

Ready to light up your life? Dive into the electrifying world of soldering as you learn to piece together a circuit board! Use your skills to create a programmable blinking LED kit that will dazzle and amaze – it's tech magic at your fingertips!

Blinky POV

Cha-Cha-Chindogu

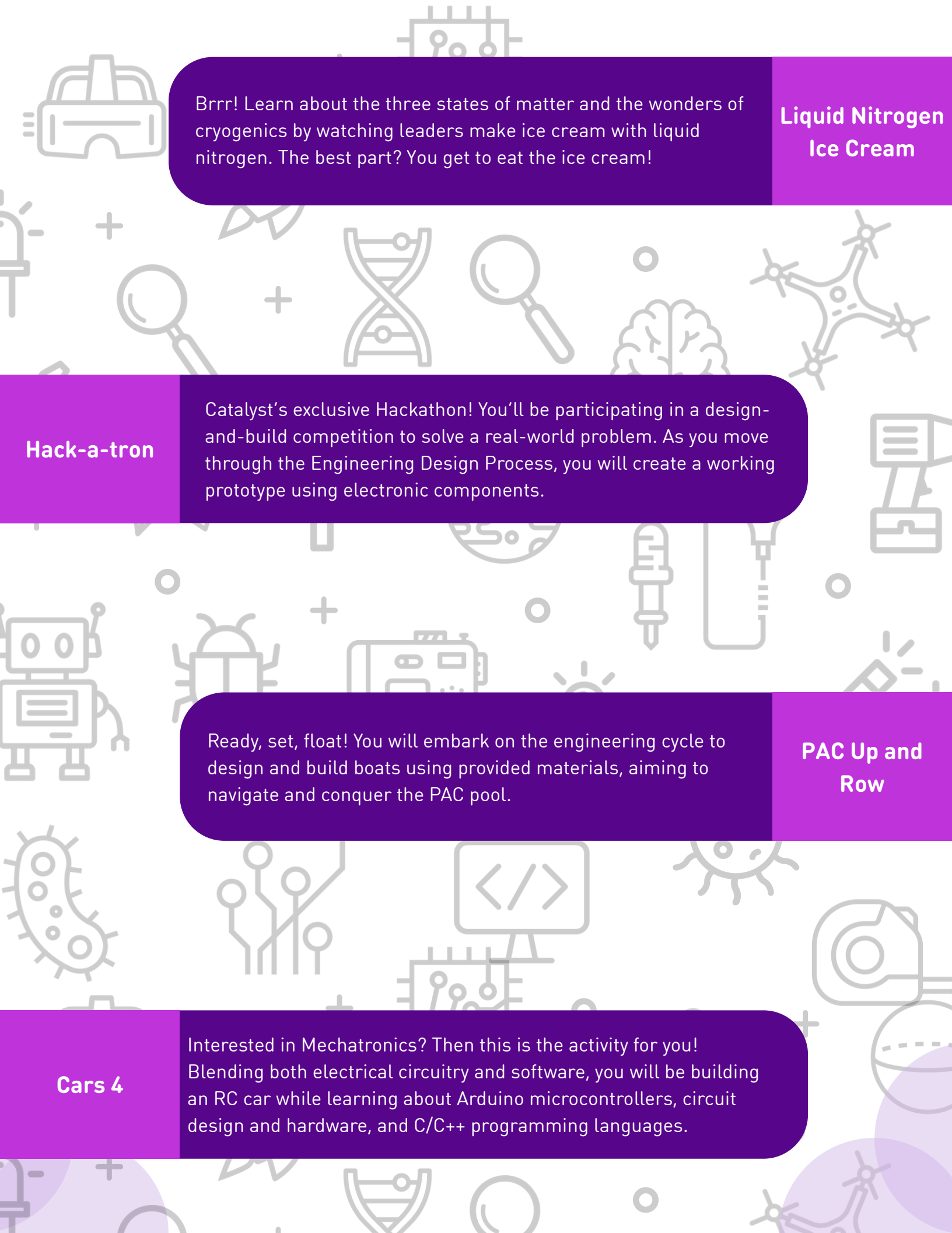
Let the chaotic creativity begin! Use Tinker CAD to design your own Chindogu, an impractical gadget aimed at solving everyday problems. Then, bring your creation to life with the possibility of 3D printing it.

Secrets are meant to be discovered! Write Python scripts to decrypt encoded messages, unlocking the fascinating world of cryptography and also the lock to an escape room!

Mission: Unlock

Cultured Surfaces

Ready to uncover the hidden world of microbes? Grab your swabs and head out to sample "clean" spots around you. After a week, discover the surprising bacteria that have bloomed and see if your cleanliness assumptions hold true!



Brrr! Learn about the three states of matter and the wonders of cryogenics by watching leaders make ice cream with liquid nitrogen. The best part? You get to eat the ice cream!

Liquid Nitrogen Ice Cream

Hack-a-tron


Catalyst's exclusive Hackathon! You'll be participating in a design-and-build competition to solve a real-world problem. As you move through the Engineering Design Process, you will create a working prototype using electronic components.

Ready, set, float! You will embark on the engineering cycle to design and build boats using provided materials, aiming to navigate and conquer the PAC pool.

PAC Up and Row

Cars 4


Interested in Mechatronics? Then this is the activity for you! Blending both electrical circuitry and software, you will be building an RC car while learning about Arduino microcontrollers, circuit design and hardware, and C/C++ programming languages.




Calling all innovators and changemakers! Develop a groundbreaking product to tackle a pressing social or environmental issue and then pitch your brilliant idea to a panel of judges. Show off your creativity and problem-solving skills in this exciting and inspiring challenge!

Pitch Competition

Power Pong




Get ready to build a ping pong paddle like no other! In this fun, hands-on activity, you'll use a small motor to create a paddle that spins, vibrates, or boosts your shots. It's a quick dive into DIY engineering with a competitive twist!



Chemistry meets style! You will explore chemical reactions, electrochemistry, and nanotechnology while crafting titanium rings using anodization. Discover the science behind stunning jewelry in this hands-on activity.

That Ring is Ti-ght

Medieval Engineering



In the beginning ... early engineers sought to build defenses and prepare from enemy attack. In this activity, you will design and build structures and catapults fit to withstand battle to see who will conquer the engineering kingdom.