

BUILDING BLOCK ENGINEERING – STATE RULES

Superintendent(s) Tony Foster, Central Kansas District and Wabaunsee County Volunteer
State Staff Contact Patsy Maddy, Special Projects Administrator

The BBE exhibit area focuses on using architectural blocks (“Legos”) to construct dioramas. This project allows youth to explore architectural design in a three-dimensional space. The intent for this program is to allow youth to explore the construct and gain knowledge through interaction with a common toy. This division is not intended for youth wishing to exhibit constructed kits. Kits and non-diorama displays should not be displayed in this division.

Rules

1. 4-H members must be currently enrolled in the Kansas 4-H Building Block Engineering project to exhibit in this division.
2. Each exhibitor may enter one exhibit. Exhibits must have been constructed during the current 4-H year. The exhibit must have been selected at the county level for entry at the State Fair. Counties or districts should select only top blue or purple ribbon BBE exhibits which meet State Fair guidelines.
3. Counties are limited to FOUR exhibits to the state fair to insure sufficient space for all exhibitors.
4. Total exhibit dimensions may not exceed 2 feet high, by 2 feet wide, by 2 feet deep.
5. The minimum exhibit dimensions must be at least 6 inches wide and deep.
6. All exhibits should be placed in a sturdy see-through enclosure with a top, bottom, and 4 sides. A ‘clear’ tub turned upside down with the exhibit placed on the lid would be an acceptable enclosure. It may be desirable to place a cutting board or other hard surface between the lid and base plate of the exhibit to make it more sturdy. This is to keep exhibit components from being “scattered to parts unknown” at the fair. The outer dimensions of the enclosure do not count towards the total exhibit dimensions but should not be excessive. The entire exhibit should fit in the display enclosure so the enclosure does not smash into the exhibit during movement.
7. All components used in construction should be dust and hair free, clean, free of chips, scuffs, cracks, or broken blocks
8. Gaps or cracks should not be visible between assembled blocks unless they fit with the story, for example an earthquake
9. The primary building component should be interlocking blocks, commonly referred to by the brand name of Lego®
10. Other components can be integrated into dioramas to illustrate architectural aspects that may be difficult to convey with traditional interlocking blocks, for example marbles for small round objects
11. The use of existing “store bought” sets for major elements of the display is not allowed, use of figurines from sets is allowed as is using individual bricks or small sub-assemblies to create something different than the set it came from. For example a car hood or front end from a car kit could be used in a “car museum,” just not the entire car. The intent of this is to ensure fairness among exhibitors and encourage maximum creativity instead of just following a set of plans.
 - a. COUNTY FAIRS may choose to add classes for kits, but exhibits in those classes are not eligible for the Kansas State Fair.
12. Dioramas should be suitably complex and have multiple elements, for example, a camp site that has a log cabin, a tree fort, and a car.
13. All dioramas should have a story, which is part of the information pack, that describes what is happening in the diorama; this can be as simple (the nursery rhyme “Jack and Jill” for example) or complex as needed to explain to someone looking at the exhibit what is happening.
14. Vehicles that are intended to stay in a single place should be affixed to base plates with sticky tack, hot glue, or other method
15. Mechanical enhancements or motion elements that add motion to the diorama are acceptable and encouraged. For example, marry-go-rounds, doors, elevators, gears, marbles going down a channel, flapping wings, animatronics, etc. If included judges should be able to use them and instructions should be provided for operation either in the story or on a separate page.
16. Artistic designs , for example recreating paintings like the “Mona Lisa” or “Stary Nights” and structures like “David” are not permitted as exhibits and one ribbon placing should be deducted, these exhibits should be displayed in Visual Arts.
17. The exhibitor’s name(s) and county or district must be tagged or labeled in a prominent location on the display, additionally the display case should have the exhibitor’s information attached to it as well, as the top part of the case may be separated from the display.
18. Each exhibit must include an Architectural Block Construction information packet. Entry of either a packet without an accompanying exhibit or an exhibit without a packet is not a sufficient exhibit.

19. Each exhibitor is required to complete the “4-H Building Block Engineering Exhibit Information Form” which is available through your local K-State Research and Extension office or at <http://blocks.engtech4ks.com/> . This form must be attached to the outside of a 10” x 13” manila envelope. Do not tie the envelope to the exhibit. All revisions of forms previously released for the division dated prior to current year are void for use and new forms must be obtained and used that are dated by the Kansas State 4-H Office for the current year.

20. Each exhibit information packet should include the following items:

a. 1 to 5 pages of photos showing work on the exhibit, preferably from a beginning state to final or completed state. Final pictures help in determining where a part might go in case something comes loose.

b. If appropriate operating instructions for mechanical portions of the diorama.

21. Additionally, exhibitors are required to create a video about their project discussing their construction experiences and the architectural elements of the diorama (tell the story of what is happening in their exhibit). This allows judges to get a better understanding of the exhibit and allows youth the opportunity to fully explain their exhibit. The video should be no longer than 8 minutes and should be placed on a USB drive or micro/SD card drive or, if desired, uploaded as to YouTube as an unlisted video and a link to that video included in a file titled “VideoLink” or printed on a separate sheet of paper.. These videos may also be considered for inclusion in a running video loop in the Engineering and Technology area at the state fair after review by judges, superintendent(s), and extension staff. Adult guardians must complete the video release included with the exhibit form. If the release is not completed the video will not be included in the video loop on display in this area at the Kansas State Fair.

a. FOR COUNTY FAIRS with consultation judging, it is recommended that the video elements be waived in favor of talking with the exhibitor.

