Please Note: These minutes are pending Board approval.

Board of Education
Newtown, Connecticut

Minutes of the Board of Education meeting held on April 5, 2022 at 7:00 p.m. in the Council Chambers, 3 Primrose Street.

D. Zukowski, Chair
J. Vouros, Vice Chair
D. Ramsey, Secretary
R. Harriman
D. Cruson
J. Kuzma
J. Larkin
C. Savo
M. Irving
L. Rodrigue
A. Uberti
T. Vadas
11 Staff
13 Public
1 Press

Ms. Zukowski called the meeting to order at 7:00 p.m.

Item 1 – Pledge of Allegiance

Item 2 – Consent Agenda

MOTION: Mr. Ramsey moved that the Board of Education approve the consent agenda which includes the donation to Newtown High School and the correspondence report. Mr. Cruson seconded. Motion passes unanimously.

Item 3 – Public Participation

Carrie Grummons, 5 Black Walnut Drive, referred to the equal opportunity policy with a line struck through the sentence "The Board directs the administration to set as a goal the recruitment, selection, and employment of qualified people among racial and ethnic minority groups" which is against what the previous board passed in the DEI policy last term. She spoke about racism and bullying.

Ms. Zukowski clarified that initially there was one policy for affirmative action and minority recruitment but we felt minority recruitment was too important which is why we separated them into two policies.

Mrs. Harriman asked if other Board members would be allowed to provide clarification during public comment or was it just a privilege of the Board chair.

Ms. Zukowski said generally it is a privilege for the chair, which is a rare event, but other Board members can respond with clarifications.

Wendy Leon Gambetta, 19 Saw Mill Ridge Road, spoke about the importance of having diversity in teachers.

Danielle Lozer, 1 Grays Plain Road, spoke about racism, the lack of minority teachers, and asked to make minority recruitment a priority.

Item 4 – Reports

Chair Report Ms. Zukowski noted that the Legislative Council Education Committee recommended a $557,195 reduction in the Board of Education budget for next year. It will be presented to the full Legislative Council tomorrow for a vote.

Mrs. Hariman asked for clarification on the reduction and where we were going to find them.

Ms. Zukowski said the cut is based on a number of elementary teachers we are asking for because of the additional 84 students. They took $170,000 from facilities and was in support of keeping money for students in the classroom.

Mr. Vouros addressed the parents to make sure they attended the Legislative Council meeting tomorrow night so voices can be heard. We cannot do this without you.

Superintendent's Report: Dr. Rodrigue gave an update on COVID and the optional testing program. 118 were tested with two positive cases. There have been 10 cases at the high school in the last two days and feels we are in a good place. She spoke about the staffing report which included two teacher retirements.

Committee Reports:
Mr. Vouros reported the Curriculum and Instruction Subcommittee met regarding the presentations tonight.

Mr. Cruson said the Policy Committee met last Wednesday and finished the retaliation and whistle blowing policies as well as a few others.
Mrs. Harriman noted that Mr. Johnson reached out with agenda items so the DEI Committee will meet after break.
Mrs. Kuzma said the Social Emotional Health and Wellness Committee met March 25 and included Anne Dalton. They discussed furthering partnerships with other groups in the community. Mrs. Dalton added a health and wellness page on the website.

Student Representatives:
Ms. Savo reported on various high school updates.
Mr. Irving said the Winterguard championships were held Saturday and we received a couple of titles. He also provided some high school highlights and that the district art show was in the Municipal Center .

Item 5 – Presentations
i-Ready Data Report:
Dr. Frank Purcaro presented the i-Ready assessment data for grades 2 through 8 in ELA and math.

Mrs. Larkin noted that some grades were affected harder than others and asked if we had a plan to look at what they can do for those specific grades.
Dr. Purcaro said we did more research into that data and are addressing that.

Mrs. Kuzma asked how we compare with other towns
Dr. Purcaro said we will compare spring testing with other districts. On Smarter Balance we were in the high sixties for math and low to mid-seventies in reading.

Mrs. Harriman asked if our results were typical and if we are doing great or average in our growth.
Dr. Purcaro stated that i-Ready indicates we have had a lot of growth.
Mrs. Harriman was concerned about students and teachers getting to where we were before the pandemic.

Mr. Ramsey asked if there was a vision or plan for teachers to explore other methods of teaching math.
Dr. Purcaro said Bridges is pushing pedagogy for teacher to access math in a different way. i-Ready has taken some of the cloudiness and targets areas for some students.

Proposed Changes to Math Pathways:

Anne Uberti reported on possible math changes and was joined by Jessica Fonovic and Bonnie Hart.
Mr. Ramsey was concerned about students who have latent math ability and could slip through the cracks.
Mrs. Uberti felt it was unlikely that anyone would slips through the cracks. We also try to assess new students moving in.

Mr. Cruson was concerned about pushing identification and afraid that students who are not standouts to the teachers won't get what they need
Mrs. Fonovic spoke about the placement process.

Ms. Zukowski asked how much of an advantage self-directed learners have over students who need more guidance. Also, in some pathways you skip part of the curriculum. Some students have advantages at home for extra help. She made a recommendation that this goes back to Curriculum and Instruction in terms of equity and in terms of cognitive processing for fifth graders.

Mrs. Hart said a benefit of Covid was that all students have Chromebooks, I-Excel and free online resources to help.
Ms. Zukowski felt it would make sense to have more conversations and feels the Board should vote on this.

Mrs. Uberti stated that the entire math committee and principals support this change. It's difficult to address the equity issue. She has a concern about delaying the change if it's the right thing to do. She suggested taking the next two weeks to get the questions answered and then come together for a vote.

Mrs. Larkin feels that more data is needed to see what is driving this and we should vote on it.
Mr. Ramsey asked who was on the math committee.
Mrs. Uberti said the math committee consisted of math specialists from the elementary, Reed and middle school, the high school math department chair, two high school math teachers, Jim Ross and a six plus teacher at Reed.

