

NEGOTIATED RULEMAKING COMMITTEE

Computer Science, Library
Media/Information Literacy, and
Technology Integration

Content Standards Revision

February 12, 2020

Putting Montana Students First **A+**



PUBLIC MEETING

All comments received become part of the official public record of the Negotiated Rulemaking Committee proceedings in accordance with MCA 2-3-212.

This meeting is being recorded and streamed via MPAN.

Please use the microphone whenever you are speaking.

Remote participants are joining this meeting via conference call.

CALL TO ORDER



MEETING AGENDA

Call to Order

- Housekeeping
- Review Process and Guidelines

Proposed Rule Changes

- Complete Technology Integration review
- Library Media/Information Literacy review

Lunch

Proposed Rule Changes

- Library Media / Information Literacy (continued)

Economic Impact Report and Data

Negotiated Rulemaking Timeline

Public Comment

Adjourn

HOUSEKEEPING

Restrooms and Breaks

Connectivity Check/ Device Setup

Committee Agenda Packet

Lunch break at 12 p.m.

Work Session concludes at 4 p.m.

ROLES AND RESPONSIBILITIES

Committee Members

- review drafts prepared by the revision team to provide feedback and a recommendation to the Superintendent on the draft
- assist in determining the economic impact of the draft

OPI and BPE Staff

- support the work of the committee

PROCESS

Where are WE?

Montana Constitution

Montana Code Annotated (Legislature)



Administrative Rules of Montana (OPI NR
Committee OPI BPE)

Policy (School Trustees)

Procedure (School Administrator)

BACKGROUND AND CONTEXT FOR RULE CHANGE

The Board of Public Education sets forth the following guidelines for content standards revision:

- Standards will define what all students should know and be able to do;
- Standards will be challenging and rigorous;
- Standards will be clear, understandable, and free of jargon;
- Standards will be measurable;
- Standards will address diversity, specifically fulfilling the commitment to implementing Indian Education for All;
- Standards will be consistent with the grade level and grade band structures in ARM Chapter 53; and
- Content standards will be consistent with the program delivery standards described in ARM Chapter 55.

BACKGROUND AND CONTEXT FOR NEW COMPUTER SCIENCE RULES

Computer science skills are necessary for college and career readiness

- Today's and tomorrow's jobs require computational thinking, programming, and problem solving skills

Organized by grade level for K-5 and by grade band for 6-8 and 9-12

- Grade level standards for K-5 clarify learning expectations for elementary teachers who teach in all content areas
- Grade band standards for 6-8 and 9-12 clarify expectations and allow for flexibility of program delivery

Integration of Indian Education for All

Progression of skills and content from K-12

BACKGROUND AND CONTEXT FOR RULE CHANGES TO TECHNOLOGY INTEGRATION

Current technology content standards were adopted in 2008

- Program delivery standards (Ch 55) were not proposed or adopted

Organized by grade level for K-5 and by grade band for 6-8 and 9-12

- Grade level standards for K-5 clarify learning expectations for elementary teachers who teach in all content areas
- Grade band standards for 6-8 and 9-12 clarify expectations and allow for flexibility of program delivery

Integration of Indian Education for All

Emphasis on technology integration across content and contexts

BACKGROUND AND CONTEXT FOR RULE CHANGES TO LIBRARY MEDIA

Current Library Media/Information Literacy content standards were adopted in 2008

- Program delivery standards (Ch 55) were not updated in 2008

Organized by grade level for K-5 and by grade band for 6-8 and 9-12

- Grade level standards for K-5 clarify learning expectations for elementary teachers who teach in all content areas
- Grade band standards for 6-8 and 9-12 clarify expectations and allow for flexibility of program delivery

Integration of Indian Education for All

Emphasis on the skills students need to be information literate in any information or problem solving environment

PROPOSED RULE CHANGES



A thumb held up indicates that I understand and am in agreement with the proposal.



A thumb held sideways indicates that I do not understand the proposal.



A thumb held down indicates that I understand and do not agree with the proposal.

