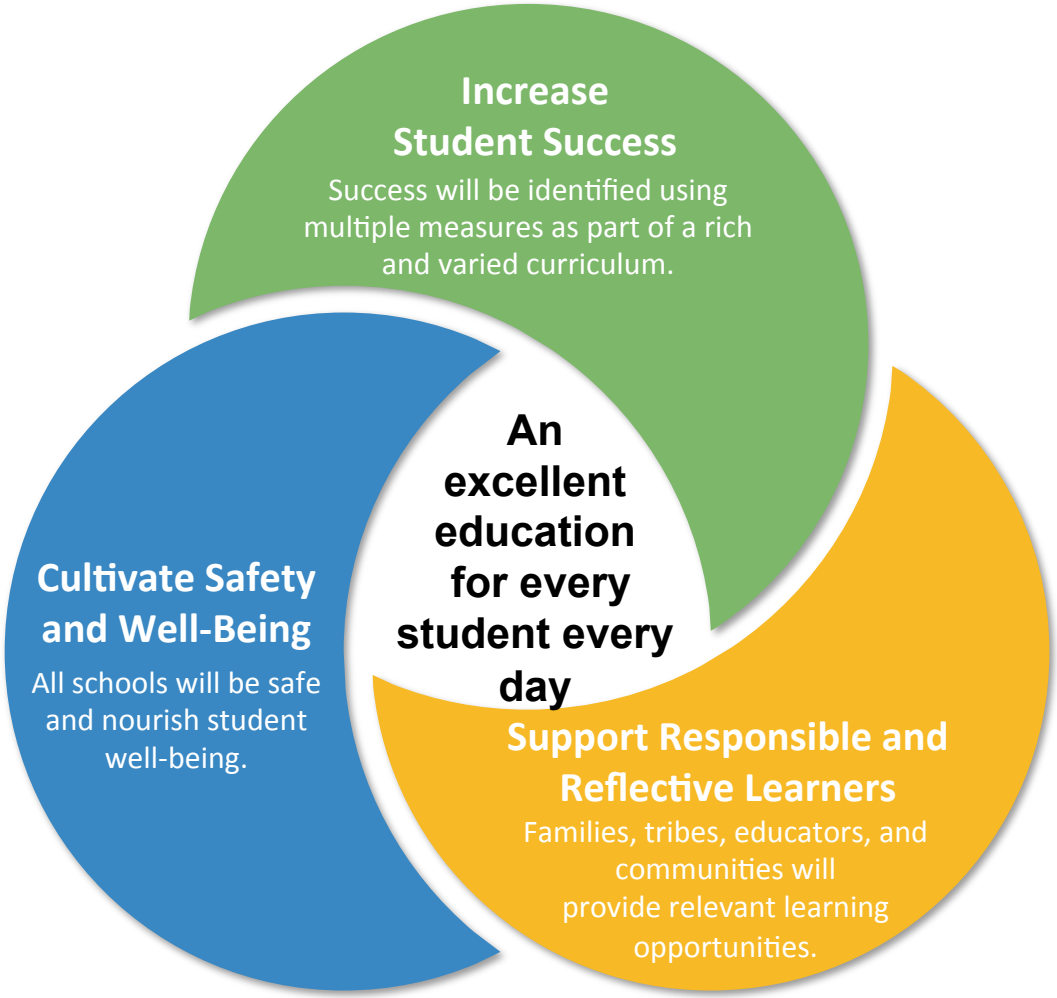
Creating a Culture of Computer Science in Alaska

Sam Jordan
Education Technology Coordinator
Alaska Department of Education and Early Development



ALASKA DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT

ALASKA'S Education CHALLENGE

Computers, smartphones, smart systems, and other technologies are woven into nearly every aspect of our daily lives… the essential question for American education is:

In a computational world, what is important to know and know how to do?

