



STEM
DISCOVERY
CENTER

Curtis Kinetic Science Competition Requirements



March 27, 2021

Deadline for Submissions: January 20, 2021

The **Curtis Kinetic Science Competition** is a fun way to learn the science behind kinetic systems, as well as the skills required to plan, execute, document, reflect, and present a science project in a higher level science competition. The 2020 Kinetic Competition will be open to any middle school, science club and home school group in the 9 surrounding counties (Brevard, Lake, Marion, Osceola, Orange, Seminole, Polk, Sumter, and Volusia). There will be **ONE** division and students may work in teams of up to five.

This year's awards will be as follows:

- **Best in Fair:** An individual medal to each team member, \$500 to the team, and \$250 to the team's teacher/coach
- **Best Use of Science:** An individual medal to each team member and \$250 to the team
- **Most Innovative/Creative:** An individual medal to each team member and \$250 to the team
- *Please note that award money will be distributed evenly among all registered team members. After awards are announced, all winning team members will need to fill out a W-9 prior to leaving the Science Center.*



ORLANDO SCIENCE CENTER

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Requirements

Goal:

Teams build a **kinetic** system with multiple energy transformations. The system may be free-standing or designed for a table top. All purchased parts for the system must not exceed \$100 and any found object may not exceed \$20. The system should not exceed 30 inches deep, 72 inches wide, and 108 inches high (as measured from the floor). Each member of the team will participate in the oral explanations to the judges.

All entries will be judged on:

- The kinetics used
- Presentation skill and explanation of the science behind their creation
- Reliability: running the system initially successfully within 3 tries
- Being able to reset the system within 5 minutes and run it again multiple times
- Innovation: creating a new system or changing an existing system in a creative and innovative way
- Project boards with abstract and proof of purchases and budget documentation.
- Does not exceed the measurements of 30"x72"x108"

The following items are prohibited:

- Explosive or effervescent chemicals (including soda and Mentos)
- Balloons
- Live Animals

Project Requirements:

In addition to the ones listed above all project must feature the following:

- Project Board which contains:
 - The abstract, in the lower left hand corner.
 - Credible bill or proof of materials, in the lower right hand corner.
 - A drawing of the system explaining energy transformations
 - Scientific Principles used
 - Data collected
 - Conclusions
- Interactions during Judging
 - Respectful interactions with judges, teachers, and peers. For example:





- Collaboration among team members
- Listening and using appropriate language
- Being aware of your surroundings
- Being ready to answer judge's questions. For example:
 - What do we want to show?
 - How are we going to do it?
 - Scientific principles
 - Materials
 - How did we make it work?
 - Analysis/Discussion
 - Conclusion
- A laboratory notebook which contains:
 - A copy of the Abstract
 - Research & Bibliography
 - Materials used (Include receipts for purchased materials)
 - Scientific Principles used
 - Procedure
 - Test runs made
 - Analysis/Discussion
 - Conclusion
 - Questions answered through experimentation
 - Experimental procedure for testing scientific principles used
 - Solved problems arising with procedure
 - Original approach or technique





Abstracts

Completing the Abstract:

A project abstract is a brief paragraph or two, limited to a maximum of 250 words, highlight and/or summarizing the major points or most important ideas about your project. An abstract allows judges to quickly determine the nature and scope of a project. Abstracts must include the following:

- Purpose of the experiment
- Procedure
- Data gathered
- Conclusions

Tips on Writing an Abstract:

Be sure to avoid:

- Acknowledgments of any brand names, or self-promotions, and external endorsements
- Work or procedures done by a mentor
- Extraneous details and discussions
- Long, descriptive, exhaustive sentences
- Jargon
- Incomplete sentences

If mentors or students have questions on the abstract, notebooks, or any other requirements for this year's competition, please do not hesitate to contact the competitions specialist at competitions@osc.org or 407.514.2035.