Integrated STEM Curriculum for Grade 5 and 6:
Peter Bernsen presented the grades 5 and 6 Integrated STEM curriculum.

Item 6 – Old Business
MOTION: Mr. Ramsey moved that the Board of Education approve the Computer Integration Curriculum for grades 7 and 8. Mr. Cruson seconded. Motion passes unanimously
MOTION: Mr. Ramsey moved that the Board of Education approve the Technology Education Curriculum for grades 7 and 8. Mr. Cruson seconded. Motion passes unanimously.
MOTION: Mr. Ramsey moved that the Board of Education approve Policy 4111.1 / 4211.1 Equal Employment Opportunity (Affirmative Action). Mr. Cruson seconded.
Mr. Cruson said this policy has been through the committee multiple times Mr. Johnson and Dr. Rodrigue brought this to our attention to be split into two policies. Motion passes unanimously.

MOTION: Mr. Ramsey moved that the Board of Education approve Policy 4111.3 / 4211.3 Plan for Minority Recruitment and Selection. Mr. Cruson seconded.
Mrs. Harriman wanted to be sure Mr. Johnson reviewed this policy, to which Mr. Cruson said he was part of all discussions. Motion passes unanimously.

MOTION: Mr. Ramsey moved that the Board of Education rescind Policy 4118.239 / 4218.239 required COVID-19 Vaccinations. Mr. Cruson seconded. Motion passes unanimously.
Ms. Zukowski moved to postpone the Hawley update to two weeks from today. Mr. Cruson seconded. Motion passes unanimously.

Item 7 – New Business
Newtown Middle School Moving Up and Newtown High School Graduation Dates:
MOTION: Mr. Ramsey moved that the Board of Education approve June 14 for the Newtown Middle School Moving-up Ceremony and June 15 as the Newtown High School Graduation date with June 16 as the rain date. Mrs. Harriman seconded. Motion passes unanimously.

Board of Education District Highlights:
MOTION: Mr. Ramsey moved that the Board of Education approve the Board of Education District Highlights Volume 2 Issue 2. Mr. Cruson seconded. Motion passes unanimously.

Minutes of March 15, 2022:
MOTION: Mr. Ramsey moved that the Board of Education approve the minutes of March 15, 2022. Mr. Cruson seconded. Motion passes unanimously.

Minutes of March 24, 2022:
MOTION: Mr. Ramsey moved that the Board of Education approve the minutes of March 24, 2022. Mrs. Harriman seconded.
MOTION: Mr. Cruson moved to amend the motion to indicate that he was not at this meeting. Mr. Vouros seconded. Motion passes unanimously.
Vote on main motion: 6 ayes, 1 abstained (Mr. Cruson) Motion passes.

Item 8 – Public Participation
Tony Keating, 7 Oak Ridge Drive, spoke about people in Newtown constantly being accused of being racist or bigoted and also about white males trying to enter college.
Stephanie Barnes**,** 40 Black Bridge Road, asked if there was information available at the high school regarding help for addiction with groups like Narcotics Anonymous and Alcoholics Anonymous.
Nerlande Foote, 14 Bears Hill Road, spoke about racism and that DEI includes all.
Konrad Miller, 72 Forest Drive, spoke about bullying and racism.
Jessica Lasko, 103 Brushy Hill Road, thanked the Board about the math pathways. Regarding the Superintendent search she asked the Board to create a hiring committee with teachers, administrators and staff. We need a diverse committee.

MOTION: Mr. Ramsey moved to adjourn. Mrs. Harriman seconded. Motion passes unanimously.
Item 9 – Adjournment
The meeting adjourned at 10:07 p.m.

Respectfully submitted:

_____
Donald Ramsey
Secretary

March 22, 2022

TO: Dr. Lorrie Rodrigue

FROM: Kimberly Longobucco

Please accept the donation of $12,000 from long time softball coach Lindell Hertberg for the construction of a press box behind the backstop at the softball field at NHS. This facility would serve as a storage facility along with a place for the announcer and scorekeepers from both teams to sit and work during the games.

Thank you.

Lindell Hertberg
61 Main Street
Newtown, CT 06470

Correspondence Report
03/15/2022 – 04/04/2022

Date	Name	Subject
03/15/2022	Deborra Zukowski	Context for tonight's discussion on transportation
03/15/2022	Donald Ramsey	Correspondence Report 03-01-2022 through 03-14-2022
03/15/2022	Donna Norling	Curriculum and Instruction Minutes March 8, 2022
03/15/2022	Tanja Gouveia (via google_	Item shared with you: "Student Transportation ITB.pdf"
03/15/2022	Kathy June	Additional donation for approval
03/15/2022	Kara Dogali	Superintendent Search
03/16/2022	Lorrie Rodrigue	NHS Incident
03/17/2022	Lorrie Rodrigue	High School Incident...again
03/17/2022	Deborra Zukowski	Non-meeting notice
03/17/2022	Kathy June	March 21 Agenda
03/18/2022	Deborra Zukowski	Re: Request for cross-board participation in BoE executive session
03/20/2022	Lorrie Rodrigue	Sunday Highlights
03/20/2022	Deborra Zukowski	March 20, 2022 Week in Preview
03/21/2022	Michelle Hiscavich	Fwd: NHS Artists on the Rise
03/21/2022	Deborra Zukowski	Reschedule of Monday meeting
03/21/2022	Lorrie Rodrique	Invitation: BOE – Exec Session (w/legal) @ Thu M 2022 6:30PM – 8PM (EDT)
03/21/2022	Kathy June	Special Meeting Agenda
03/21/2022	Kathy June	Corrected March 24 agenda
03/22/2022	Deb... Zukowski	Keeping you up to date re: budget process
03/22/2022	Newtown Board of...	Superintendent Search Focus Groups
03/22/2022	Kiley Gottschal...	BOF 024-22 Agenda
03/23/2022	Jimmy434' via Ne...	My child in Hawley Elementary