-*Computational Thinking for a Computational World*, DigitalPromise.org

ALASKA DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT

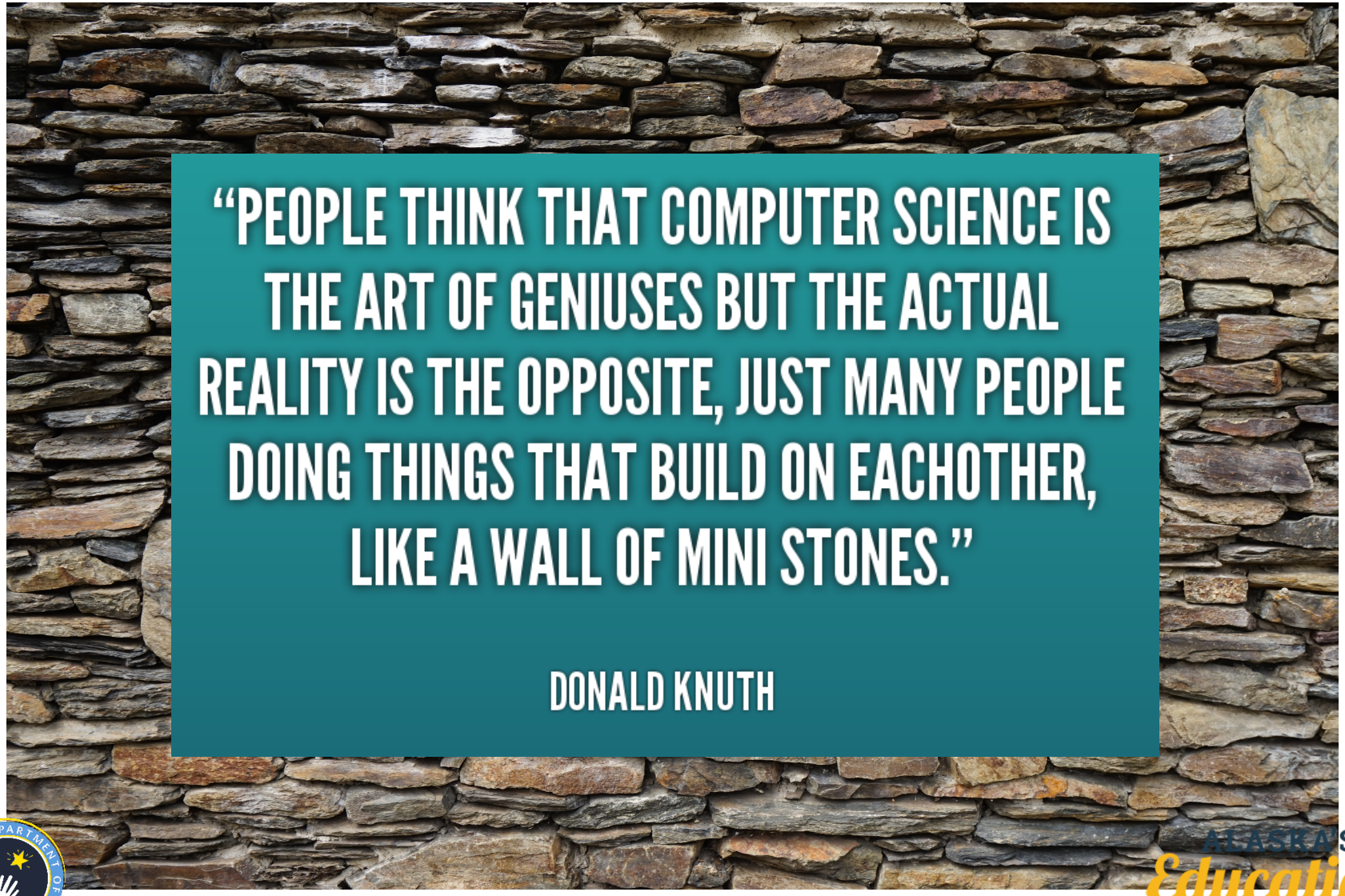
ALASKA'S Education CHALLENGE

ALASKA DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT

ALASKA'S Education CHALLENGE