DRAFT PROPOSALS

Content
Standards

- ARM Chapter 53 and 54

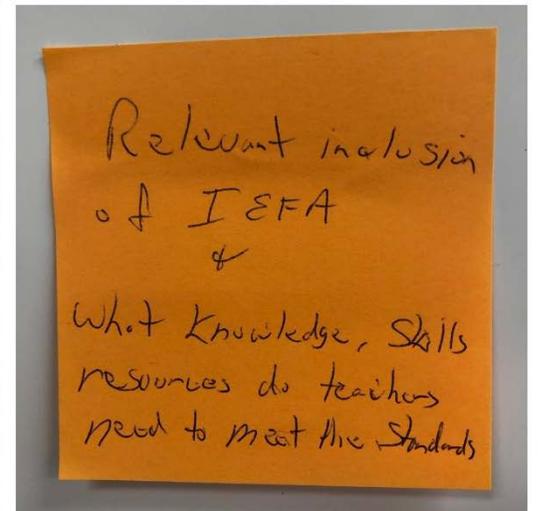
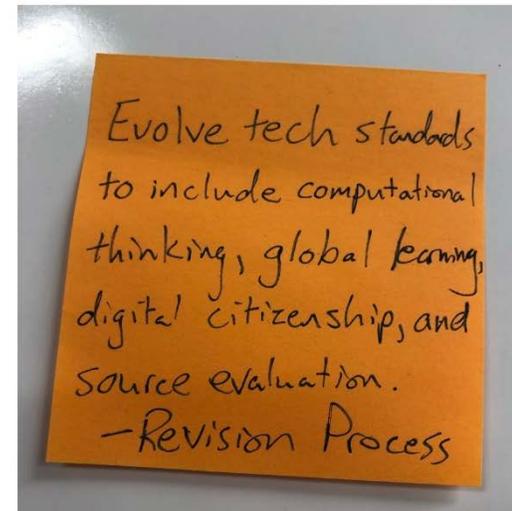
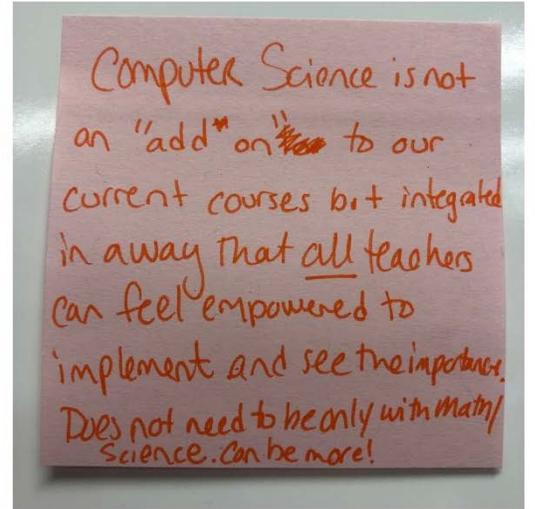
Program Delivery
Standards

- ARM Chapter 55

DIGGING IN

Review and Consensus Process

- Technology
- Library Media/Information Literacy



Comment Summary

Computer Science

No comments were received to date.

Comment Summary

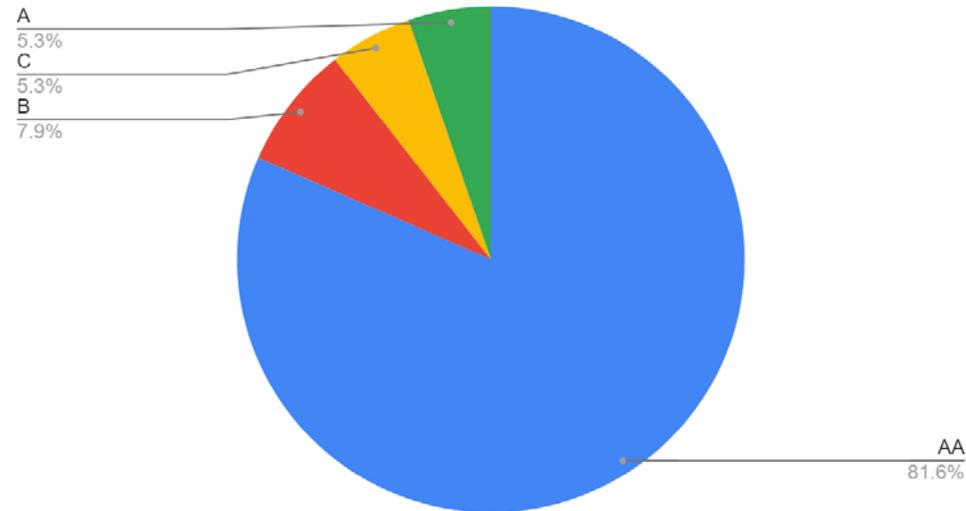
Technology Integration

No comments were received to date.

