

DEPARTMENT – BUILDING EXHIBITS

SECTION – BUILDING BLOCK ENGINEERING (BBC) (Must be enrolled in Building Block Engineering Project)

Description: The project is starting with an emphasis 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 construction and gain knowledge through interaction with a common toy.

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
3. Total exhibit dimensions may not exceed 2 feet high, by 2 feet wide, by 2 feet deep.
4. The minimum exhibit dimensions must be at least 6 inches wide and deep.
5. All components used in construction should be dust free, clean, free of chips, scuffs, or cracks
6. Gaps or cracks should not be visible between assembled blocks unless they fit with the story, for example an earthquake.
7. The primary building component should be interlocking blocks, commonly referred to by the brand name of Lego®
8. 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.
9. The use of existing “store bought” sets for major architectural elements of the display is only allowed for 7- and 8-year old’s. Use of figurines from sets is allowed as are using individual bricks to create something different than the architectural component of the set it came from. “Store bought” sets should be considered an arts and crafts entry for anyone over the age of 8. The intent of this is to ensure fairness among exhibitors and encourage maximum creativity instead of just following a set of plans.
10. 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.
11. 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.
12. Architectural elements should have a consistent look, walls with no pattern or consistency will be deducted one ribbon placing.
13. Doors should open and close, windows can be either fixed or open and close.
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. You can use a partial wall or no wall, called a reveal. Reveals that show the inside of a structure are acceptable, such as only having three walls to allow an unobstructed view into a room.
16. Mechanical enhancements or motion elements that add motion to the diorama are acceptable and encouraged. If used judges should be able to use them and instructions should be provided for operation.

17. Artistic designs with no architectural design/components are not permitted and two ribbon placings will be deducted.
18. The exhibitor's name(s) and club must be tagged or labeled in a prominent location on the display.
19. Each exhibit must include a Building Block Engineering information packet. Entry of just a packet without an accompanying exhibit is not a sufficient exhibit.
20. 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.
21. Each exhibit information packet should include the following items: a. At least one drawing of the desired architecture on graph paper, multiple views (top, front, side) are preferred. Plans encourage organizing the build process so that elements don't get forgotten. For example, a real house doesn't get built without plans. Pages b.1 to 5 of photos showing work on the exhibit, preferably from a beginning state to final or completed state. If appropriate operating instructions for mechanical portions of the diorama.
22. **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 sturdier. 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. If an enclosure is not provided, the project will be lowered one ribbon.**

Pre-introductory – (Ages 7 and 8 only)

5709 Building Block Engineering with a kit.

Introductory -Level 1 classes (about 1 -3 years of experience)

5710 Diorama illustrating at least 2 architectural features beyond floors, ceilings, and walls

Experienced –Level 2 classes (about 4 -6 years of experience)

5711 Diorama illustrating at least 4 architectural features beyond floors, ceilings, and walls, and includes 1 or more motion elements

Advanced –Level 3 classes (about 7 -9 years of experience)

5712 Diorama illustrating at least 6 architectural features beyond floors, ceilings, and walls, and includes 2 or more motion elements

Master –Level 4 classes (10 or more years of experience)

5713 Diorama illustrating at least 8 architectural features beyond floors, ceilings, and walls, and includes 3 or more motion elements

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.