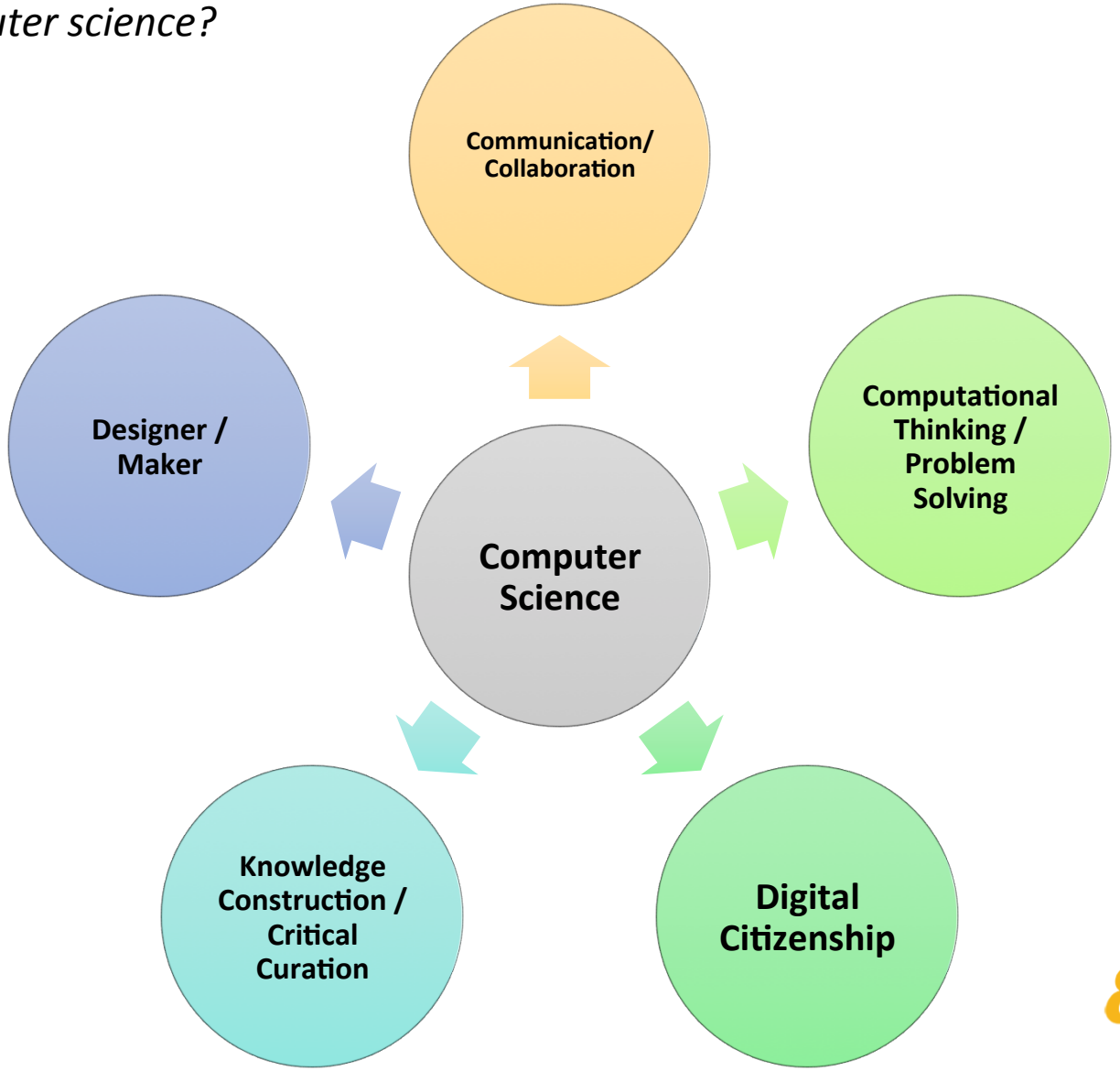
ALASKA DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT

ALASKA'S Education CHALLENGE


"PEOPLE THINK THAT COMPUTER SCIENCE IS THE ART OF GENIUSES BUT THE ACTUAL REALITY IS THE OPPOSITE, JUST MANY PEOPLE DOING THINGS THAT BUILD ON EACHOTHER, LIKE A WALL OF MINI STONES."
DONALD KNUTH