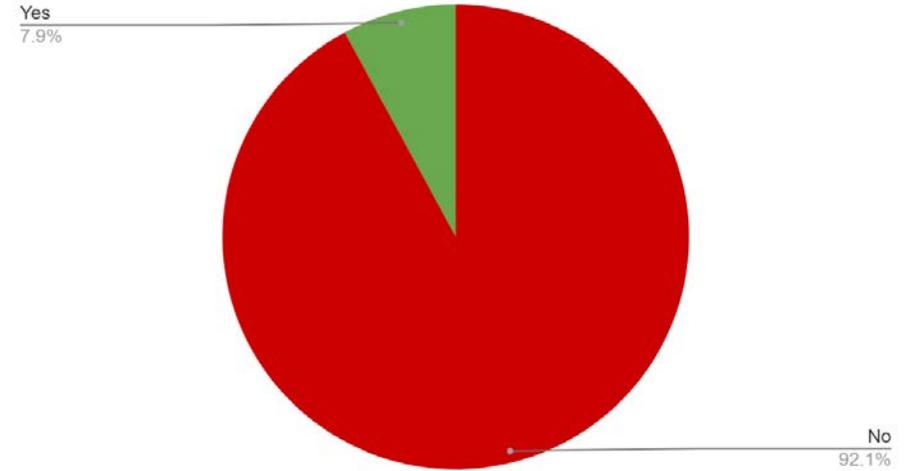
Comment Summary

Library Media/Information Literacy (n=38)

Library Media - Count of School Size



Support Draft Proposal (YES/NO)



Comment Summary

Library Media/Information Literacy (n=38)

Summary of “Does Not Support” Comments (n=36)

- Adopt AASL standards with IEFA additions
- Add a standard that emphasizes reading for pleasure and personal interest

Summary of “Supports” Comments (n=2)

- Need more concise standards
- Need more flexible standards

No comments were received that specifically addressed proposed changes to ARM 10.55.1801 Library Media Program Delivery Standards

ECONOMIC IMPACT

2-4-405. Economic impact statement.

(2) Except to the extent that the request expressly waives any one or more of the following, the requested statement must include and the statement prepared by the committee may include:

(a) a description of the classes of persons who will be affected by the proposed rule, including classes that will bear the costs of the proposed rule and classes that will benefit from the proposed rule;

(b) a description of the probable economic impact of the proposed rule upon affected classes of persons, including but not limited to providers of services under contracts with the state and affected small businesses, and quantifying, to the extent practicable, that impact;

(c) the probable costs to the agency and to any other agency of the implementation and enforcement of the proposed rule and any anticipated effect on state revenue;

(d) an analysis comparing the costs and benefits of the proposed rule to the costs and benefits of inaction;

(e) an analysis that determines whether there are less costly or less intrusive methods for achieving the purpose of the proposed rule;

(f) an analysis of any alternative methods for achieving the purpose of the proposed rule that were seriously considered by the agency and the reasons why they were rejected in favor of the proposed rule;

(g) a determination as to whether the proposed rule represents an efficient allocation of public and private resources; and

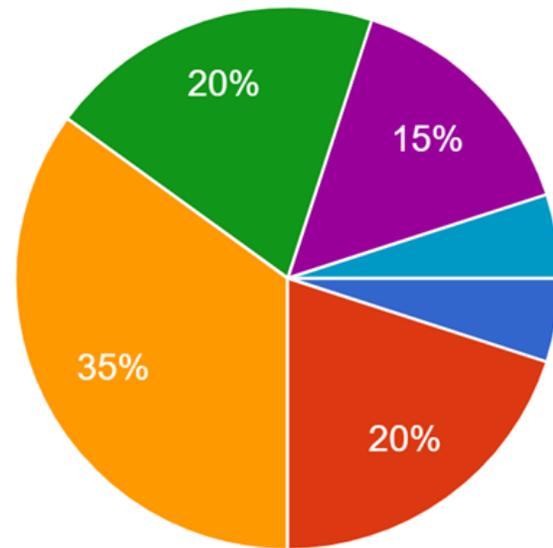
(h) a quantification or description of the data upon which subsections (2)(a) through (2)(g) are based and an explanation of how the data was gathered.