03/24/2022	Tanja Gouveia	Document shared with you: "Transportation Specs Draft.docx"
03/24/2022	Janet Kuzma	Meeting with Randall
03/24/2022	Michelle Hiscavic...	2022 Winter Guard Championships
03/24/2022	Deborra Zukowski	Potential repercussions from yesterday's power outage
03/27/2022	Lorrie Rodrigue	Sunday Highlights
03/27/2022	Deborra Zukowski	March 27, 2022 Week in Preview
03/29/2022	Miche... Hiscavich	Invitation – Upcoming Arts Events
03/29/2022	Deborra Zukows...	Fwd: Charter Revision Commission Draft Report
03/31/2022	Deborra Zukowski	Comments on Charter Revision
04/01/2022	Kathy June	BOE Mailing – April 5, 2022
04/03/2022	Janet Kuzma	Meeting with Randall
04/03/2022	Lorrie Rodrigue	Sunday Highlights
04/03/2022	Deborra Zukowski	April 3, 2022 Week in Preview
04/04/2022	Kate McGuirk	Request for Information
04/04/2022	Michelle Embree Ku	Proposed Changes to Math Pathways Need More Evaluation

TO: Lorrie Rodrigue, Superintendent
FROM: Suzanne D'Eramo, Director of Human Resources
RE: Superintendent's Report – Certified Staffing Update for MARCH 2022
DATE: March 30, 2022

MARCH 2022

CERTIFIED RETIREMENTS:
Nancy Cedor – RIS SPED teacher (eff. June 30, 2022)
Janet Filmer – NHS math teacher (eff. June 30, 2022)

CERTIFIED RESIGNATIONS:
None

CERTIFIED NEW HIRES:
None

CERTIFIED OPEN POSITIONS:
MGS SPED (PAL Program – 1 year position)
RIS/NMS School Psychologist

ADDITIONAL DISTRICT HIRING NOTES:

Here is a recap of all certified/non-certified staff who began working in March:
Building subs/LT subs = 3
Paraeducators = 1

Of the 4 newly hired employees, 1 indicated a diverse ethnicity or race other than white. This equates to a total of 25% broken down as follows:
Asian = 1

2021-22 SPRING COACH ROSTER

L Rodrigue

NAME	SPORT	STEP
JEREMY O'CONNELL	GIRLS GOLF	3
MAUREEN MAHER	GIRLS TENNIS	3
ANNA MALKIN	BOYS TENNIS	2
BECKY OSBORNE	OUTDOOR BOYS TRACK	3
BECKY BOURRET	OUTDOOR GIRLS TRACK	3
MEGAN GUARINO	ASSISTANT BOYS TRACK	3
LAURA MCLEAN	ASSISTANT GIRLS TRACK	3
KEVIN HOYT	ASSISTANT BOYS TRACK	3
RYAN EBERTS	ASSISTANT GIRLS TRACK	3
BARBARA SKIDMORE	ASSISTANT BOYS & GIRLS TRACK	3
JOANNA CLOSS	SOFTBALL	3
KERRY BEGIN	SOFTBALL - JV	3
CHRISTINE TISI	SOFTBALL - FRESHMAN	2
IAN THOESEN	BASEBALL	3
MATT PAOLA	BASEBALL - JV	3
MATT MENARD	BASEBALL - FRESHMAN	3
SCOTT BULKLEY	BOYS LACROSSE	3
NICK GROCCIA	BOYS LACROSSE - JV	2
SANDY DOSKI	BOYS VOLLEYBALL	3
TBD	BOYS VOLLEYBALL - JV	3
MAURA FLETCHER	GIRLS LACROSSE	3
LOU SANTOLI	GIRLS LACROSSE - JV	3
LARRY SALADIN	UNIFIED HEAD COACH	
REBECCA MILES	UNIFIED ASSISTANT COACH	
BOB PATTISON	WEIGHT ROOM SUPERVISOR	
JOHN LEARY	WEIGHT ROOM SUPERVISOR	
JOSEPH LIZZA	SEASONAL SITE SUPERVISOR	
MIDDLE SCHOOL		
ANDREW TAMMERO	SOFTBALL	
MICHELLE FONTAINE	ASSISTANT SOFTBALL	
GREGORY HORNE	BASEBALL	
COLLIN RUSSELL	ASSISTANT BASEBALL	
ANDREW TAMMERO	UNIFIED HEAD COACH TRACK/VOLLEYBALL	
KEN KANTOR	ASSISTANT UNIFIED COACH TRACK/VOLLEYBALL	
VOLUNTEERS		
CHRISTINA WOLF-GALLO	SOFTBALL	
LINN HERTBERG	SOFTBALL	
JOE CRIMI	BASEBALL	
JOSEPH LIZZA	BASEBALL	
MATT PAZ	BASEBALL	
NANCY ANDERSON	GIRLS TENNIS	
JEREMY DOSKI	BOYS VOLLEYBALL	
STEVEN GOCEIA	BOYS LACROSSE	
STEPHANIE SUHOZA	GIRLS LACROSSE	
MARK FELTCH	GIRLS LACROSSE	
CASEY REGAN	GIRLS GOLF	

i-Ready Data Report:
Winter Results

Report to the BOE
March 2022

Agenda

- ❑ Assessment Overview
- ❑ Winter Results for Math and ELA
- ❑ Typical Growth vs. Stretch Growth
- ❑ Winter Growth Results for Math and ELA
- ❑ District and School Based - Next Steps
- ❑ Summary/Questions

i-Ready Assessment Overview

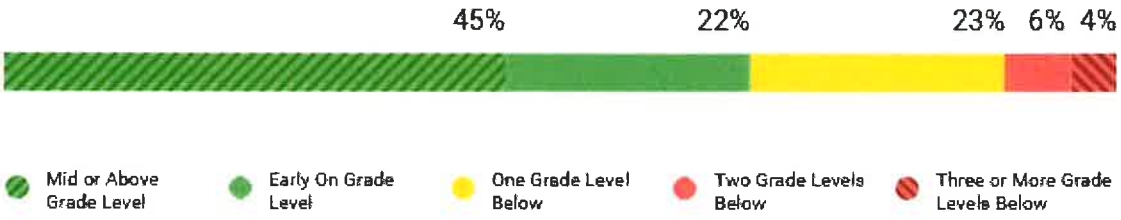
- Administered three time a year in grades 2-8.
- Both ELA and Math.
- Detailed reports, include overall results as well as results for 4 domains in math and 6 domains in ELA.
- Students results are color coded and reported out based on whether they have met the expectations of the grade level standards in ELA and math.
- Internal, district-wide assessment.

