







Kansas City's most exciting K-12 STEM competition!

COMPETITION PACE E



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With Burns & McDonnell Battle of the Brains, your team can earn a piece of \$155,000-plus in grants for STEM education at your school by dreaming up an exhibit concept for Science City - and one school sees their idea come to life in a big way!

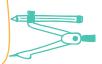


Burns & McDonnell Battle of the Brains is Kansas City's most exciting K-12 STEM competition. So far, more than 11,000 students in 50 school districts have benefited from this immersive educational opportunity.



THERE IS NO LIMIT TO THE NUMBER OF ENTRIES A SCHOOL MAY SUBMIT.

The same teacher may lead multiple teams. Each team should have a maximum of two co-leaders. While there are no defined limits on team size, learning objectives diminish with teams of more than 20 students. Each team must design a STEM exhibit focused around a single topic or main idea of your choice.



ENTRANTS MUST:

- Be full-time K-12 students.
- Be currently enrolled in and attending a public, private, parochial or home-based school in any of the following counties:
 - KANSAS: Atchison, Douglas, Franklin, Jefferson, Johnson, Leavenworth, Miami, Shawnee and Wyandotte.
 - MISSOURI: Bates, Buchanan, Caldwell, Cass, Clay, Clinton, Jackson, Johnson, Lafayette, Livingston, Platte and Ray.



COMPETITION CRITERIA

Entries are judged in the following categories:

(A scoring rubric outlining criteria requirements for each category is provided in this packet.)



CREATIVITY & INSPIRATION 30 points



INTERACTIVE EXHIBIT ENGAGEMENT 35 points



VISUAL & WRITTEN PRESENTATION 15 points



SOCIAL MEDIA 5 points



CONSTRUCTABILITY
10 points



STUDENT INVOLVEMENT 5 points

The Burns & McDonnell Foundation reserves the right to modify the rules without materially affecting the terms and conditions hereof. Entrants are responsible for checking the competition website after Sept. 1, 2017 for any updates to the rules. Answers to frequently asked questions and legal regulations are available on the *fine print* page at *botbkc.com*.

Entries must:

- Include the entry form information requested on the submission website.
- Be a maximum of four or fewer single-sided pages, saved as a PDF that is no larger than 10 MB. (Don't include entry form information in this PDF.).
- Be on letter-sized paper (8.5-by-11 inch) with 1-inch margins.
- Use a standard font no smaller than 10 points. (Don't make us bring out our reading glasses!)
- Include at least one drawing or sketch of your exhibit, though we encourage you to include other graphics and sketches. (These will be included in the page count.)
- Focus on a topic/main idea suitable for the identified indoor exhibit space.
- Address the categories in the competition criteria (see to the left and in rubric) in order.
- Limit school information to the online entry form. Your PDF proposal cannot in any way identify your school.
- Be in English.
- Include a video (.mp4, .mov or .flv), no longer than two minutes, describing the design.
- Be uploaded to **botbkc.com** by 5 p.m. Central Time on Oct. 25.

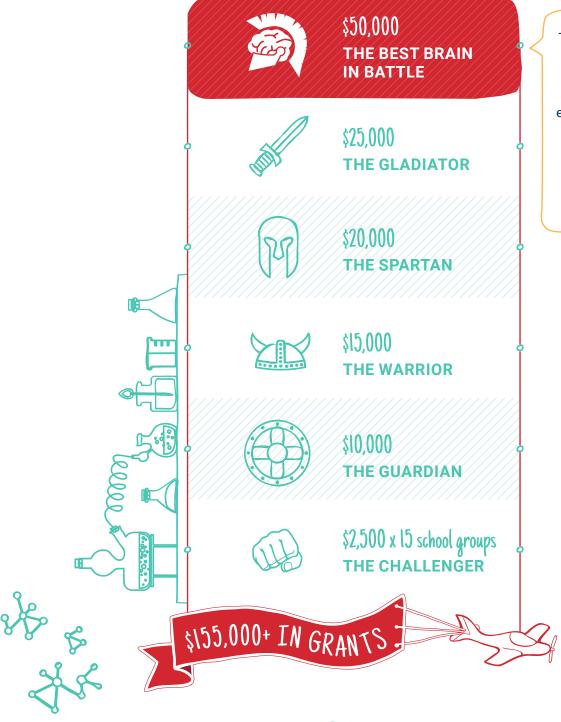




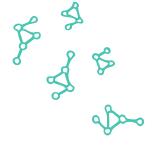




The Burns & McDonnell Foundation awards \$155,000-plus in grant money!



The grand prize winner will also be awarded the opportunity to work with architects, engineers, construction managers, graphic designers and researchers to bring their ideas to life at Science City!