ECONOMIC IMPACT SURVEY

Computer Science

What school size do you represent?

20 responses

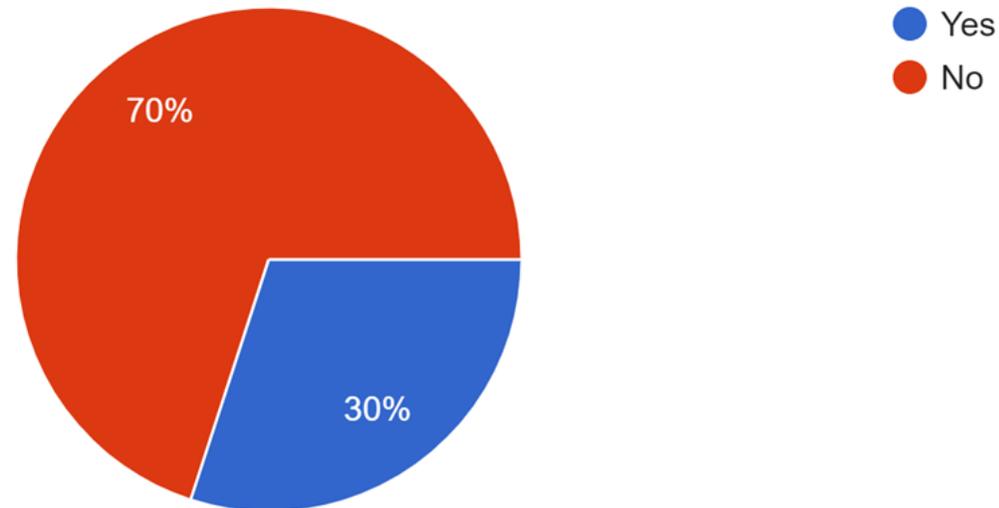


- Small School (fewer than 126 students)
- Class C
- Class B
- Class A
- Class AA
- Multiple districts represented (approximately 12,200 students)

ECONOMIC IMPACT SURVEY

Do you anticipate that your district will be able to implement the proposed standards with existing resources?

