



IGNITE STEM DESIGN CHALLENGE

APR 9 | 9:30AM - 5:00PM

IgniteSTEM Design Challenge 2022: Urban Upgrade

IgniteSTEM is proud to hold our in-person design challenge on Princeton's campus on April 9, 2022! Our unique design thinking exercises teach the fundamentals of engineering design in a fun event with other like-minded students while solving the world's biggest problems. It can't be missed!

The Challenge

Students will **work in groups** to complete **short design exercises**, brainstorming, creating and presenting innovations to **build sustainable and vibrant cities**. The specific exercises will be revealed the day of the event

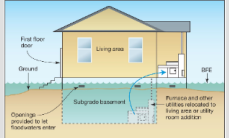
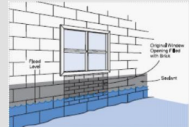
At the end of each challenge, students will make a presentation about **an innovative solution they've developed**, and present all of them at the end of the day to compete for exciting prizes.

There are a number of other events – **a tour of Princeton**, a workshop on creativity and a keynote speech on the power of engineering design.

See some of the solutions from last year's natural disaster-focused design challenge. Now that we're in person, we'll have the opportunity to build **physical prototypes** as well!

Our Solution

- Dry Floodproofing
 - watertight shields
 - use of sealants and membranes
 - reinforcement of walls to withstand water pressure
- Wet Floodproofing
 - flood vents
 - flood damage resistant building materials
 - protecting service equipment by locating them above the anticipated flood elevation



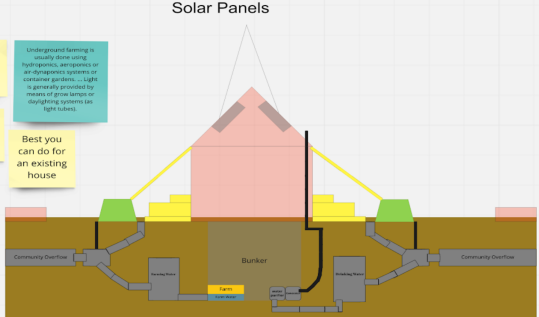
Solar Panels

Any family home

Hurricane Housing

Best you can do for an existing house

Underground basements are usually those using foundations, are expensive or not designed to resist or sustain pressure. Light is generally provided by means of pipe lamps for daylighting systems and light tubes.



The Teams

Students will work in **teams of three to six**. Students can **register as a group** or **we'll match them** with other students at our challenge.

All teams will be **mentored by a Princeton student** who will guide them through the steps of design thinking through a variety of different exercises. Students will also learn from teacher mentors – who will help the teams but also have **professional development opportunities** throughout the day.

Tentative Schedule

Time	Event
9:00-9:30 am	Event Check-in
9:30-9:45 am	Opening Ceremony
9:45-10:15 am	Team Introductions
10:15-10:45 am	Intro to Ideation led by IgniteSTEM
10:45-11:30 am	Design Thinking Exercise 1
11:30 am-12:00 pm	Lunch
12:00-1:15 pm	Campus Tour
1:15-2:00 pm	Design Thinking Exercise 2
2:00-2:30 pm	Guest Speaker
2:30-3:15 pm	Design Thinking Exercise 3
3:15-3:30 pm	Finalize Presentations
3:30-4:30 pm	Festival of Ideas
4:30-5:00 pm	Closing Ceremony

Register Now!

All participants must fill out our registration form by **March 31, 2022**:

<https://princetonclub.typeform.com/to/KWQ3fAlB>