Burns & McDonnell

Battle of the Brains



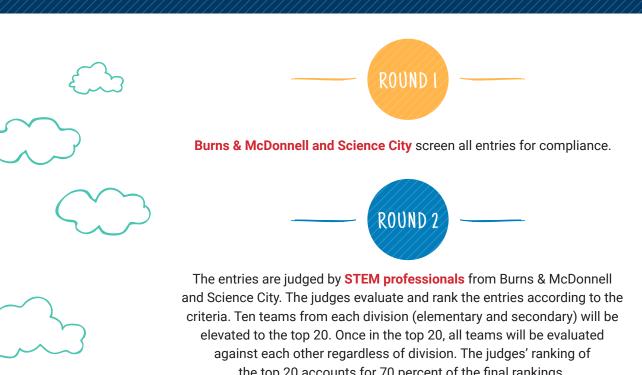


JUDGING PROCESS



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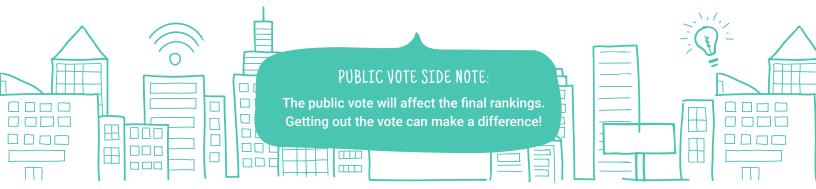
Battle of the Brains is judged using a vigorous three-step process.



the top 20 accounts for 70 percent of the final rankings.



The public votes from Nov. 17-24 on the remaining 30 percent of rankings at botbkc.com. Anyone here or across the country with a valid email address can vote.













SIGN-UP

Visit **botbkc.com** now through Sept. 8 to let us know your school group will participate. Your team must be registered by Sept. 8 to be eligible.





ATTEND A BATTLE PLAN TEACHER INFO SESSION

Attend a Battle Plan Teacher Info Session at the Burns & McDonnell headquarters to learn more about exhibit design, how to maximize the competition experience for your students and other valuable insights. Check out the latest session schedule at **botbkc.com**.





UPLOAD YOUR PROPOSAL

Upload your proposal to botbkc.com. Entries must be received by 5 p.m. Central Time on Oct. 25.





JUDGING

Judges will evaluate your ingenious ideas through a rigorous process to select the finalists.



TOP 20 FINALISTS ANNOUNCED

We'll announce the finalists — ten teams from each division (elementary and secondary). Once in the Top 20, all teams will be evaluated against each other regardless of division.





VOTE!

The public vote counts for 30 percent of the final selection and anyone with a valid email address can vote.



AWARDS CEREMONY

We'll award \$155,000-plus in grants — and announce which exhibit will be built — during an exciting awards ceremony at Union Station.









2017 JUDGING RUBRIC

Title of Exhibit Design: _

Criteria # Creativity and Inspiration	0 - 10	11 - 20	21 - 30	POINTS
 □ The proposal clearly explains the exhibit's main idea. □ The exhibit teaches STEM principles or concepts. □ The proposal explains the inspiration behind the exhibit design. □ The proposal explains how the exhibit will remain relevant in the future. 	The proposal doesn't explain the main idea. It is difficult to determine what STEM concept is being presented or the information is inaccurate. The proposal doesn't explain how the group was inspired to develop the exhibit. The proposal provides one reason why the exhibit will remain relevant in the future.	The proposal presents more than one main idea or doesn't explain the main idea well. The STEM concept is explained but could be developed further. The proposal briefly states how the group was inspired to develop the exhibit. The proposal provides at least two reasons why the exhibit will remain relevant in the future.	The proposal properly presents and fully explains the main idea. The STEM concept is accurate, comprehensive, well-supported and makes the concepts easily understood. The proposal clearly states how the group was inspired to develop the exhibit. The proposal provides three or more reasons why the exhibit will remain relevant in the future.	/30
Criteria #2 Interactive Exhibit Engagement	0 - 15	16-25	26-35	POINTS
 □ The user can interact with the exhibit. □ The STEM topic is relevant to the user's life. □ The proposal explains the follow-up questions the exhibit will generate. □ The activities presented are fun and engaging to different age groups. □ The exhibit fits within the space provided. □ The exhibit demonstrates a blend of hands-on components and educational information. 	The user interacts with the exhibit in only one way. The STEM topic doesn't demonstrate relevance to the user's life. The proposal doesn't explain the follow-up questions the exhibit will generate. The exhibit doesn't provide any fun, engaging activities. The exhibit doesn't fit in the space provided. The exhibit is primarily readonly educational information.	The user gets two or more opportunities to investigate the topic. The proposal highlights one to two ways the exhibit is relevant to the user's life. The proposal provides one to two examples of follow-up questions the exhibit will generate. The activities presented are fun and engaging for only a specific age group. The exhibit fits in the space provided with few modifications. The exhibit is primarily hands-on components with little explanatory educational information.	The user gets four or more opportunities to investigate, test and make observations. The proposal highlights three or more ways the exhibit is relevant to the user's life. The exhibit provides three or more examples of follow-up questions the exhibit will generate. The activities presented are fun and engaging for all ages. The exhibits fits within the space provided with no modifications. The exhibit demonstrates a blend of hands-on components and explanatory educational information.	/35

