



EnergyWhiz 2024

Critter Comfort Cottage (C3)

RULES



What is the C3 competition?

Critter Comfort Cottage (C3) challenges teams to design and build a cost-effective, comfortable home for a critter using energy-efficient, green building design and construction techniques. The team will also create a communication and marketing piece that describes the features and benefits of their creation. A critter in the context of this competition, is any living creature, such as a mammal, bird, fish, insect, arachnid, amphibian, or reptile. Teams develop their project, complete a webpage (using WordPress) and then showcase their work in-person at **EnergyWhiz**.

Who May Compete

The Critter Comfort Cottage competition is open to teams of 2-6 students in grades 3-12.

The competition is divided into three divisions. Teams of mixed grade levels will compete in the division of the highest grade level student.

- Elementary (3rd - 5th grade)
- Middle School (6th - 8th grade)
- High School (9th - 12th grade)

Note: Because competitions run concurrently, individual students may only participate in two (2) EnergyWhiz competitions as team members.

Important Dates

| Events | Date |
|---|----------------|
| Project Webpages Due | April 3, 2024 |
| Project Feedback Available to Coaches/Teachers | April 11, 2024 |
| Web Pages Available for Public Viewing/Comments | April 15, 2024 |
| Student/Team Names & Risk and Release Forms Due | April 17, 2024 |
| EnergyWhiz Event at FSEC | April 20, 2024 |

Requirements

Teams are to design and build a full-sized pet home that provides shelter and comfort for their critter while being as energy and resource efficient (green) as possible. Renewable energy technologies that enhance the comfort or quality of life for their critter are encouraged.

Teams are expected to:

- research the habits and needs of the critter so that the “cottage” is safe and comfortable.
- research the materials used in construction.
- understand what materials may be toxic to the critter and only use those that are non-toxic.
- consider temperature regulation, air flow, containment (if necessary for the critter)
- consider the habitat’s intended location, indoors or outdoors



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Note: If reusing components from a previous year, the new design must be at least 50% different from entries submitted in a previous year. Projects that are deemed unsafe will be disqualified.

Web Page

Each team will populate a web page on the EnergyWhiz site (using Wordpress) that showcases their Critter Comfort Cottage. This web page will be used to judge the habitat and will be viewed by other students and the public.

The web page **must include the following** (minimum requirements):

| 1. Photo & Basic Info | |
|---|---|
| | Team name |
| | Name of the School |
| | First name(s) and last initials of students on the team (no last names on the public page) |
| | Grade level of each team member |
| | Type of critter (pet) the structure will house |
| | A photo of the completed Critter Comfort Cottage (use this as the <i>Featured Image</i> on your page). Be sure the project photo is clear/visible. |
| 2. Design Documentation | |
| | Photos - a <u>minimum of four</u> close-up photos of parts of the habitat that you want to showcase |
| | A list of any help received from non-team members (i.e. home improvement store staff, internet, parents, teacher, etc.). Include in this section any help you had with power tools, plans you downloaded, or items that you had pre-cut at a store or shop. |
| | A list of parts used in construction, including any recycled parts used |
| 3. Critter Test | |
| | Include a statement of how the habitat performed when a live animal was introduced into the space. If this is not possible, such as a project for a wild animal, include a statement of how the habitat performed in the environment it was designed for during different weather conditions. |
| 4. Descriptive Video – (less than 5 minutes) to be included on your web page and hosted on our Vimeo site that includes one or more team member(s) detailing the items listed below. (Note: The video may be edited and/or pieced together or included in separate segments on the web page.) | |
| | Explain why the team chose their particular animal |
| | Explain why this design was chosen, and how it provides a good home for the animal |
| | Describe the special features of the habitat—close-ups are strongly encouraged |
| | List each team member’s contribution to the project |
| | Describe any energy efficient design features and any renewable energy technology that was included |



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Teams are encouraged to use the **Evaluation and Judging** criteria as a guide to what extras they may want to include in their web page. Below are some examples of what the web page **may** include:

- extra photos of the design, building and testing process
- an explanation of unusual and/or recycled parts used in their animal home
- photos of an animal inhabiting the design
- an explanation of the challenges encountered and what the team did to overcome them
- project log - entries made on workdays documenting the engineering process
- list of internet sites used in the research process
- marketing material the team will be presenting at the EnergyWhiz event

Communications and Marketing

Each team will create a marketing piece to accompany their design that highlights the energy efficient design, any green or renewable energy features, and the quality of the habitat for the selected animal. The marketing piece can be in any format and should be geared toward the general public. Creativity is encouraged! The examples below are not meant to be exclusive and may include:

- brochure/flyer/handouts
- video clip/television commercial
- poster

Teams will also be judged on how well the design is marketed to the judging team. This includes team member knowledge and verbal presentation to the judges.

