COOK INLET TRIBAL COUNCIL

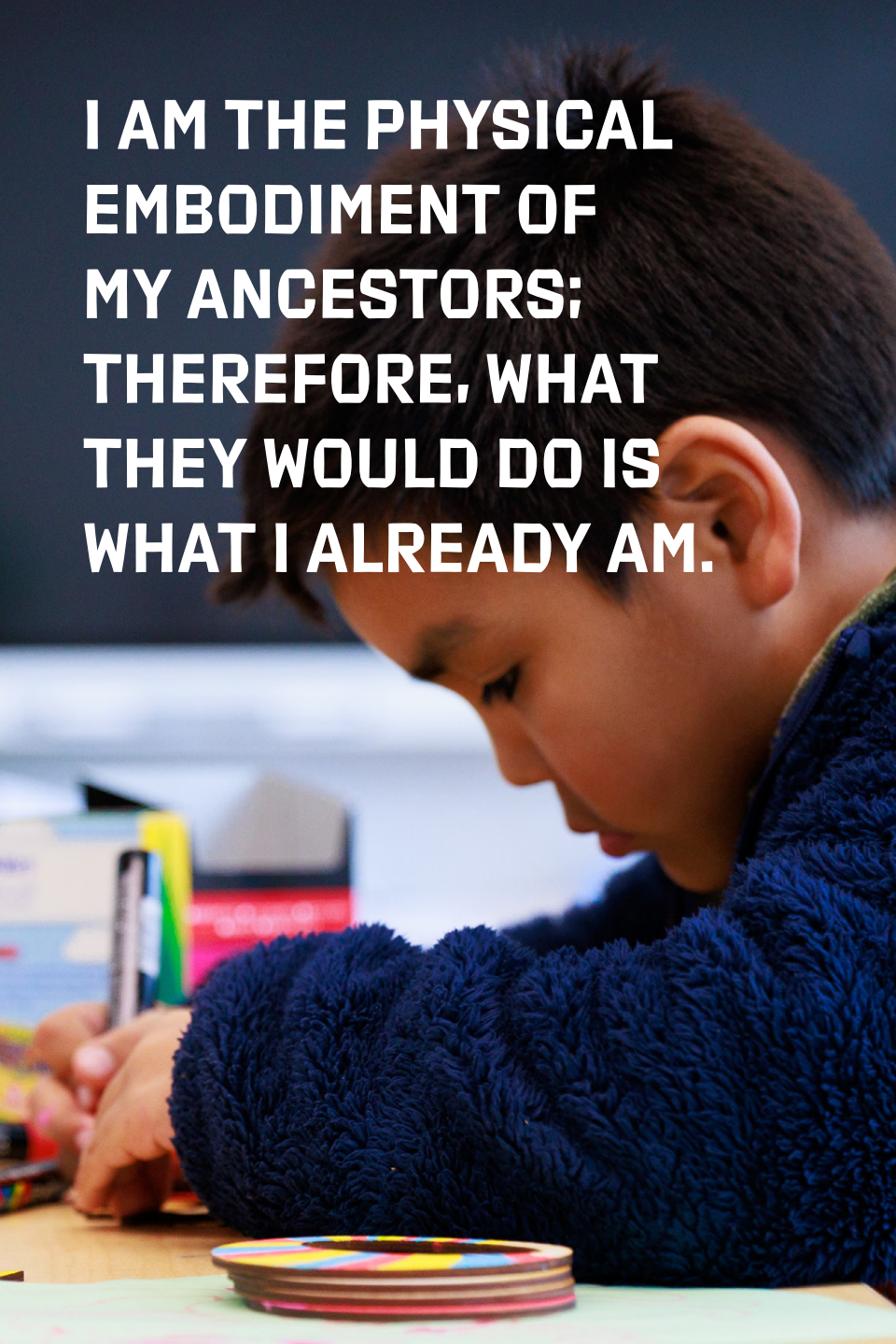
denetchin.lab

PUFFIN SKULL // 3D SILICA PRINT

GRAND OPENING

AUGUST 16, 2023

INNOVATION | TECHNOLOGY | EDUCATION


I AM THE PHYSICAL EMBODIMENT OF MY ANCESTORS; THEREFORE, WHAT THEY WOULD DO IS WHAT I ALREADY AM.

ABOUT THE COVER PHOTO

This puffin skull was made in the Denełchin Lab with a special printer that uses silica powder. The printer heats up the fine grains of silica with a laser, then binds them together, layer by layer, to create three-dimensional objects. It's like building something with sand—but the objects created by the printer are precise, strong, detailed, and resistant to heat.

