



Run, Don't Walk, to Computer Science

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District

In today's session we will, with regards to our own organizations...

- ❑ Develop a vision of an ideal CS Education program
- ❑ Consider the current state of Computer Science Education
- ❑ Outline a reasonable strategic plan timeline
- ❑ Brainstorm stakeholder contributions and obligations
- ❑ Develop draft action steps to take to make our vision reality!

Notecatcher

Our Thought Partners



- ★ Name
- ★ Role in CS Education your organization

*As you listen, make notes of those colleagues in roles or organizations similar to your own.

Why I am here...



How I hope to help...



Computer Science *Education*



is the study of computers with particular attention paid to:

- Computer and networking systems integration,
- Computational thinking principles,
- Creation of physical computing (hardware) for end users,
- Creation of software designs for end user application, and
- Computing's historical, present and future impact on society

Created by the Colorado Computer Science Leaders 2017, (adapted from Tucker, et. al, 2006, p.2.)

Computer Science *Education*



What it isn't.

Computer science education is not the same as teaching digital literacy or general computer usage. In other words, computer science is not about teaching students how to use applications such as Office, Google, iMovie or Adobe.




Develop a vision of an ideal CS Education program

Computer Science is Changing Everything



***Write one sentence that summarizes
your hopes for your CS program.***



Consider the current state of Computer Science Education

Current State



Consider the current state of Computer Science Education in your organization

1. What & To What Extent?
 - a. When are students first exposed to CS education?
 - b. Is there a clear pathway in place for students from PK-12? If so, is it communicated clearly?
 - c. Does every student get the opportunity or just the interested?
 - d. [Computer Science Implementation Continuum](#)

PRODUCT: Honestly evaluate your organization on the continuum, marking specific areas of strength and challenge

Current State

PRODUCT: Make a list of names of people you need to talk to in order to learn more.

3. Learn More

- a. Talk to teachers, counselors, administrators
- b. Talk to students - do they perceive opportunities as they are intended?
- c. Talk to parents - do they know what is available? Are they satisfied with the opportunities their children have? Do they have ideas for community partnerships and programs?
- d. What secondary courses are available? Are they tech literacy or Comp Sci? Is CTE, AP or IB available? Can students earn college credit or Industry certifications?
- e. What is your enrollment in secondary Comp Sci classes?
- f. What is the collective vision of district leadership?



Outline a reasonable Strategic Plan

Strategic Planning



- Be realistic
- 3-5 years to full implementation, plus more for evaluation, data analysis, improvement
- Gather input
- Draft a plan
- Get feedback
- [Example Computer Science Strategic 3-year Plan](#)

Strategic Planning



PRODUCT: a 3-5 year timeline for general reaching of “ideal state”

- What can you reasonably get done this year?
 - ◆ Consider other initiatives
 - ◆ Consider your place on the continuum
 - ◆ Do you have support and funding? If not, how can you build that?
 - ◆ Do you have community partnerships can enhance your work?
 - ◆ Don't forget to include CTE!
 - ◆ Do you need new courses?
 - ◆ What standards are you using?
 - ◆ What professional development do your schools need?
 - ◆ What instructional materials will be used?

*If you are retiring before 2024, factor in transition planning! :-)



Brainstorm stakeholder contributions and obligations

Stakeholder contributions and obligations

- Be realistic - the n+1 rule might be a good one here.
 - Who do you need to involve? Be specific - name names. Identify the goal of the collaboration.
 - ◆ Initial planning
 - ◆ Budgeting
 - ◆ Communication
 - ◆ Buy-in
 - ◆ Is there “low hanging fruit”?
 - ◆ When does leadership need to be included? Layers above, at and below your pay grade.
 - ◆ How are teachers included? Parents? Students? School admin?
- Example: Bee, Grant Writer, work with Bee to identify potential grants to support CS program growth, apply, win, implement.

PRODUCT: a comprehensive list of stakeholders and your needs from each collaboration.



**Develop draft action steps
to make your vision reality!**

Develop draft action steps



Using your vision, current state, timeline, and stakeholders to draft **SMART** action steps:

Strategic
Measurable
Actionable
Results-oriented
Time-bound

PRODUCT: an action plan of at least 3 actions, at most 10 actions to be completed this year.

Helpful resources



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[@BoulderMathD](#)

[Example Computer Science Strategic 3-year Plan](#)

[Example PK-12 Computer Science Pathway](#)

[Computer Science Teachers Association K-8 Standards](#)

[CDE Computer Science Standards 9-12](#)

[CDE Computer Science Resource Bank](#)

[mindSpark Learning - code.org Regional Partner for Professional Learning](#)

[Colorado School of Mines Summer Computer Science Professional Learning Programs](#)

Thank you and enjoy your day!

This is
my
thank you
dance!