ALASKA'S Education CHALLENGE

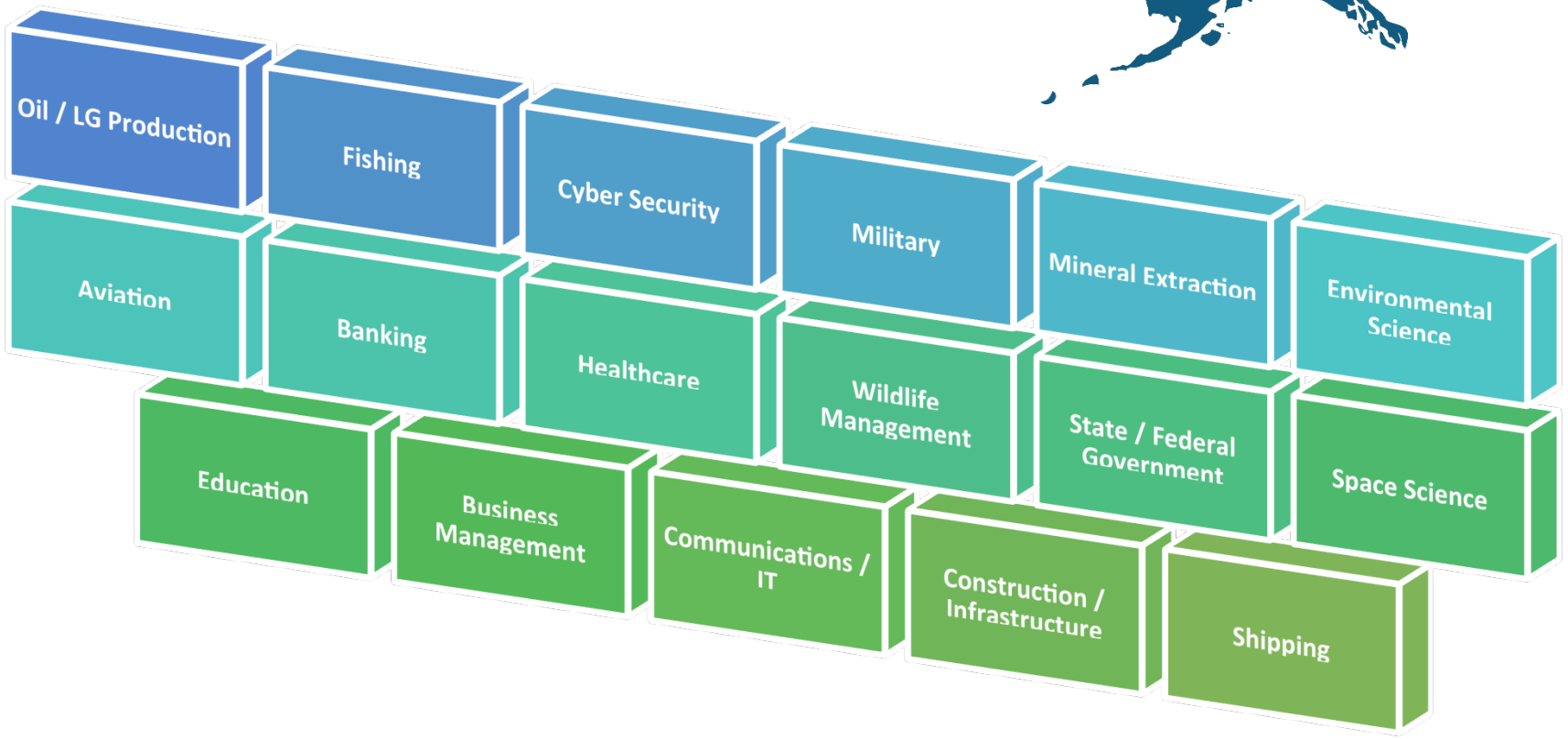
What is computer science?



ALASKA DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT

ALASKA'S Education CHALLENGE

Industries increasingly driven by computer science in Alaska…



ALASKA DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT

ALASKA'S Education CHALLENGE

ALASKA PUBLIC MEDIA PBS npr

Pick.Click.Give. Support when yo

TELEVISION RADIO NEWS KIDS & FAMILY SUPPORT ABOUT US CONTRIBUTE

The trans-Alaska pipeline fights off 22 million cyber attacks. Daily.

By **Elizabeth Harball, Alaska's Energy Desk - Anchorage** - March 14, 2018

tweet

Support

University of Alaska: Hacker breached data system

By Associated Press | Posted: Wed 6:51 AM, Sep 07, 2016

ANCHORAGE, Alaska (AP) - University of Alaska officials say som
drive that contained private information like Social Security numbe

1st commercial launch scheduled at Kodiak spaceport complex

Tuesday, March 20th 2018, 2:41 am AKDT by Associated Press
Updated: Tuesday, March 20th 2018, 6:41 am AKDT

Credit: Alaska Aerospace Corporation

KODIAK, Alaska (AP) - Alaska Aerospace CEO Craig Campbell says the Pacific Spaceport Complex in Kodiak will be launching its first commercial spaceflight next month.

ALASKA DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT

Shortage of Computer Science Graduates

25 computer science graduates in Alaska

655 open computing jobs in Alaska

Source: www.indeed.com

The average salary for a computing occupation in Alaska is $84,747, which is significantly higher than the average salary in the state ($56,710).

ALASKA DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT

ALASKA'S Education CHALLENGE

What if….

ALASKA'S Education CHALLENGE

ALASKA DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT

What if….

ALASKA'S Education CHALLENGE

Alaska

655 open computing jobs
(2.4x the state average demand rate)

25 computer science graduates

Policy Environment (**rubric**):

- No dedicated state funding for CS PD
- Does not require all high schools to offer CS
- No K-12 CS curriculum standards

▼ AP Stats

- 8% of schools teach AP CS
- 68 AP CS exams were taken last year
- 25% of them were female
- 5 were underrepresented minorities

View Alaska fact-sheet

Sources: **The Conference Board**, **National Center for Education Statistics**, and the **College Board**. **More info**.

ALASKA DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT

ALASKA'S Education CHALLENGE

What DEED is doing?