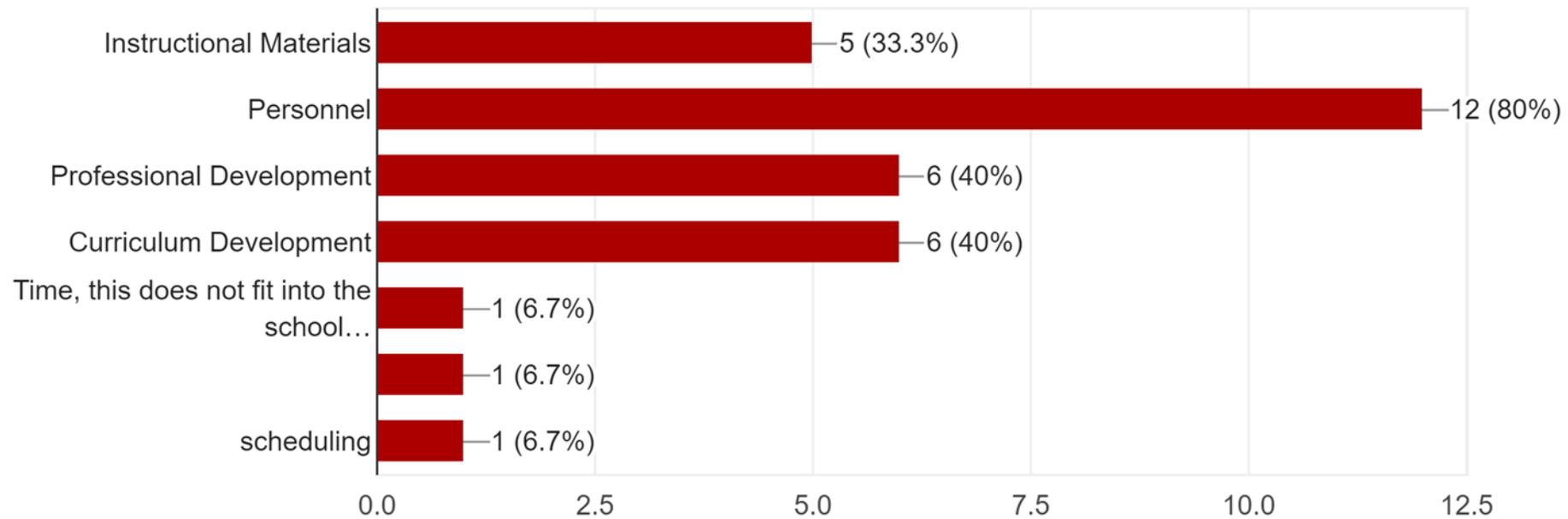
20 responses



ECONOMIC IMPACT SURVEY

If no, what are the two most significant challenges to implementation?

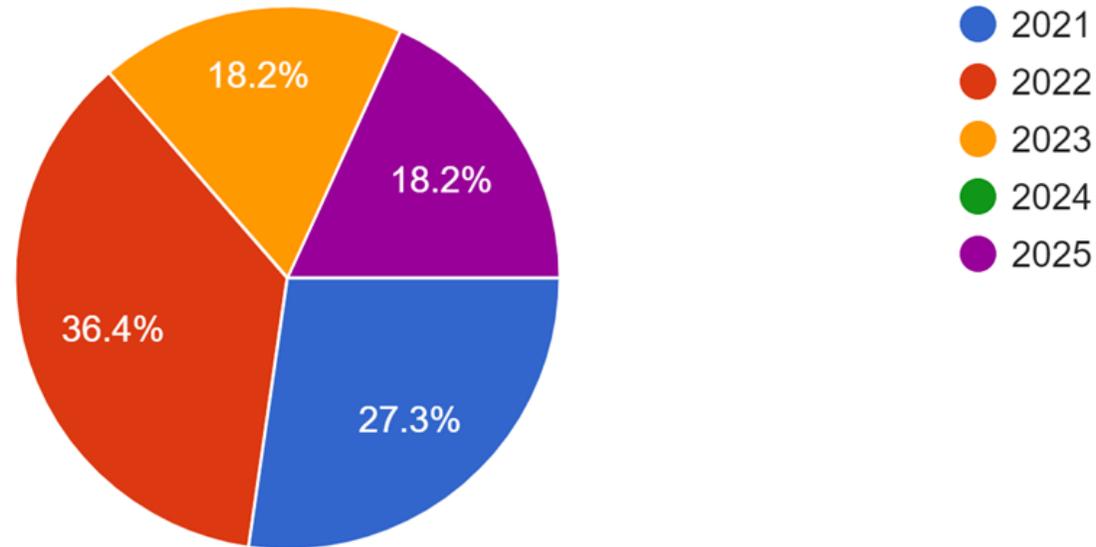
15 responses



ECONOMIC IMPACT SURVEY

What year would your district implement these standards?