Replicas aren't just cool to look at — they provide context around cultural narratives and values that have been passed down for generations. A combination of time-honored traditions and contemporary technology highlights the ingenuity of Alaska Native communities. By integrating ancestral stories with modern tools, students are actively participating in their own cultural identities, strengthening their connection with past and future generations.

Denełchin Lab—a state-of-the-art creative space—is a place for students to use high-tech design programs, industrial-grade machines, and programming tools to transform ideas into reality.

Created in partnership with the Massachusetts Institute of Technology (MIT), this innovative educational space challenges youth to connect to their full science, technology, engineering, and mathematics (STEM) potential.

Denełchin

[deh-nel-chin]

"to make something"

(Dena'ina Athabascan)

Gloria O'Neill
President + CEO
Cook Inlet Tribal Council

denełchin·Lab
COOK INLET **TRIBAL** COUNCIL

On behalf of CITC's Board of Directors and leadership team: **Welcome to Denełchin Lab!**

Simply put, Denełchin Lab is an expansive learning space designed to create opportunities for Our Youth to connect with their endless potential. For CITC, this is a landmark investment in our community, our shared future, and, most importantly, Our People.

We've forged this path through togetherness. Denełchin Lab was made possible by deep and lasting partners who are aligned with CITC in their belief that education is the greatest equalizer.

Our Tribal Leaders said: "*Pick up the tools of the modern world, use those tools, and don't forget who we are,*" and our Board gave us the bold vision to develop "radical new models of education." Denełchin Lab is a direct result of this wisdom. It is here that we will thoughtfully and intentionally **connect Our Youth to technology** through advanced machinery, and Science, Technology, Math, and Engineering (STEM) learning while leveraging culture and tradition to channel the wisdom of Our People.

COOK INLET TRIBAL COUNCIL
People. Partnership. Potential.

One of the best things about a learning environment like Denełchin Lab is that it values what **we do so well as a people:** creativity, design, ingenuity, practicality, and hands-on learning.

With Our Youth at the forefront, we believe this is the time to be innovative by investing in technology and **designing relevant opportunities that allow us to thrive in the age of digital technology.**

I want to thank our many valued partners on this journey—Denełchin Lab wouldn't exist without you. Your support will help change lives, strengthen communities, and influence generations to come.

FAB LAB MILESTONES

2014

CITC partners with MIT to open Anchorage's first community-accessible Fab Lab in the CITC Qech'Henu building ("to go to work").

2016

CITC partners to install world's northernmost Fab Lab in Utqiagvik.

2018

CITC develops a mobile Fab Lab for on-site STEM learning for public schools on Alaska's road system.

2019

CITC establishes Innovation Stations, installing mini Fab Labs in urban and rural classrooms across Alaska.

2022

By partnering with progressive sponsors, CITC implements Alaska's first Super Fab Lab, Denełchin Lab, in east Anchorage.

INSIDE THE LAB:

M.J. MURDOCK CHARITABLE TRUST PRINTERS PEAK

A dynamic environment for 3D printing, as well as printing posters, stickers, and textiles. Projects like 3D printed snow goggles, Tlingit language dice, and student-designed t-shirts showcase the versatility of Printers Peak. Equipped with advanced tools, including a direct-to-garment printer, 3D scanner, vacuum former, and larger volume resin printer, the space aims to host engaging community workshops on 3D printing basics, t-shirt design, and 3D modeling.

INSIDE THE LAB:

CIRI LASER LOUNGE

CIRI Laser Lounge: A multi-functional space, used for activities ranging from rapid prototyping and digital design to laser cutting. Equipped with new laser cutters with advanced capabilities like deeper focus and camera positioning, the space allows for larger projects and improved workflow. Future plans include expanding its role as a creative space, offering laser cutter training, and hosting community workshops on laser cutting basics.

INSIDE THE LAB:

RASMUSON FOUNDATION WOODSHOP

A lively, hands-on space where participants engage in traditional woodworking using manual skills and shop tools. It offers improved capabilities such as centralized dust collection, larger work area, and new CNC routers. Future plans include fostering participant growth in manual skills and confidence with tools while prioritizing safety through the teaching of best practice protocols.

INSIDE THE LAB:

MEDIA ROOM

A versatile space for photography, podcast recording, video, audio, and student programming. It boasts a green screen, comfortably accommodating up to five people, and professional sound and video recording equipment. Plans include empowering Native youth by using podcasts and videos as a platform for storytelling, preserving and showcasing local stories.

