Interview

!Microcontroller Design

KANSAS Digital Submission Due Date: 11:59 PM CST on March 8th

Upload Portfolio as a Multi-Page PDF include Images the Product

Problem: Interactive automated insect

Items Judged

Documentation Portfolio

Device

Presentation

!Off the Grid*

KANSAS Digital Submission Due Date: 11:59 PM CST on March 8th

Upload Portfolio as a Multi-Page PDF include Model and Display

Design Brief: Design a home in a country containing a Grassland biome for a family of three (3) with two (2) generations living in the home. The country can be any country containing the grassland biome of your choice. The house must be designed for an area that does not have access to a power grid. In addition, the house must include a renewable energy source, one (1) agricultural system, and solve one (1) problem that is specific to the area.

Items Judged

Tier 1- Display

Tier 1- Model Design

Tier 2- Documentation Portfolio

Semi-Finalist Presentation/Interview

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Prepared Speech*

Theme: Evolution of Excellence

%Kansas Quirk: The use of preliminary rounds depends on the number of entries in the event. Specific details will be communicated to the Chapters involved with the event.

Items Judged

Content
Stage Presence
Organization

Problem Solving

%Kansas Quirk: Kansas TSA commonly provides the materials to be used for the solution of the problem. Notice will be sent out prior to the Conference detailing what supplies, if any need to be brought.

Items Judged

Testing of Solution

!Promotional Marketing

KANSAS Digital Submission Due Date: 11:59 PM CST on March 8th

Upload Portfolio as a Multi-Page PDF as noted in the Event Guide

Theme: Summer Middle School TSA is hosting a STEM night at the school and your goal is to create the marketing materials for this event.

Additional Information:

Date of event: May 20

Time: 6:00PM – 8:00PM

Your promotional toolkit needs to include the following three items.

1. Printable: Design a bi-fold brochure
2. Wearable: A t-shirt that can be given to participants
3. Digital Signage: Short video (1 ½ - 2 ½ minutes) to be shown at the STEM night event

Items Judged

Print Design
Wearable Design
Digital Signage
Semifinal Challenge

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!STEM Animation*

KANSAS Digital Submission Due Date: 11:59 PM CST on March 8th

Upload Portfolio as noted in the Event Guide; Include link to the animation

Theme: The use of robots in the medical field

Items Judged

Documentation Portfolio

Animation

Semifinal Presentation

Structural Engineering

Design Brief

The design brief for 2024 is to design a balsa structure that will support the greatest load possible (in the center) using the least amount of materials. The solution must transfer the load to the top of the abutments as efficiently as possible.

Verification Form

Items Judged

Pre-Built Structure

On-site Structure

Subjective Criteria

System Control Technology*

Items Judged

Inventor's Log

Solution to Problem

Programming Structure

Demonstration/ Interview

Tech Bowl

%Kansas Quirks: Test is completed online Day 1 of the Kansas State Conference.

- Multiple teams per school at the Middle School level maybe allowed; Schools with multiple teams CANNOT interchange team members.

Items Judged

Averaged Test Scores to determine semifinalist teams

Semifinal Round- Oral Competition

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Technical Design

%Kansas Quirk: Confirm participation and pick up Problem at the registration desk begins Day 1 at 10:00am.

-Entries MUST be turned in by 12:00pm on Day 2 to the registration desk.

Items Judged
Solution

!Video Game Design

KANSAS Digital Submission Due Date: 11:59 PM CST on March 8th

Upload Portfolio with Game Link as per guidelines in Event Guide

No theme – subject is participant's choice.

Items Judged
Video Game Design
Documentation Portfolio
Semifinal Presentation

!Vlogging

KANSAS Digital Submission Due Date: 11:59 PM CST on March 8th

Upload PDF with Link to Website as per guidelines in Event Guide

Theme: Ethical Use of Artificial Intelligence
Minimum number of videos: 4_

UPDATE 11/29/23: EVALUATION Tier 2
SEMIFINAL ROUND
A. The On-site Challenge

UPDATE 1/23/24: PRECONFERENCE
B.8. Team's self-evaluation of the video series, using the criteria for TIER-1 VLOG SERIES on page 326 (can be in paragraph format or a copy of the rubric portion with data from the team); one (1) page.

Items Judged
Tier 1- Vlog Series
Tier 2- Documentation Portfolio
Semifinal On Site Challenge

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!Website Design

KANSAS Digital Submission Due Date: 11:59 PM CST on March 8th

Upload PDF with Link to Website as per guidelines in Event Guide

Design Brief: Website for a Makerspace

Challenge: Develop a website for a fictitious makerspace in a community. It should provide information about what equipment and services the makerspace offers, membership information, hours, and a calendar of events. It should be easy to follow and include an option to reserve equipment or space.

Items Judged

Website

Semifinal Interview