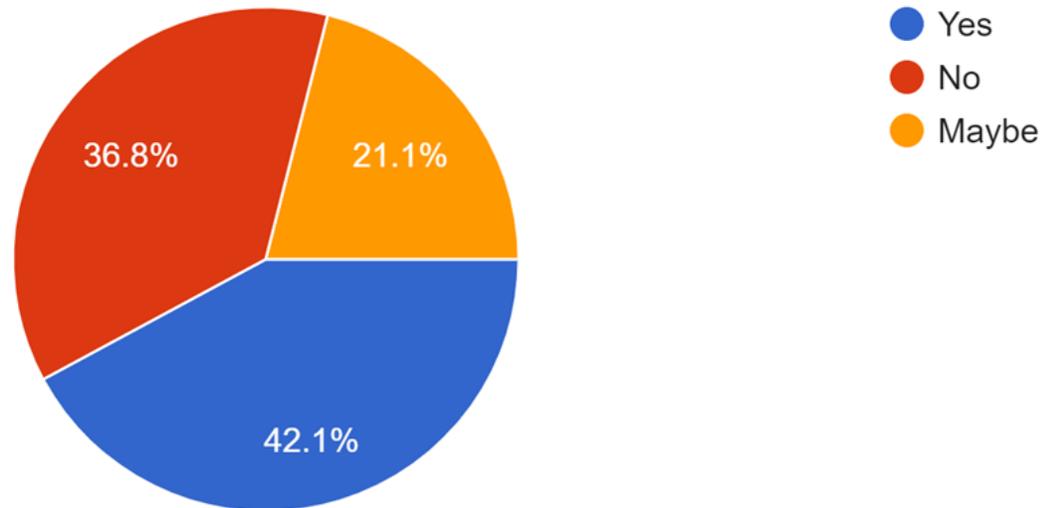
11 responses



ECONOMIC IMPACT SURVEY

Will your district have difficulty finding instructional materials to implement the proposed standards?

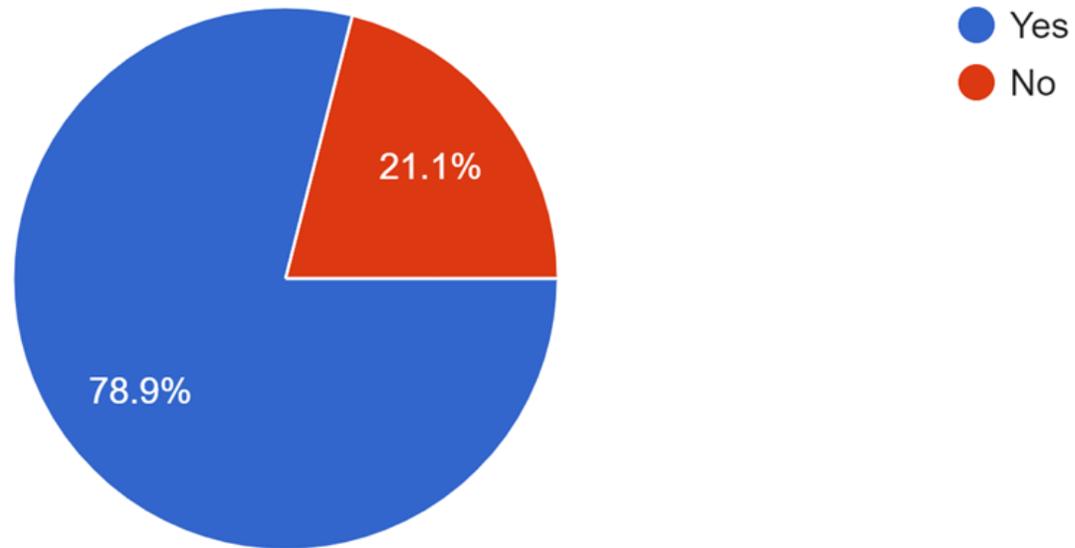
19 responses



ECONOMIC IMPACT SURVEY

Will your district have a shortage of teachers endorsed to teach computer science?

19 responses



ECONOMIC IMPACT SURVEY

What increase in total dollars would be required to cover the cost associated with Instructional Materials? (best estimate)

Answer Range: \$1,200- \$1,000,000

“\$100 per grade K6 and potentially much more than that in a junior high or high school class.”

“About \$25K for equipment and supplies to start a Business Ed. program.”

“\$800k to 1 million. We don't have difficulty in finding the materials, we need funding to support the purchase of updated and ongoing consumables for CTE”

What increase in total dollars would be required to cover the cost associated with professional development?

Answer Range: \$500 to \$100,000*

**\$100,000. this includes paying the teacher for their time to attend the training, any certifications associated with the training and CTE field, travel, lodging, etc.*

What increase in total dollars would be required to cover the cost associated with curriculum development?