Competition Day at EnergyWhiz - Showcase Your Project!

Note: Because competitions run concurrently, individual students may only participate in two (2) EnergyWhiz competitions as team members.

Each team will have a 10' x 12' space with a 6' table where they will set up their project, discuss their animal habitat with the judges, and present their marketing strategy to the public. Teams must be able to discuss their Critter Comfort Cottage with the judges and explain the energy efficient and green design, and construction components. Teams will also interact with and display to the public.

A representation or facsimile of the team's critter is to be displayed along with the pet home at EnergyWhiz; no live critters are allowed. **Any team that brings a live critter to C3 will be disqualified.**

Oversized projects: In the event that a team is unable to transport their design to the competition, the team must include a photo display of their project in their booth. They must be able to explain their project through additional supporting materials such as documents, videos, schematics, charts, blueprints, drawings, etc., to adequately represent their design and student construction.



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In the event of rain, the WOW! portion of the judging will be canceled; however, design judging and awards will continue. **No pets except service animals will be allowed at EnergyWhiz. Any team that brings a live critter to C3 will be disqualified.**

Evaluation and Judging Criteria

C3 projects will be reviewed online by multiple judges and provided with a preliminary score based on the rubric that follows. Final review of all projects happens in-person at EnergyWhiz.

Best Design 1st – 3rd Place Awards: Given to top scoring teams for Best C3 Design in each division.

Wow! 1st Place Awards: One Wow! Award will be given to the top team in each division with the best presentation, marketing strategy, delivery, and overall presence at EnergyWhiz.

The judges will base their scores on the following for Best C3 Design:

| CATEGORY | DESIGN | MAX POINTS |
|---------------------------------|---|------------|
| Design Decisions: | How well does the team understand energy efficient/green building and design? How thorough are their design decisions? Was careful attention paid to parts selection and integration? Was proper attention paid to safety? | 15 |
| Crittter Considerations: | How well does the team understand the habitat needs of their chosen critter and was it applied appropriately? | 15 |
| Green Building Tech: | Were recycled and/or green materials used? Did the team use passive and/or active renewable energy or energy efficiency in their design? How well is energy efficiency and green building practices represented in the project? | 15 |
| Construction Technique: | How well did the students construct their design? Is the design durable? Will it be sturdy enough for animal habitation in the selected environment? | 15 |
| Function: | Does the design provide a good habitat for the critter? Are the size and features appropriate? Will the habitat maintain appropriate temperatures? Was the design tested? How was it tested? | 15 |
| Creativity: | How creative is the design? Is it a novel or interesting solution to a problem? | 10 |
| Web Page | Does the contents of the team web page document the design, building and engineering process in a way that the viewer can see how the habitat will perform and see the special features that the team incorporated in their design? | 8 |
| Video: | Is the video component of the webpage clear and understandable? Did the team fulfill the video requirements? Did they communicate effectively? | 7 |
| | Design SCORE | 100 |



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The judges will base their Wow! Scores on the following:

| CATEGORY | WOW! | MAX POINTS |
|-----------------------------|---|------------|
| Presentation: | How well does the team communicate? Are they enthusiastic? Do they approach & interact with the crowd? | 15 |
| Impression: | Does the team have a unified appearance (i.e. team t-shirts, theme, etc.)? Do they give a good first impression? | 15 |
| Message: | How well does the team convey their message (i.e. suitable habitat, energy efficiency, green building practices, alternative energies that are used, etc.) How well does the team know their subject? | 15 |
| Marketing Materials: | Are the marketing materials professional looking? Do they inspire interest? | 15 |
| Wow! Factor: | Does the project have mass appeal? How creative is the team? Do they go above and beyond the average to promote their project? | 20 |
| Team Dynamics | Is there collaboration between team members? Does everyone have a role and contributed to the project? Do the team members convey the same information about their project? Did they adequately convey what they learned? | 20 |
| | WOW! SCORE | 100 |

GOOD LUCK TO ALL C3 TEAMS!