5 Level Placement Reports

- Mid or above grade level performance
- Early grade level performance
- One grade level below
- Two grade levels below
- Three or more grade levels below

Reading Overall Placement Level - Winter

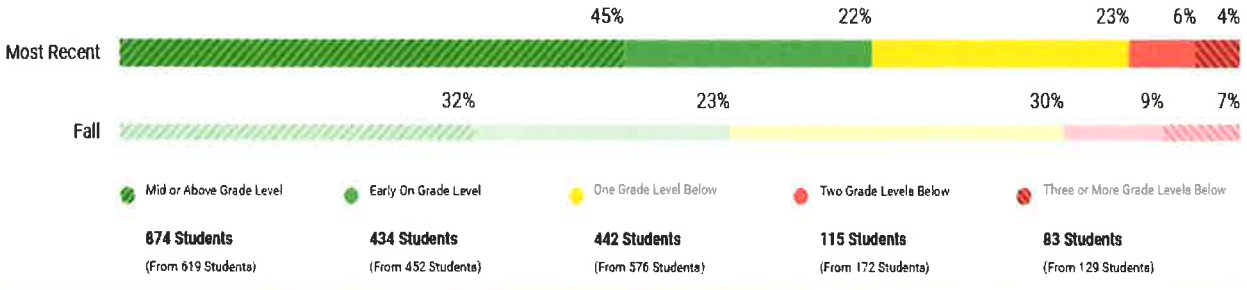
Current Placement Distribution



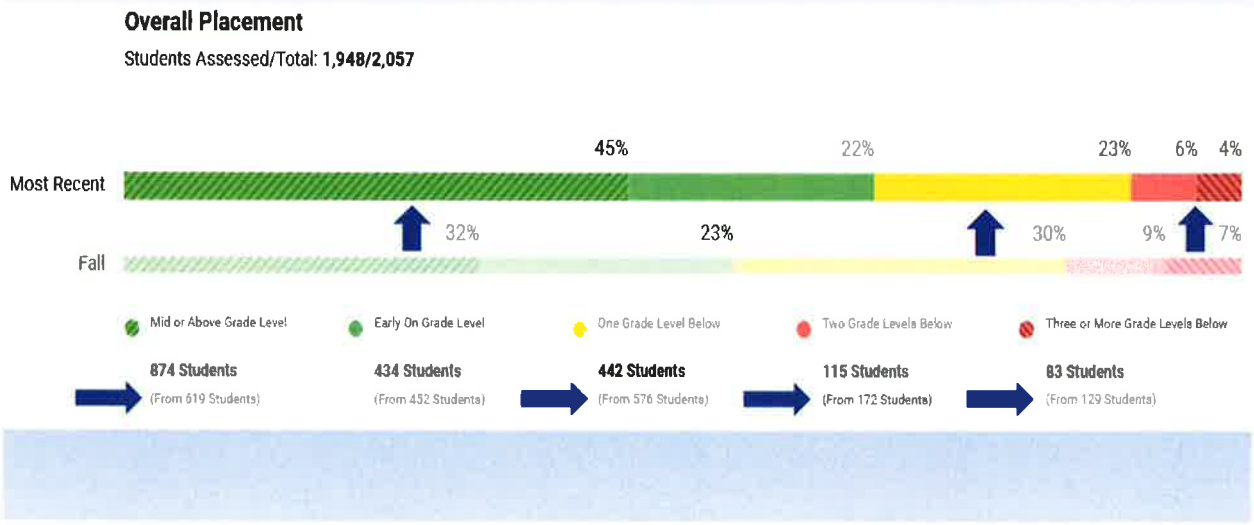
Reading Placement with Fall Comparisons

Overall Placement

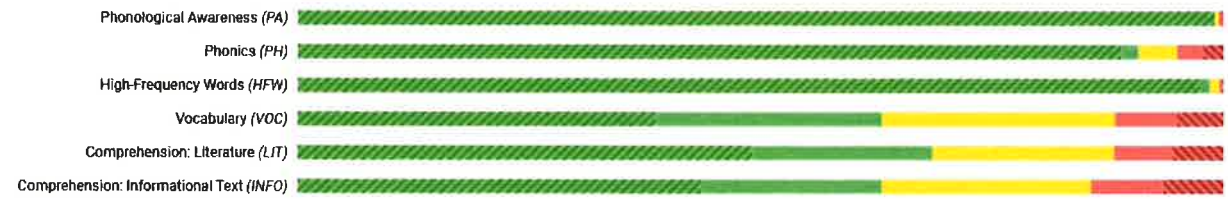
Students Assessed/Total: **1,948/2,057**