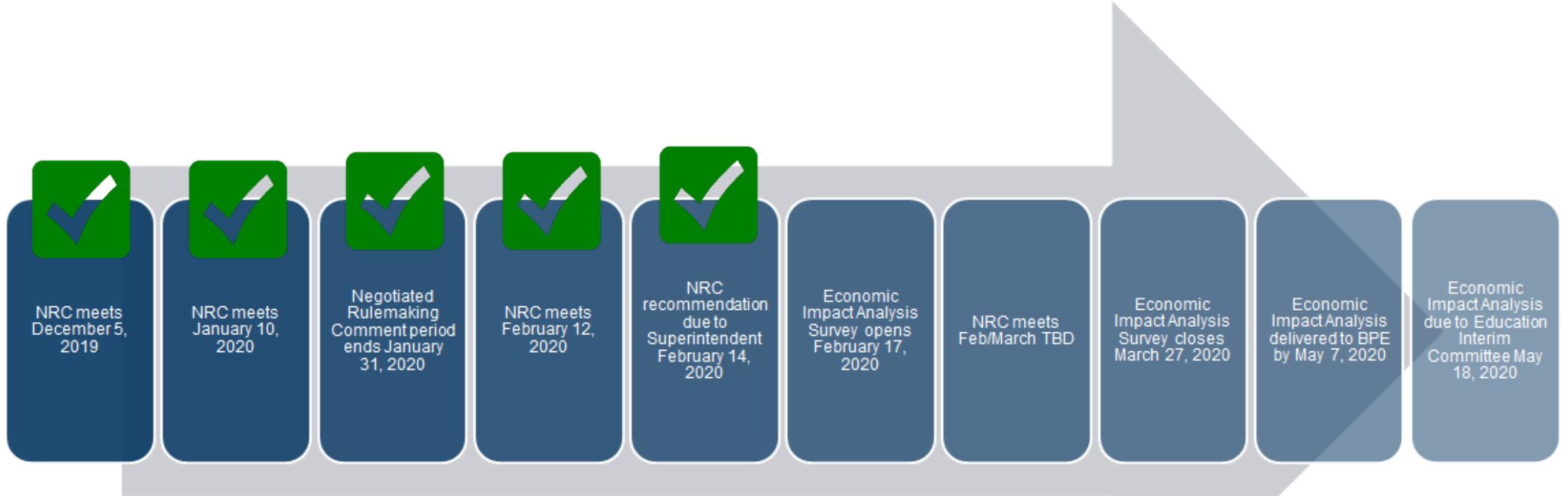
Range: \$400- \$100,000

**That would depend on the interest of the teacher and willingness to learn new areas of application.*

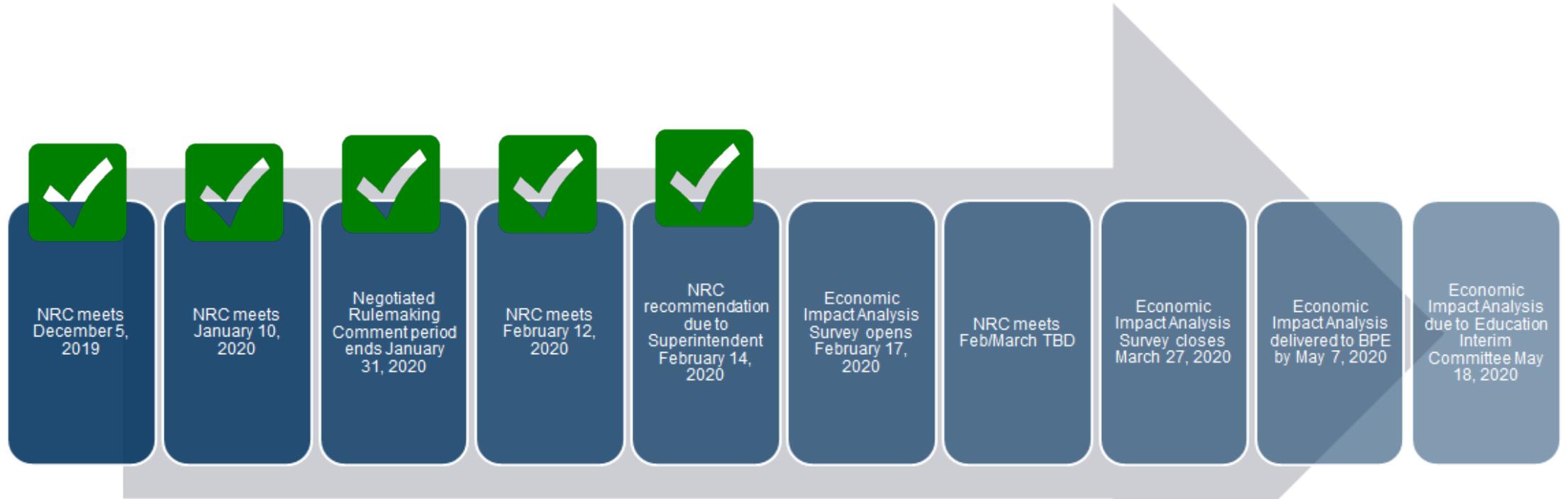
COMPUTER SCIENCE NRC REVISED TIMELINE



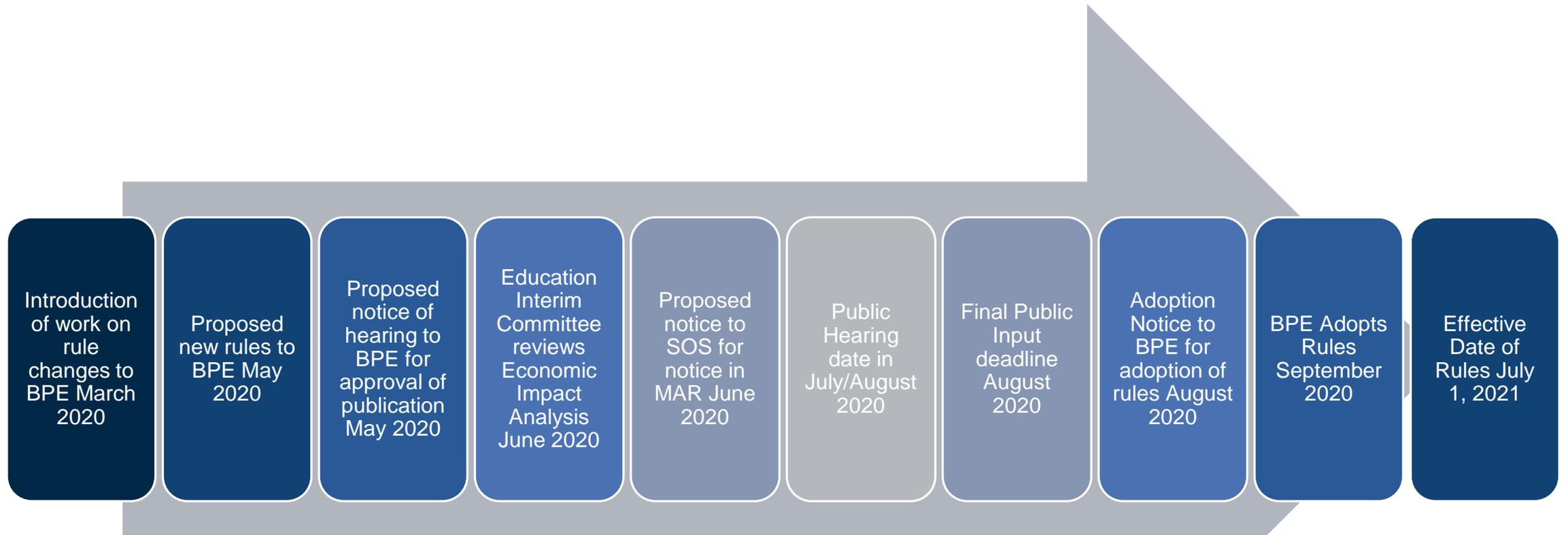
TECHNOLOGY INTEGRATION NRC REVISED TIMELINE



LIBRARY MEDIA/INFORMATION LITERACY NRC REVISED TIMELINE



MAPA PROPOSED TIMELINE



WRAP UP FOR COMMITTEE

Next Meeting:

TBD

PUBLIC COMMENT

Please introduce yourself and spell your last name.

If you are speaking on behalf of an organization, identify the organization and your association with the organization.

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ADJOURN

**Thank you for your commitment
to Montana Education.**

Safe Travels!