2025-2026 Maker Faire Sustainable City Competition Rules & Guidelines

The Maker Faire Sustainable City Competition is a design and engineering challenge where students can design solutions for real-world environmental problems. Eligible teams must attend school within MEEC's boundaries (High Desert portion of San Bernardino County, the Palo Verde Valley of Riverside County and the High Desert region of North Los Angeles County, including the cities of Lancaster and Palmdale).

2025-2026 Challenge Theme: "Firewise Future: Designing Cities that Stand Against the Flames"

As the frequency and intensity of wildfires increases, city planners must rethink how we build and live. Your challenge is to design, construct, and build a **3D model of a wildfire-resilient city**—one that keeps people, air, water, and wildlife safe—even in the face of wildfires, drought, and wind-blown smoke.

Your city is located within the urban-wildland interface - where human development meets or intermingles with natural wildland areas such as forests, shrublands, or grasslands. These cities face unique challenges, particularly increased wildfire risk, due to the close proximity of homes and infrastructure to flammable vegetation.

Your city should be drought-tolerant, wildfire-resilient, sustainable and realistic for a dry, high desert climate. **It gets about 9–12 inches of rain per year**, **2–3 inches of snow, and has long, hot, windy summers with very dry conditions**. Your city design and presentation should show how your community stays safe through wildfire preparedness, how it protects people and places during a fire, and how it recovers after the fire is over**.**

Competition Structure:

Each team of 3 to 8 students is responsible for designing and building a model of what they consider to be a sustainable city that addresses the real-world environmental problem as chosen by the Maker Faire Committee.

Eligibility Requirements:

1. Each competing team consists of three to eight students in grades 3 through 12. Each school may register multiple teams with a different adviser. The first two teams per school will be automatically registered. Any additional teams will be placed on a waitlist until the registration deadline. After the deadline, if space is still available, teams on the waitlist will be offered entrance to the competition and advisors will be notified.

2. The competition is divided into three divisions: elementary (grades 3 through 5), middle school (grades 6 through 8), and high school (grades 9 through 12). Teams of mixed grade levels will compete in the division of the highest-grade level student.

3. Competing teams agree to have their projects on display as part of the Maker Faire Exhibit Hall. Team members will ensure that their display has a representative at all times to answer questions from other attending teams.

Project/Design Requirements:

1. Team projects consist of four components: City Model, Essay, and Oral Presentation and an **optional digital component.**

2. Teams must design and build a portable city model. While there are no height or weight requirements, the model must be movable and able to be displayed on a standard 6-foot table with no overhang. **Max. size dimensions: 65" X 25". Tables have a max weight rage of 100 pounds.**

3. Team model must be constructed with a minimum of 75% recycled/reused materials. Models must include a least one moving part or light and should include 2D (hand drawn) and 3D components.

4. Only students are allowed to build their model–this is not a parent/advisor project. However, for safety reasons, teams may have assistance with power tools, and may buy pre-cut parts as needed. Adults are encouraged to monitor the use of tools.

5. The city model must address the solution to this year's environmental challenge theme ***and*** include 2-4 sustainable design concepts from the list below:

- Zoning (agriculture, industrial, business, residential, forest, protected areas)
- Sustainability with minimal environmental impact
- Low-emission or efficient transportation
- Water sources
- Water treatment
- Waste disposal
- Recycling/Circularity
- Power Plants/stations
- Protecting biodiversity
- Business (ex: commerce)
- Housing (ex: housing density)
- Recreational areas (ex: parks)
- Geological features and/or mineral resources
- Pollution prevention (ex: runoff etc., reducing CO2 emissions)

6. Team essays shall describe the unique attributes of their city and provide a solution to this year's environmental challenge. Essays should be no more than 1,500 words. All teams must submit their essay to MEEC no later than 1 week before the competition.

7. Teams will present a three-to-five-minute oral presentation about their city and their solution to the environmental challenge, followed by a three-to-five-minute question and answer session with the judges.

8. OPTIONAL DIGITAL COMPONATE: Teams will create a social media post (Facebook, Instagram, X) on the day of the event about their project tagging MEEC in the post.

Competition Day:
At the event, each team will have a booth space in the Maker Faire Exhibit Hall in which they will display their model and discuss their project with other teams. Booths must have 2 student representatives during exhibit hall hours.
Judging will take place at your team table. Your whole team must be present for judging at your assigned time.
If your model requires electrical hook ups, you must notify MEEC one week prior to event.

Judging Criteria — Model (45 points total)

1. Design Decisions: Does the model showcase the solution to the environmental theme? Did the model address 2 to 4 sustainable concepts? Is there at least one moving part or light?

2. Construction Technique: How well did the students construct their design? Are the students able to discuss the materials used? Is the model made from mostly recycled/reused materials?

3. Creativity: How creative is the use of materials? Is the design/project presented in a creative way?

Judging Criteria — 1,500-word essay (30 points total)

1. Relevance to environmental theme: Did the students describe the unique attributes that they used to create a solution to this year's challenge?

2. Comprehensiveness: How well did the students understand the challenge and their solution?

3. Creativity and Originality: Uniqueness, novelty and authenticity of ideas. Did the students present a critical view of the subject with a fresh way of looking at things?

Judging Criteria —Presentation and Q&A (45 points total)

1. Presentation and delivery– Did the team provide a well-executed and engaging presentation within prescribed time limit and incorporate required information to help judges evaluate their solution? Did the team demonstrate knowledge of their solution to the challenge? Did the team describe the whole city model to the judges? Does the team present and answer questions with confidence?

Bonus Judging Criteria- Digital Component (10 points total)

1. Content Quality: Message is clear and easy to understand, content highlight key components of your project and project theme.
2. Creativity and Originality: creative use of visuals, captions and hashtags.