Reading Placement with Fall Comparisons



Reading Placement by Domain - Winter

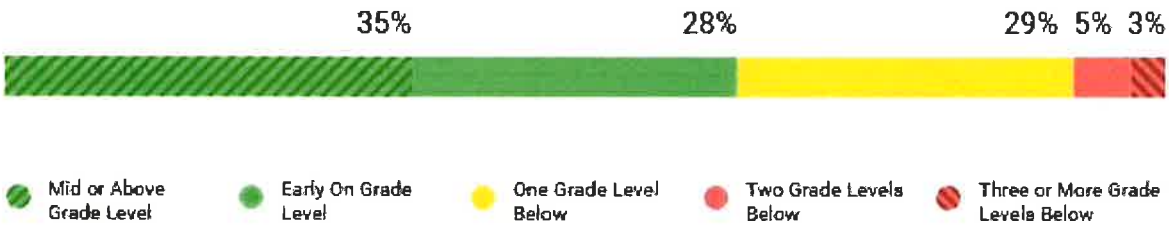


Reading Placement by Grade - Winter

Grade	Overall Grade-Level Placement					
Grade 2		48%	18%	30%	4%	0%
Grade 3		59%	23%	9%	9%	1%
Grade 4		44%	21%	31%	3%	1%
Grade 5		36%	21%	33%	7%	3%
Grade 6		41%	19%	25%	7%	9%
Grade 7		43%	26%	17%	8%	6%
Grade 8		41%	25%	19%	4%	11%

Math Overall Placement - Winter

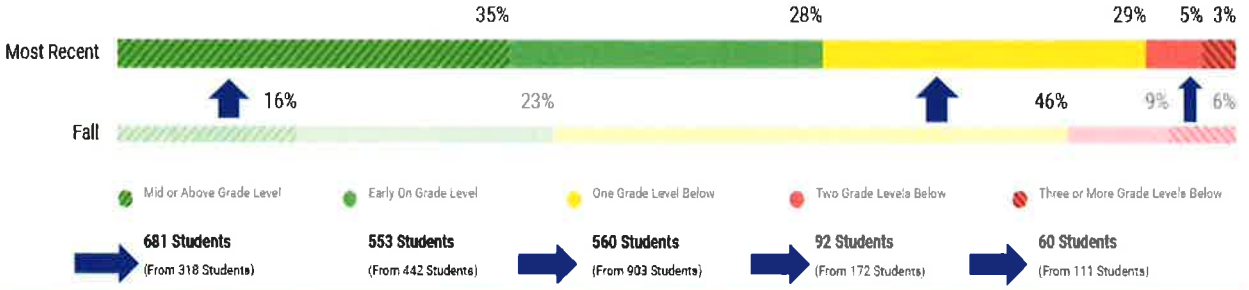
Current Placement Distribution



Math Placement with Fall Comparison

Overall Placement

Students Assessed/Total: **1,946/2,306**



Math Placement by Domain - Winter

Math Placement by Grade - Winter

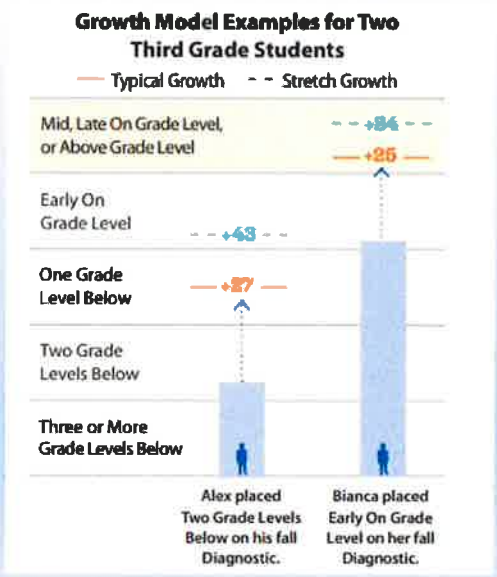
Grade	Overall Grade-Level Placement					
Grade 2		25%	31%	42%	3%	0%
Grade 3		36%	26%	34%	3%	1%
Grade 4		43%	25%	26%	5%	1%
Grade 5		35%	31%	28%	3%	3%
Grade 6		32%	30%	26%	7%	4%
Grade 7		34%	29%	25%	7%	6%
Grade 8		35%	26%	24%	6%	8%

Typical Growth vs. Stretch Growth

- Typical Growth – The average growth a student will make in one year in a given grade level/initial placement level.

- Stretch Growth – Growth a student is capable of achieving with additional support/enrichment. Students who are below grade level will now be on path to proficiency and students who are already on grade level will be on a path toward advance proficiency.

Focus on Growth – Sample Report



Reading Growth by Grade

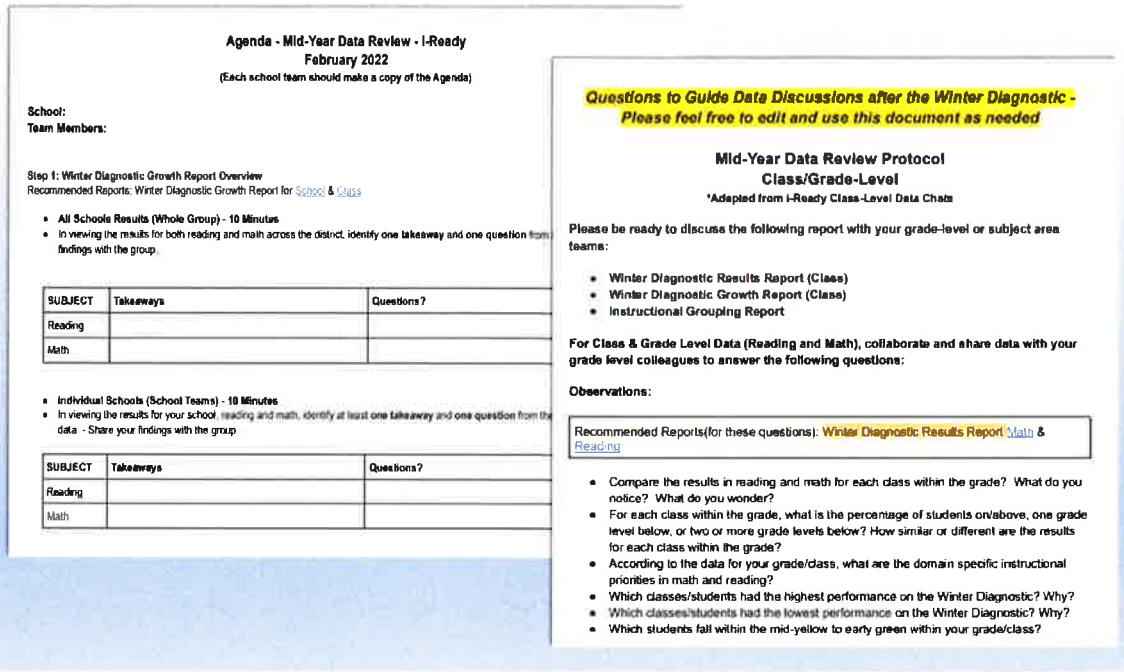
Grade	Annual Typical Growth Progress (Median)	Annual Typical Growth % Met	Annual Stretch Growth® Progress (Median)	Annual Stretch Growth® % Met	% Students with Improved Placement
Grade 2	87%	44%	62%	21%	57%
Grade 3	86%	44%	49%	22%	49%
Grade 4	91%	46%	51%	21%	47%
Grade 5	81%	47%	39%	20%	42%
Grade 6	125%	57%	46%	27%	49%
Grade 7	80%	48%	26%	20%	42%
Grade 8	125%	57%	39%	23%	45%