Alaska Digital Citizenship Week (Sept)

Educational Technology Coordinator (DEED)

Alaska Week of Code (Dec)

Emerging AK Computer Science Culture

Industry Partnership

AK Computer Science Standards

GCI

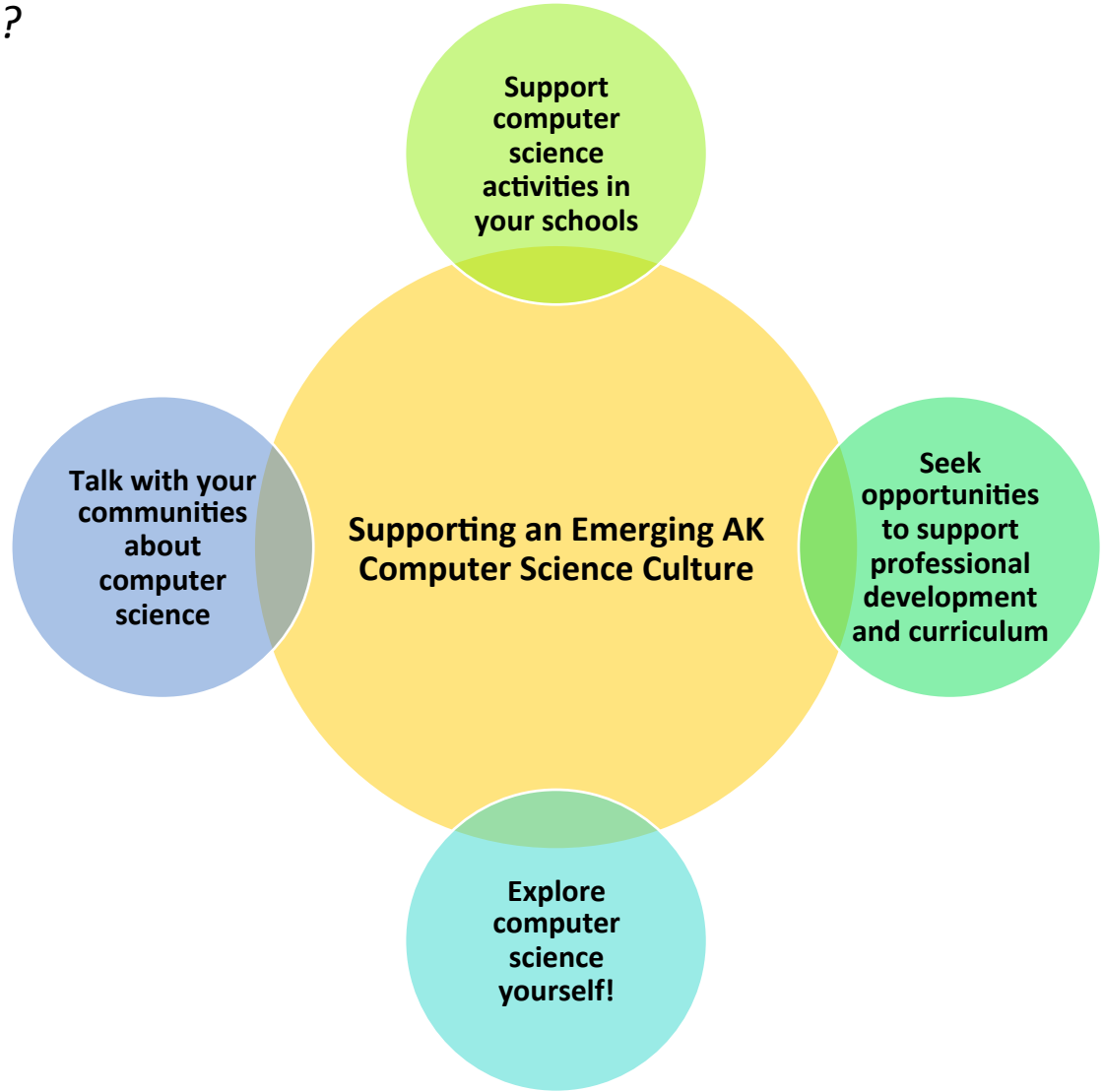
alaska COMMUNICATIONS

Microsoft

ALASKA'S Education CHALLENGE

ALASKA DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT

What you can do?



ALASKA DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT

ALASKA'S Education CHALLENGE

In the world of technology, lets help Alaskan students be thoughtful creators, not just consumers.

ALASKA DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT

ALASKA'S Education CHALLENGE

Questions / Comments

Sam Jordan
samuel.Jordan@alaska.gov