

ATTACHMENT NO. X-C: Long Term Technology Plan and Purchase

Suggested Motion: Move to approve the Long Term Technology Plan and Purchase Option 2

Recommended Action: Approve the motion.

It is recommended that the Board approve Option #2 presented in the Technology Plan. This will allow for students at the high school to be 1:1 in 9<sup>th</sup> through 12<sup>th</sup> grades. Current devices at the high school and at 8<sup>th</sup> grade will be distributed to the K-4 elementary schools. The total cost is \$181,900. This money would come from the \$190,000 stimulus package. The North Boone School District will now be 1:1 in grades 3-12. Professional development opportunities are scheduled for staff beginning at the conclusion of this school year and also at the beginning of next school year. The professional development will provide teachers with training for moving teaching and learning online. This will be key if extended school closures continue and the district will be using e-Learning.

# Instructional Technology Purchases

Board of Education  
April 2020



# What problem are we trying to solve?

- As part of our continuous improvement and curricular processes, we are realizing a push in education to support student learning through more digital resources. In order to differentiate instruction for our students, we need to use online platforms that require additional student devices.



# Why are we trying to solve this problem?

- By 2030, emerging technologies, such as Artificial Intelligence and Virtual Reality, are going to transform the workplace.
- For students to be successful in the future, we need to give them opportunities to complete project-based work using new technologies.
- Students need to master the variety of ways they can use technology to accomplish complex tasks or search for answers.

-eSchool News Aug. 7, 2018



# Who is our target audience?

19-20 School Year	20-21 School Year	21-22 School Year	22-23 School Year
5th-8th grade students	9th-12th grade students	3rd-4th grade students	K-2nd grade students
9th-12th grade teachers			



# What is currently being done to address this problem?

## Devices

- For the 19-20 school year, we purchased Chromebooks for our 5th - 8th grade students and laptops for our 9th-12th grade teachers.
  - The cost was \$157,000.



# What is currently being done to address this problem?

## Digital Resources - Core Curriculum

Math	Science	English Language Arts	Social Studies
K-5: Into Math 6-12: Go Math, Desmos	K-5: Inspire Science 6-8: iScience	5-8: Currently reviewing resources 9-12: My Perspectives	5-8: Currently reviewing resources



# What is currently being done to address this problem?

## Digital Resources - Supplemental for grades K-4

Math	Science	English Language Arts	Social Studies
Study Island, Education City, Tumble Books, Brain Pop			
MathSeeds Prodigy Reflex	Mystery Science	Reading Eggs Starfall Reading A-Z	





# What is currently being done to address this problem?

## Digital Resources - Supplemental for grades 5-6

Math	Science	English Language Arts	Social Studies
Schoology, Brain Pop			
IXL	Mystery Science Study.com	Quill Newsela Reading Counts	Newsela Study.com



# What is currently being done to address this problem?

## Digital Resources - Supplemental for grades 7-8

Math	Science	English Language Arts	Social Studies
Schoology, Google Classroom, Albert, Kami, Brain Pop			
		Quill	



# What is currently being done to address this problem?

## Digital Resources - Supplemental for grades 9-12

Math	Science	English Language Arts	Social Studies
Schoology, Google Classroom, Mastery Manager, Albert, Khan Academy			



# What is our proposed solution?

To provide a Chromebook to every high school student for use at school and at home.

- We have two options to consider for obtaining the devices.