Math Growth by Grade

Grade	Annual Typical Growth		Annual Stretch Growth®		% Students with Improved Placement
	Progress (Median)	% Met	Progress (Median)	% Met	
Grade 2	59%	20%	42%	7%	52%
Grade 3	81%	34%	58%	12%	65%
Grade 4	83%	40%	56%	12%	63%
Grade 5	83%	42%	52%	11%	58%
Grade 6	86%	47%	46%	19%	52%
Grade 7	55%	35%	28%	11%	35%
Grade 8	82%	45%	36%	12%	38%

Data Review Protocols

- Review of Winter Data with Building Based Teams
  - 2/10 – Newtown Middle School
  - 2/11 – All Elementary Schools and Reed
- DPLC Day dedicated to school/classroom based data review
  - 2/18 - All teachers in grades K-8
  - Action Plans created to address any unfinished learning
- Regular meetings with interventions to determine support
- A-Team PLC Data review analysis framework
- Planned building based follow-ups in April



Agenda - Mid-Year Data Review - i-Ready
February 2022
(Each school team should make a copy of the Agenda)

School:
Team Members:

Step 1: Winter Diagnostic Growth Report Overview
Recommended Reports: Winter Diagnostic Growth Report for School & Class

- **All Schools Results (Whole Group) - 10 Minutes**
- In viewing the results for both reading and math across the district, identify one **takeaway** and one question from
findings with the group.

SUBJECT	Takeaways	Questions?
Reading		
Math		

- **Individual Schools (School Teams) - 10 Minutes**
- In viewing the results for your school, reading and math, identify at least one **takeaway** and one question from th
data - Share your findings with the group

SUBJECT	Takeaways	Questions?
Reading		
Math		

Questions to Guide Data Discussions after the Winter Diagnostic - Please feel free to edit and use this document as needed

Mid-Year Data Review Protocol
Class/Grade-Level
*Adapted from i-Ready Class-Level Data Chats

Please be ready to discuss the following report with your grade-level or subject area teams:

- **Winter Diagnostic Results Report (Class)**
- **Winter Diagnostic Growth Report (Class)**
- **Instructional Grouping Report**

For Class & Grade Level Data (Reading and Math), collaborate and share data with your grade level colleagues to answer the following questions:

Observations:

Recommended Reports(for these questions): Winter Diagnostic Results Report Math & Reading

- Compare the results in reading and math for each class within the grade? What do you notice? What do you wonder?
- For each class within the grade, what is the percentage of students on/above, one grade level below, or two or more grade levels below? How similar or different are the results for each class within the grade?
- According to the data for your grade/class, what are the domain specific instructional priorities in math and reading?
- Which classes/students had the highest performance on the Winter Diagnostic? Why?
- Which classes/students had the lowest performance on the Winter Diagnostic? Why?
- Which students fall within the mid-yellow to early green within your grade/class?

Types of Intervention and Support

- **Elementary Schools Intervention & Support:** Before school program, small group instruction in Math and Reading, Tier 2 and 3 intervention by specialists, i-Ready personalized instruction, Lexia Core 5.
- **Support & Intervention at Reed:** Small group instruction in Math and Reading, Tier 2 and 3 intervention by specialists, i-Ready personalized instruction, Lexia PowerUp, IXL Math.
- **Support & Intervention at the MS:** Whole group instruction on common skill areas in Math and Reading, Tier 2 and 3 intervention by specialists, i-Ready personalized instruction, Lexia PowerUp, IXL Math and Reading.

What supports does i-Ready offer?

- Recommendations for typical and stretch growth for each student.
- Grouping recommendations for each classroom based on skill areas.
- Online personalized pathways for each student.
- Teacher tools that include multiple lesson plans for specific skill areas.
- i-Ready digital instruction book for additional practice.

Presentation Summary

In Reading…

- ★ 45% of students on or above (SBAC Proficiency Correlation).
- ★ 22% early grade level - Likely on-track to reach mid/late grade level.
- ★ 23% one grade level below.
- ★ 10% two or more below.
- ★ Vocabulary and Comprehension are reading domains in greatest need of improvement.
- ★ In both Reading and Math, all grades have shown significant growth since the fall assessment (approx. 4 months of instruction).