EMPOWERING INDIGENOUS YOUTH

When Fab Lab Assistant **Terrence Long** first came to CITC as a middle-schooler, he was homeless, couch-surfing, and living in his family's truck in Anchorage. Terrence was working two jobs, his grades were suffering, and he often experienced bullying at school. But when he joined a CITC after school program, **Terrence discovered an accepting community** that, perhaps most importantly, celebrated his Iñupiaq heritage.

In CITC's Fab Lab, Terrence forged a passion for hands-on learning, using the latest maker technology to imagine, design, and create. Guided by skilled instructors teaching culture-forward lessons, Terrence found an outlet for self-expression and identity in the Fab Lab. **He quickly progressed from student, to intern, and now to full-time staff member who helps empower Alaska Native youth to learn and connect with their potential.**

"Through CITC, with all the support they've given me, I've been able to become more stable," Terrence says. "I've been able to find out who I am, and I'm able to help others find out who they are."

One of Terrence's favorite activities to lead is CITC's Kaktovik Clock project, which is built on the traditional "base 20" counting system used by Terrence's Iñupiaq ancestors.

A traditional "base 20" Iñupiaq counting system is reborn using a set of unique numerals crafted decades ago by Kaktovik youth to keep traditions alive.

In this Denełchin Lab program, students create a wall clock using design thinking, laser-cutting technology, and resin to produce a modern tool inspired by ancient ways.

Terrence Long presents a Kaktovik clock created in Denełchin Lab.

INDIGENOUS PEOPLES SETUP SHOP

The Empowering Indigenous Peoples Set Up Shop (IPSUS) serves Alaska Native and American Indian entrepreneurs aiming to start or grow businesses. Administered by CITC in partnership with Anchorage Community Land Trust, IPSUS offers a comprehensive curriculum including cost-free business training, product design aid, and lending services. Expert instructors foster the entrepreneurial mindset, equipping individuals with essential tools for growth, regardless of the business journey stage.

COMMUNITY ACCESS

Entrepreneurs, artists, and community members interested in exploring Fab Lab technology are invited to join Denełchin Lab open-access community classes this September. Visit DenelchinLab.com for registration details.

CITC's Denełchin Lab empowers individuals with advanced skills and knowledge in digital fabrication. The community classes provide an immersive learning journey, equipping participants to unlock their creative potential.

Led by experienced instructors, the classes cater to all skill levels, from beginners on a journey of discovery to entrepreneurs designing and prototyping products. Participants gain hands-on experience with cutting-edge tools, including 3D printers, laser cutters, CNC machines, and more.

ENTREPRENEUR FELLOWSHIP

In honor of our friend and former CFO, the late Amy Fredeen, CITC is proudly launching the Amy Fredeen Entrepreneurship Fellowship. This program aims to assist, empower, and nurture Alaska Native entrepreneurs as they grow into future business leaders. Ms. Fredeen's leadership on the 49th State Angel Fund board advanced the growth of several business investments and entrepreneurial start-ups in our community. This year-long fellowship carries forward Ms. Fredeen's legacy of support for innovative initiatives within the Native entrepreneurship ecosystem.