22. Building Block Engineering exhibits may be checked out for use in a Kansas State Fair 4-H demonstration or 4-H illustrated talk with prior permission. For permission, check with the superintendent or the information desk in 4-H Centennial Hall. The exhibit must be returned to display immediately after the demonstration/illustrated talk or the exhibit will be disqualified. Exhibitors and/or their designees may not remove exhibits from 4-H Centennial Hall prior to the exhibit release time on Sunday evening without the express consent of the State 4-H Staff, any exhibit removed before release time will be disqualified.

Eligibility – Each exhibitor may enter one exhibit.

Quota – Counties are limited to FOUR exhibits at the state fair to insure sufficient space for all exhibitors. County fair judges should work with superintendents and county extension staff to pick up to FOUR exhibits and if applicable backup exhibits.

Scoresheets, Forms, and Contest Study Materials:

- BBE Scoresheet

Awards/Recognition – Best in show is applied across all Engineering and Technology exhibit areas and may not be awarded.

Classes

Intermediate (ages 9-13)

5710 Interlocking brick diorama built from scratch

Senior (ages 14 and up)

5711 Advanced Interlocking brick diorama built from scratch

Resources: • Project Area – Building Block Engineering

Educational Exhibits Rules

1. For notebooks, display boards, and posters, no additional exhibit information is required; no manila envelope is needed for these exhibits.

2. Exhibits are to have a clear link to the Engineering and Technology areas of astronomy, computers, rocketry, robotics, or uncrewed aerial systems, educational exhibits outside of these Engineering and Technology areas should be displayed in the other program areas. Just because an educational exhibit relates to the broad concept of Engineering and Technology does not qualify it to be displayed in the Engineering and Technology Educational

Exhibit area. Exhibits that do not clearly show a clear and direct relationship to the Engineering and Technology project areas of ag-mechanics, ABC, astronomy, computers, robotics, rocketry, or UAS as previously defined will be disqualified.

3. Exhibits in posters, notebooks and display boards must contain substantial supporting educational materials.

4. Educational display boards, posters and notebooks should be creative and showcase details about the knowledge learned in the project during the current 4-H year. Value is placed on youth who can demonstrate how their skills have increased while completing the project. Each exhibit will be judged on uniqueness, creativity, neatness, accuracy of material, knowledge gained, and content. An exhibit judging score sheet available at <http://blocks.engtech4ks.com/>. For example, a rocket that may have crashed and/or is highly damaged may be made into an educational display or poster that tells a great story with many lessons learned.

5. Follow copyright laws, citing all sources of information in a standard notation. Sources of information must be cited on the front of your exhibit, including all posters and educational display boards.

6. Educational displays are not to exceed a standard commercial 3' x 4' tri-fold display board. No card table exhibits will be allowed. Care should be taken to use durable materials that will withstand Kansas State Fair conditions.

7. "Construction Kits" that are part of Educational displays must be contained in cases (tackle boxes, sealable containers, etc.) that may not be larger than 1' x 2' x 2' and must have a latch which securely keeps all components contained in the "Construction Kits". Other components are to adhere to appropriate dimensions as stated elsewhere.

8. Educational Project notebooks must be organized in a 3-ring binder.

9. Any three-dimensional poster or display board exhibits may not be thicker than 2 inches.

10. Engines and igniters for rockets ARE NOT permitted with the exhibit and constitute an immediate disqualification. This is for safety reasons and includes both spent and live engines.

11. Exhibitor's name, Extension Unit, age, and year(s) in project must be tagged or labeled in a prominent location on the, notebook, and/or "Construction Kit." For education displays and/or posters the exhibitor's name, county, or district, age, and year(s) in project must be tagged or labeled on the back of the exhibit. Exhibit cards are not sufficient as they may be removed or repositioned for display. Failure to label an exhibit may result in one ribbon placing deduction.

12. Exhibits should possess the following qualities (in no particular order):

a. A Central theme

b. What you want others to learn

c. Be designed and constructed in a manner befitting the exhibit

d. Be something you are interested in

e. Be related to Astronomy, BBE, Computer System, Robotics, Rocketry, or Uncrewed Aerial Systems

13. If a safety violation is noted by the judges, superintendent, or other staff, the exhibitor's exhibit, at the judge's discretion, will receive a participation ribbon.

14. Posters, Notebooks, and Display Boards may be checked out for use in a Kansas State Fair 4-H demonstration or illustrated talk with prior permission. For permission, check with the superintendent(s). The exhibit must be returned to display immediately after the demonstration/illustrated talk, or the exhibit will be disqualified.

Educational Displays –

Building Block Engineering – Intermediate Division (Ages 9 – 13)

5481 Intermediate Building Block Engineering Educational Display

5482 Intermediate Building Block Engineering Educational Notebook

5483 Intermediate Building Block Engineering Educational Poster

Building Block Engineering – Senior Division (Ages 14 years and older)

5484 Senior Building Block Engineering Educational Display

5485 Senior Building Block Engineering Educational Notebook 5486 Senior Building

Block Engineering Educational Poster Superintendent(s)

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