Presentation Summary

In Math…

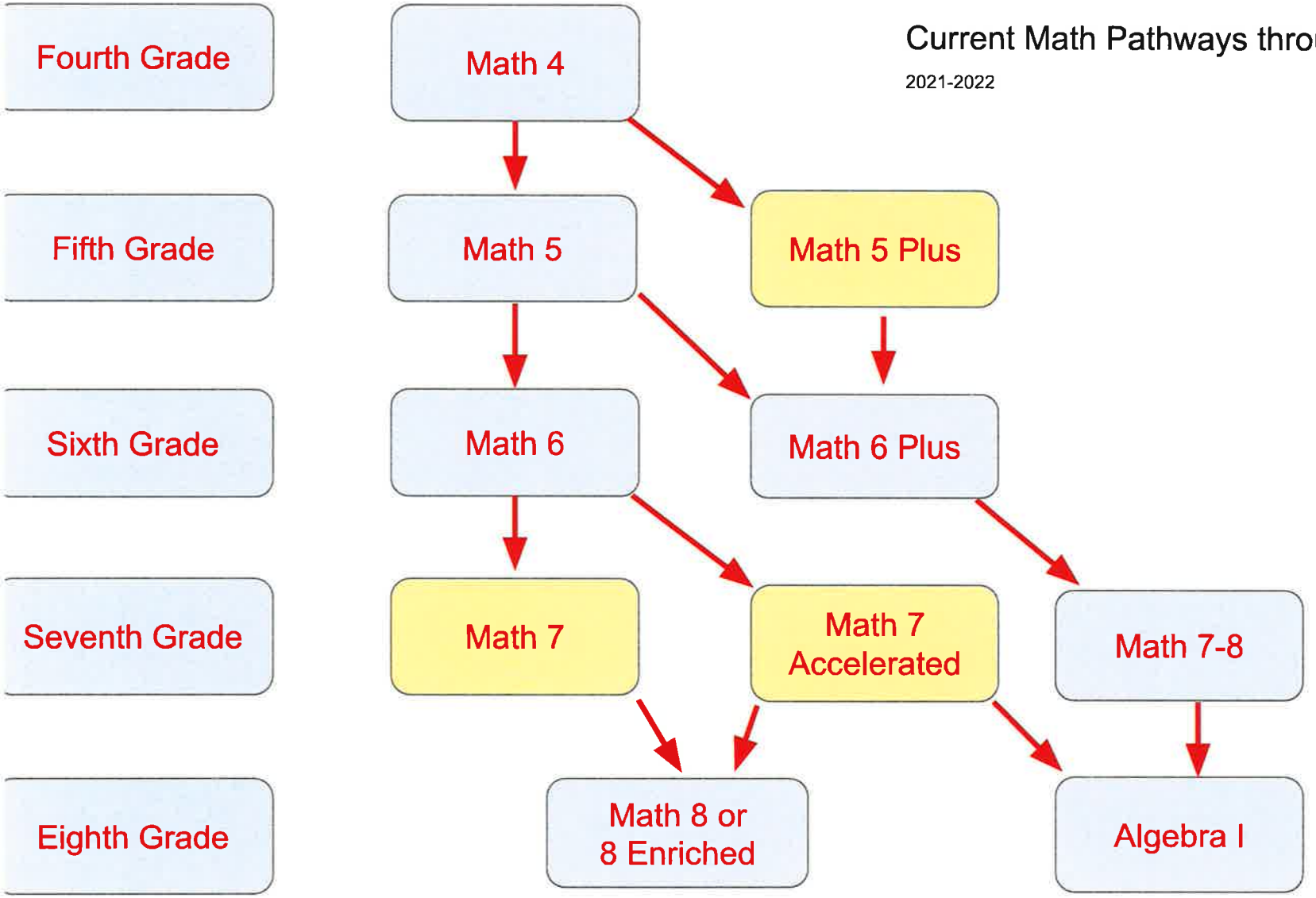
- ★ 35% of students at or above grade level (SBAC Proficiency Correlation).
- ★ 28% of students are early grade level - Likely to reach mid/late grade-level.
- ★ 29% one grade level below.
- ★ 8% of students two or more below.
- ★ Geometry is a math domain in greatest need of improvement.
- ★ In both Reading and Math, all grades have shown significant growth since the fall assessment (approx. 4 months of instruction).

Presentation Summary

- ❑ Winter data has been explained and reviewed with building leadership teams. Data protocols in place. 2/10 and 2/11.
- ❑ Data reviewed by classroom teachers during the 2/18 DPLC day, action plans created.
- ❑ Data and action plans continue to be monitored and reviewed in PLCs.
- ❑ Follow-up meetings will be had with each leadership team in April to reviewing the success of intervention and support plans.