Amy Fredeen

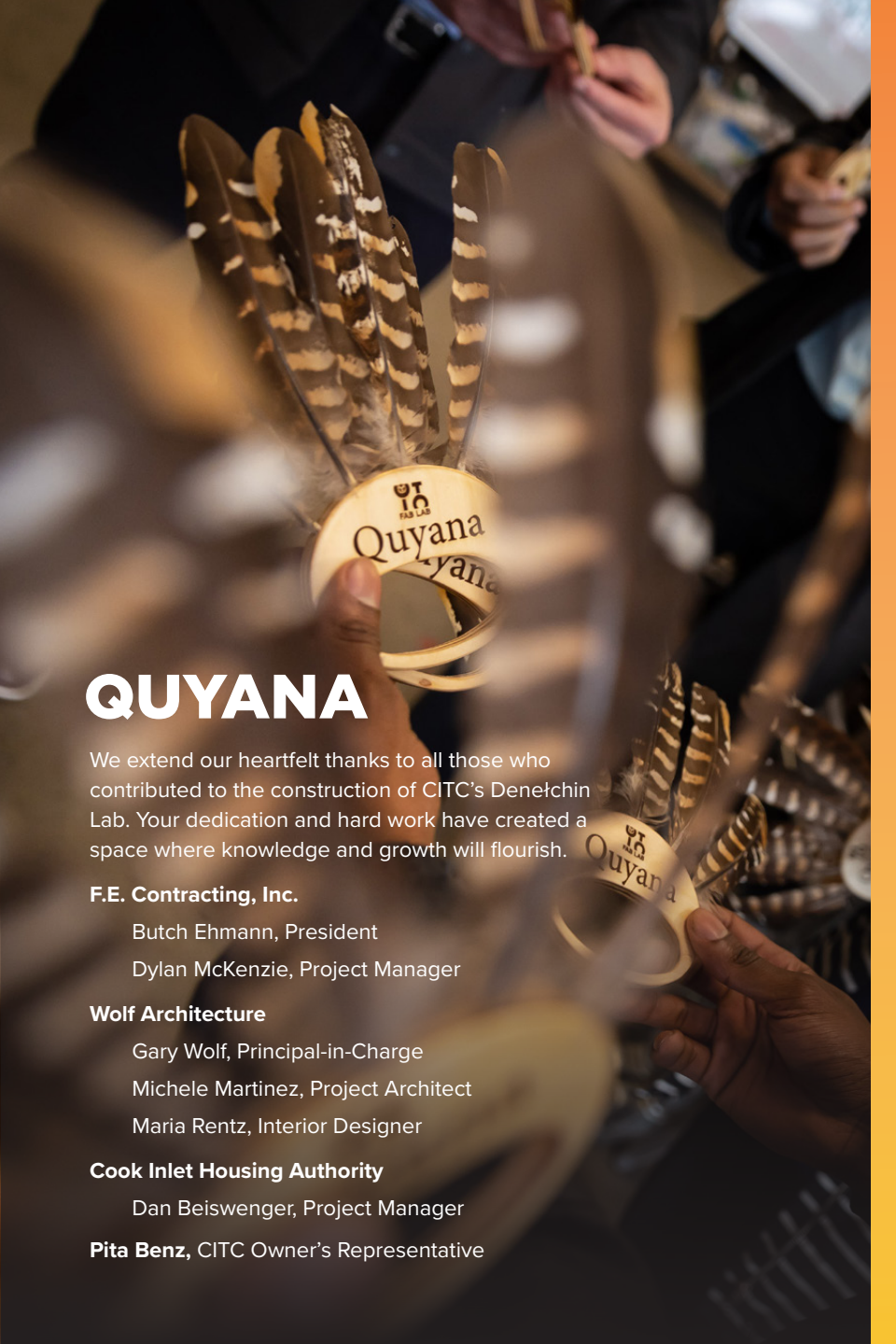
MEET THE TEAM!

FAB LAB INSTRUCTOR: BRIAN WALKER

What excites you most about moving to the new Super Fab Lab?

It's a new space. We've definitely outgrown the previous space. It served us really well—a lot of amazing conversations, projects, and collaborations happened there. **But we really needed a bigger space.** So we're super excited to be in here.

It's going to be a nice, fresh restart, and we'll be able to keep working and continue growing the curriculum that we're doing here, which is Indigenous STEAM [science, technology, engineering, art, and math]. And supporting our students and making sure they have the opportunities that maybe I didn't have, going to school—really diverging from what education is from a Western standpoint versus what we're doing here, which is Indigenous education. And that's very different. To have a new space to do that is so exciting.



QUYANA

We extend our heartfelt thanks to all those who contributed to the construction of CITC's Denełchin Lab. Your dedication and hard work have created a space where knowledge and growth will flourish.

F.E. Contracting, Inc.

Butch Ehmann, President

Dylan McKenzie, Project Manager

Wolf Architecture

Gary Wolf, Principal-in-Charge

Michele Martinez, Project Architect

Maria Rentz, Interior Designer

Cook Inlet Housing Authority

Dan Beiswenger, Project Manager

Pita Benz, CITC Owner's Representative

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COMMUNITY PARTNERS

Anchorage School District
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SUPPORT STEM EDUCATION

SPONSORSHIP PACKAGES

Sponsor levels include the following benefits:

	TINKERER $100-999	EDUCATOR $1,000-4,999	DEVELOPER $5,000-9,999	INNOVATOR $10,000-74,999	ENTREPRENEUR $75,000+
Fab Lab Machine Naming Rights					●
Funder's Fab Lab Day				●	●
Feature Story in CITC Newsletter			●	●	●
Donor Wall		●	●	●	●
Website	●	●	●	●	●
Social Media	●	●	●	●	●

Investments in the Super Fab Lab are eligible for the State of Alaska Education Tax Program, which provides eligible businesses with a tax credit worth 50 percent of that investment, up to $1 million.

SPONSORSHIP OPPORTUNITIES:

CITC Sr. Director of Development
Kelly Hurd at 907.793.3272

Learn more about Denełchin Lab and how you can invest in Alaska's youth.

dESIGN
dEVELOP
dISCOVER

denełchinlab.com