continued on next page >



Criteria #3 Visual and Written Presentation	0 - 3	4 - 10	11 - 15	POINTS
 □ The proposal includes diagrams, sketches and/ or renderings to support the exhibit's big idea. □ The text accurately describes ideas and processes. □ The proposal is neatly prepared, easy to read and organized in the rubric order. □ The proposal includes a video no longer than two minutes explaining the exhibit. 	 The proposal doesn't include diagrams, sketches and/ or renderings or they do not support the exhibit's big idea. The text is absent or doesn't describe each idea and process. The proposal is poorly prepared and hard to follow. The proposal doesn't include a video explaining the exhibit. 	The proposal includes basic diagrams, sketches and/or renderings that somewhat support the exhibit's big idea. The text is limited in describing each idea and process. The proposal preparation is adequate. The proposal includes a video no longer than two minutes that somewhat explains the exhibit.	The proposal includes diagrams, sketches and/ or renderings that strongly support the exhibit's big idea. The text accurately describes each idea and process. The proposal is neatly prepared, easy to read and organized in the order presented in this rubric. The proposal includes a video no longer than two minutes that clearly explains the exhibit.	/15
Criteria #4 Social Media	0 - 1	2 - 3	4 - 5	POINTS
☐ The exhibit's STEM concepts are expressed as examples of social media posts for Facebook, Twitter, Instagram, etc.	No examples of the exhibit's STEM concepts are provided as a social media post (Facebook, Twitter, Instagram, etc.).	One example of the exhibit's STEM concepts is provided as a social media post (Facebook, Twitter, Instagram, etc.).	Two or more examples of the exhibit's STEM concepts are provided as a social media post (Facebook, Twitter, Instagram, etc.).	/5
Criteria #5 Constructability	0 - 3	4 - 6	7 - 10	POINTS
□ The exhibit will stand up to intense daily use from thousands of users of all ages. □ The proposal explains the exhibit's safety. □ The proposal includes a list of materials needed with rough prices included. □ The exhibit's total cost is within an approximate \$250,000 budget.	 The durability of the exhibit to intense daily use is not explained. The safety of the exhibit is not addressed. The list of materials needed is missing or incomplete, or is not detailed with pricing information. No total cost is established. 	The durability of the exhibit to intense daily use is explained with one to two examples. The safety of the exhibit is mentioned briefly but not explained. The list of materials needed is somewhat complete, but some components or pricing information is missing. The exhibit's total cost is either dramatically over or under the approximate \$250,000 budget.	The durability of the exhibit to intense daily use is explained with three or more examples. The safety of the exhibit is fully explained. The list of materials needed is detailed and complete with pricing information. The exhibit's total cost takes full advantage of but is within an approximate \$250,000 budget.	/10
Criteria #6 Student Involvement	0 - 1	2 - 3	4 - 5	POINTS
 □ The proposal explains how students researched the STEM concepts. □ The proposal explains the ideas and concepts the team considered and why they were not used. □ The proposal includes information about STEM jobs related to the exhibit topic. 	 The proposal doesn't provide an outline of the process used to research the STEM concepts. The proposal explains only the one idea or concept the team used. The proposal doesn't include information about STEM jobs related to the exhibit topic. 	The proposal provides a limited outline of the process used to research the STEM concepts. The proposal explains at least two ideas or concepts the team considered and tells why they were not used. The proposal provides limited information about STEM jobs related to the exhibit topic.	The proposal clearly outlines the process used to research the STEM concepts. The proposal explains at least three ideas or concepts the team considered and provides the reasons they were not used. The proposal provides relevant and thorough information about STEM jobs related to the exhibit topic.	/5
			POINTS TOTAL	/100





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You'll input this information on the submission website.

This screen shot is an example of the information you'll be asked to submit

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Your Burns & McDonnell Battle of the Brains submission should have three components.

An otherwise extraordinary entry could be disqualified if it doesn't follow the rules. Use this checklist to help you submit a qualified entry. It's smart to ask someone who hasn't been involved in the preparation to check your entry for compliance.

1. Online Entry Form:

You entered the online entry form information on the competition website. This is the only place this information should be included to ensure a blind proposal.

2. Proposal PDF:

- Is no more than four single-sided pages.
- Is no larger than 10 MB.
- Addresses the rubric criteria, organized in the order presented in the rubric.
- Has no identifying school information. (Remember, blind proposal!)
- Is in English.
- Is on letter-sized paper (8.5 x 11 inches) with 1-inch margins on all sides.
- Uses a standard font no smaller than 10 points.
- Includes at least one drawing or sketch of your exhibit. There is no limit to how many drawings and sketches you may include as long as your PDF doesn't exceed four single-sided pages.

3. Video:

- Describes your exhibit.
- Is no longer than two minutes.
- Is in one of these formats: .mp4, .mov or .flv.

These elements must be entered and uploaded at botbkc.com by 5 p.m. Central Time on Oct. 25.

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Burns & McDonnell Battle of the Brains

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