# What is our proposed solution?

## Option 1

	2020-2021	2021-2022	2022-2023	2023-2024
New Devices	Grades 5, 9, 12	Grades 3, 4, 5, 9	Grades 5, 9	Grades 5, 9
Leased Devices	Grades 10, 11	Grades 11, 12	Grade 12	
Repurposed Devices	Grades 3, 4	Grades K, 1, 2		
Proposed costs	\$157,000	\$172,182	\$81,878	\$65,270



# What is our proposed solution?

## Option 2

	2020-2021	2021-2022	2022-2023	2023-2024
New Devices	Grades 5, 9, 10, 11,12	Grades 4, 5, 9	Grades 5, 9	Grades 5, 9
Repurposed Devices	Grades 3, 4	Grades 1, 2	Grades K, 1	Grade K
Proposed Cost	\$181,900	\$104,325	\$68,212	\$69,550



# How is this proposed solution aligned to the Strategic Plan?

- This proposed solution aligns to Curriculum.
  - 100% of students will be engaged in and successfully complete a PreK-12 standards aligned curriculum.

This solution supports Curriculum because we will be able to use student devices to implement core curricular resources and to differentiate for our struggling and exceeding students.



# Professional Development

- Professional Development
  - SAMR Training: Repeat for new grade levels and staff each year
    - High School Summer offering: Session 1 on May 27th and 28th
      - Repeat on August Institute Day for summer non-attendees
    - Tentative - October Institute Day: Session 2
  - We will open up training to all staff depending on building needs









# What is the SAMR Model?

## Redefining the Classroom with **GOOGLE** Apps

@Edtechpeck




### Substitute

-  Collect student data by using forms instead of paper and pencil
-  Create a slide show instead of a poster
-  Make a digital illustration
-  Collect and organize data


### Augment

-  Use comment features to critique writing samples
-  Create a presentation with multimedia elements
-  Use Google Forms to create a quiz.
-  Create charts to illustrate data

### Modify

-  Use multimedia to serve as backdrop for new design
-  Create a hyper doc syllabus complete with links to outside sources
-  Collect and link student recordings and data for use in e-portfolios

### Redefine

-  Use Forms to create a choose your path student adventure
-  Create a e-book with the use of Google Slides
-  Create a comic strip, mind map, or other illustration to summarize story



# How will we measure progress?

- Usage
  - IT will measure usage of devices and programs.
  
- High School Implementation Expectations
  - Use of Google Classroom as a Learning Management System
  - Online assessment administration in order to track student data on curriculum-based assessments



# How will we repair broken devices?

- Repairs
  - Currently all repairs are done in-house
  - Technology charges parents 50% of the repair
  - Typically parent pay between \$12-\$15 for a broken screen
- Prevention
  - District has a policy on technology usage
  - Grades 5-8 have procedures in place and these will be modified to meet the 9-12th grades
  - Preventative measures are taken by tech and the teachers to teach students appropriate usage (videos, behavior programs, etc.)
  - District offers sleeves and protective cases for parents to purchase at a discount price.



# What are our insurance options?

- District funded
  - 4 year with case included \$58,686
    - Covers accidental damage, liquid submersion, fire/flood, vandalism, natural disasters, power surge, mechanical failure or manufacturer defect
  - 4 year cost for the district is \$64,505
    - Covers accidental damage, liquid submersion, fire/flood, vandalism, natural disasters, power surge, mechanical failure or manufacturer defect
- Parent Funded
  - \$19 a year
    - Covers accidental damage, liquid submersion, fire/flood, vandalism, natural disasters, power surge due to lightning
  - \$27 a year
    - Covers accidental damage, liquid submersion, theft/burglary, fire/flood, vandalism, natural disasters, power surge



# Is our infrastructure ready to expand?

- If the district gets the internet/wan upgrade, the current networking infrastructure will be updated in the summer 2021. This would be covered by erate discount at 70%.
- The current plan is to upgrade our Firewall, Switches, and continue to keep our wireless access points up to date based on the current e-rate refresh schedules.
- Tech feels that the infrastructure is ready for a fall roll out at the HS.



# Do we have enough technology staff?

- Currently the technology department is comfortable with their staffing and their ability to support the devices in the district.
- We surveyed other districts to find out their staffing patterns
  - Technician to device ratio ranged from 500:1 to 1500:1
  - All use the library help desk as a hub for devices



Thank You

