Critter Comfort Cottage Rules

These rules are for the Critter Comfort Cottage <u>in-person</u> competition at the OCPS STEM Saturday event , which includes showcasing the team's finished animal habitat at the event. These rules are not valid for virtual Critter Comfort Cottage competitions.

Each team is to design and build a cost-effective, comfortable "home" for a critter using energy-efficient, green building design and construction techniques. The team must also create a communication and marketing component that effectively describes the features and benefits of their Comfort Cottage for the critter they have selected. A "critter" in the context of this competition is considered to be any living creature, such as a mammal, bird, fish, insect, arachnid, amphibian or reptile.

The Critter Comfort Cottage competition is open to teams of 2 - 6 students in grades 3 - 12. The competition is divided into three divisions: Elementary (3rd - 5th grade), Middle School (6th - 8th grade), and High School (9th - 12th grade). Teams of mixed grade levels will compete in the division of the highest grade level student.

Construction Requirements

Teams are to design and build a full-sized pet home that provides shelter and comfort for the critter that occupies the built space, while being as energy and resource efficient ("green") as possible. Renewable energy technologies that enhance the comfort or quality of life for the critter are encouraged but not required.

Teams are responsible for researching the habits and needs of the critter that will occupy their design, so that the final design is able to house the team's selected critter safely and comfortably. Teams are also expected to research the materials used in construction. Non-toxic materials must be used in areas where the animal could chew or come in contact with the material.

In designing their structure teams should also consider temperature regulation, air flow, containment (if necessary for the critter), and the habitat's intended location (i.e. designs meant for outdoor placement should be built out of materials to withstand outdoor weather conditions).

The habitat that is submitted for design judging must be one created for this year's Critter Comfort Cottage competition. 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.

Team Web Page Submission

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

The web page <u>must</u> include:
1) Photo and Basic Info
- Team name
- School name

- First name(s) and last initial of students on the team (no last names on the public page)
- Grade level of each team member
- Type of animal the habitat is designed for
- A photo of the completed Critter Comfort Cottage (use this as the Featured Image on your page)

2) Design Documentation
- Photos - a minimum of four 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 Depot 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 that is dependant on them moving in, include a statement of how the habitat performed in the environment it was designed for during different weather conditions.

4) Team Design Video
Once the Critter Comfort Cottage is built, record a video that includes:
- Why the team chose this particular animal
- Why this design was chosen, and how it provides a good home for the animal
- Special features of the habitat–close-ups are strongly encouraged
- Each team member's contribution to the project
- Energy efficient designs and any renewable energy that was used

The video will be included on your project web page and hosted on our Vimeo site. It may be edited and/or pieced together, or included on the web page in separate segments; however it may not exceed 5 minutes total.

These are the minimum requirements for the web page. However, teams are encouraged to use the judging criteria as a guide to what extras they may want to include in their web page. For example, 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 while building and testing their habitat, and what the team did to overcome the challenge
- 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 STEM Saturday event
- any items that the team feels will showcase their critter cottage, or be helpful to the judges to pick them as the winning team!

Critter Comfort Cottage web page submissions are due approximately one week before the event. The exact due date will be communicated to the team by the officials of OCPS STEM Saturday.

During the week leading up to the event and during STEM Saturday itself, all Critter Comfort Cottage web pages will be available for public viewing. Students are encouraged to share their web page address with family and friends, and to visit other team pages.

Communications and Marketing

Each team is to create a marketing piece to accompany their design. The purpose of this is to highlight the energy efficient design, any green aspects of the structures, and the quality of the habitat for the selected animal. These can be in any format that the team chooses. The marketing piece should be geared toward the general public. The examples below are not meant to be exclusive; students are encouraged to be creative. Some marketing examples 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, verbal presentation to the judges and salesmanship.

Competition Day - Showcase Your Project!

At the competition, each team will have a 'booth' space (at least 10' x 12' with a 6' table), in which to set up their project, discuss their animal habitat with the judges and present their marketing strategy and materials to the general public. All 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 are also expected to interact with, and display to the general public.

A representation or facsimile of the selected critter or critters is to be displayed along with the pet home at OCPS STEM Saturday; no live critters will be permitted. **Any team that brings a live critter to the event will be disqualified.**

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 and be able to explain their project through additional materials. This can be done through any number of medium such as documents, videos, schematics, charts, blueprints, drawings, etc. Teams should have enough supporting materials to adequately represent their design and student construction.

In the event of rain, the WOW! portion of the judging will be canceled. If this happens, design judging and awards will continue.

Judging Criteria

Awards (1st - 3rd) will be given in each division for **Best Design**.

Best Design includes:

- **Design Decisions** – How well does the team understand energy efficient/green building design? How thorough are their design decisions? Was careful attention paid to parts selection and integration? Was proper attention paid to safety issues? How well does the team understand the habitat needs of their chosen critter?
- **Green Building Technology** – 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 efficient, green building practices represented in the project?
- **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?

- **Function** – Does the design provide a good habitat for the pet? Are the size and features appropriate? Will the habitat maintain appropriate temperatures? Was the design tested?
- **Creativity of Design** – How creative is the design? Is it a novel or interesting solution to a problem?
- **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 Critter Comfort Cottage? Is the web page arranged attractively?
- **Marketing Materials** – Do the marketing materials inspire interest or create demand for the product? How well did the student team market their cottage?

Wow! Award judging includes:
- **Presentation** – How well does the team communicate? Are they enthusiastic? Do they approach & interact with the crowd? Is there collaboration between team members?
- **Impression** – Does the team have a unified appearance (i.e. team t-shirts, theme, etc.)? Do they give a good first impression?
- **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?
- **Marketing Materials** - Are the marketing materials professional looking? Do they inspire interest?
- **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?