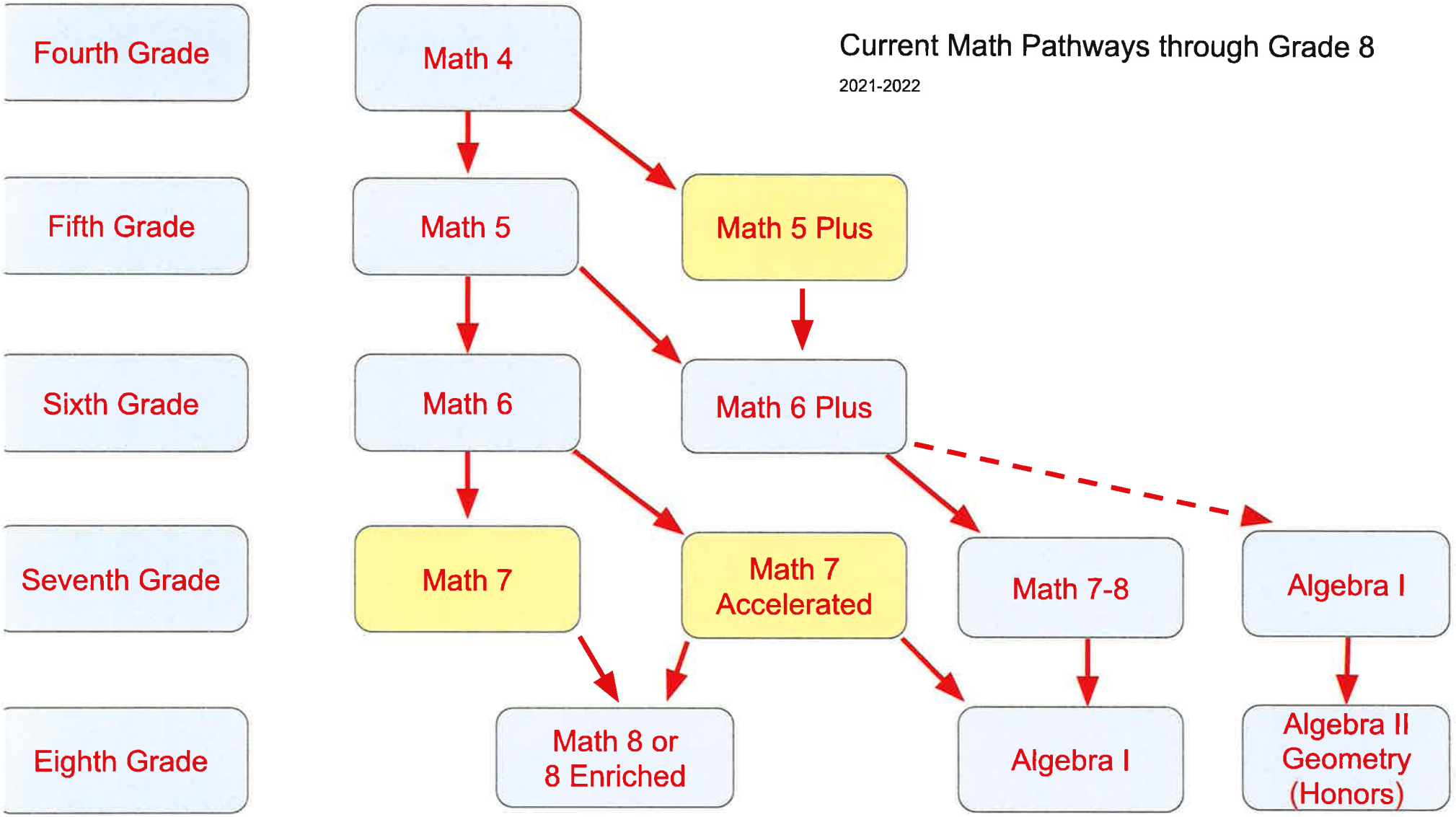
Current Math Pathways through Grade 8

2021-2022



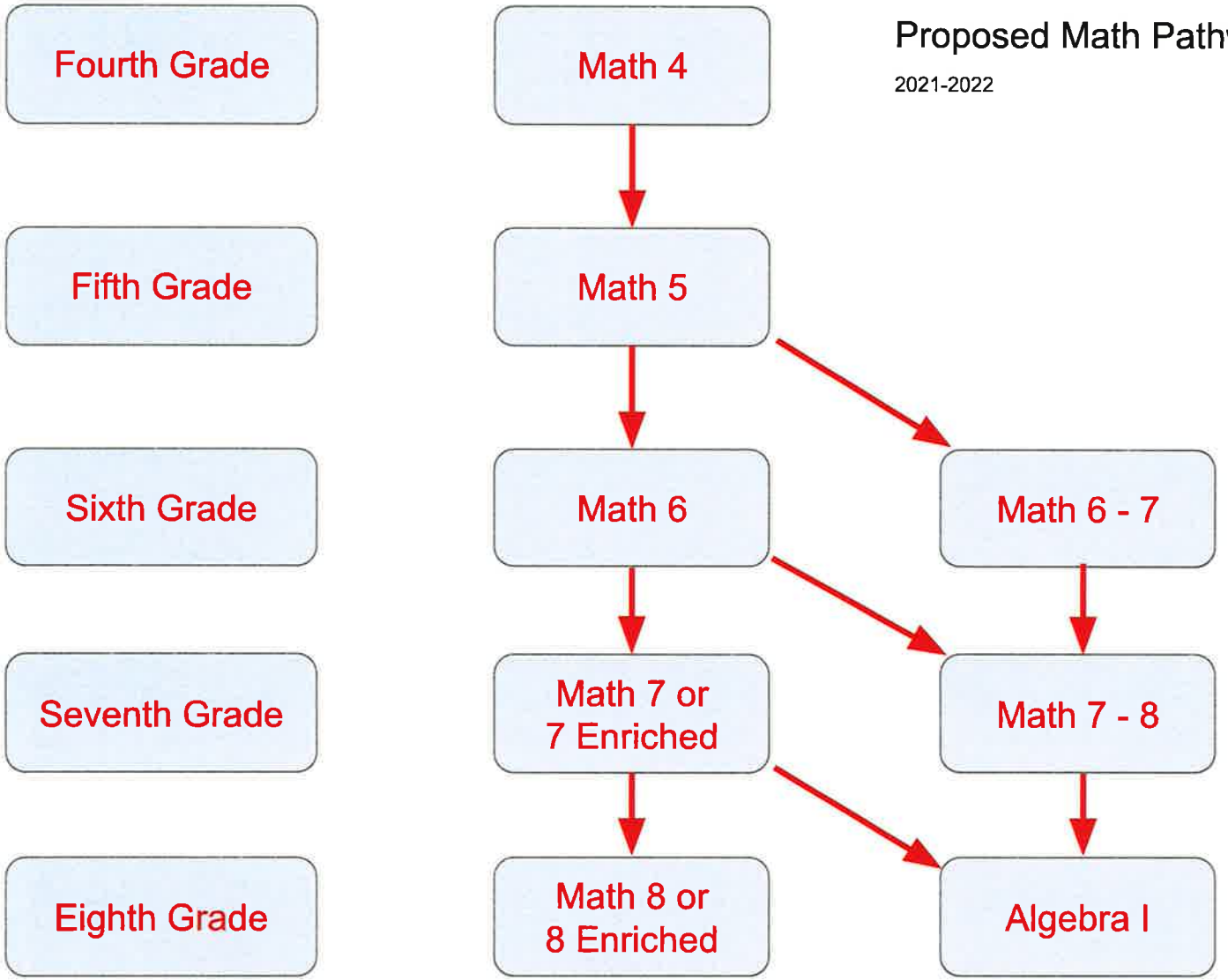
Current Math Pathways through Grade 8

2021-2022



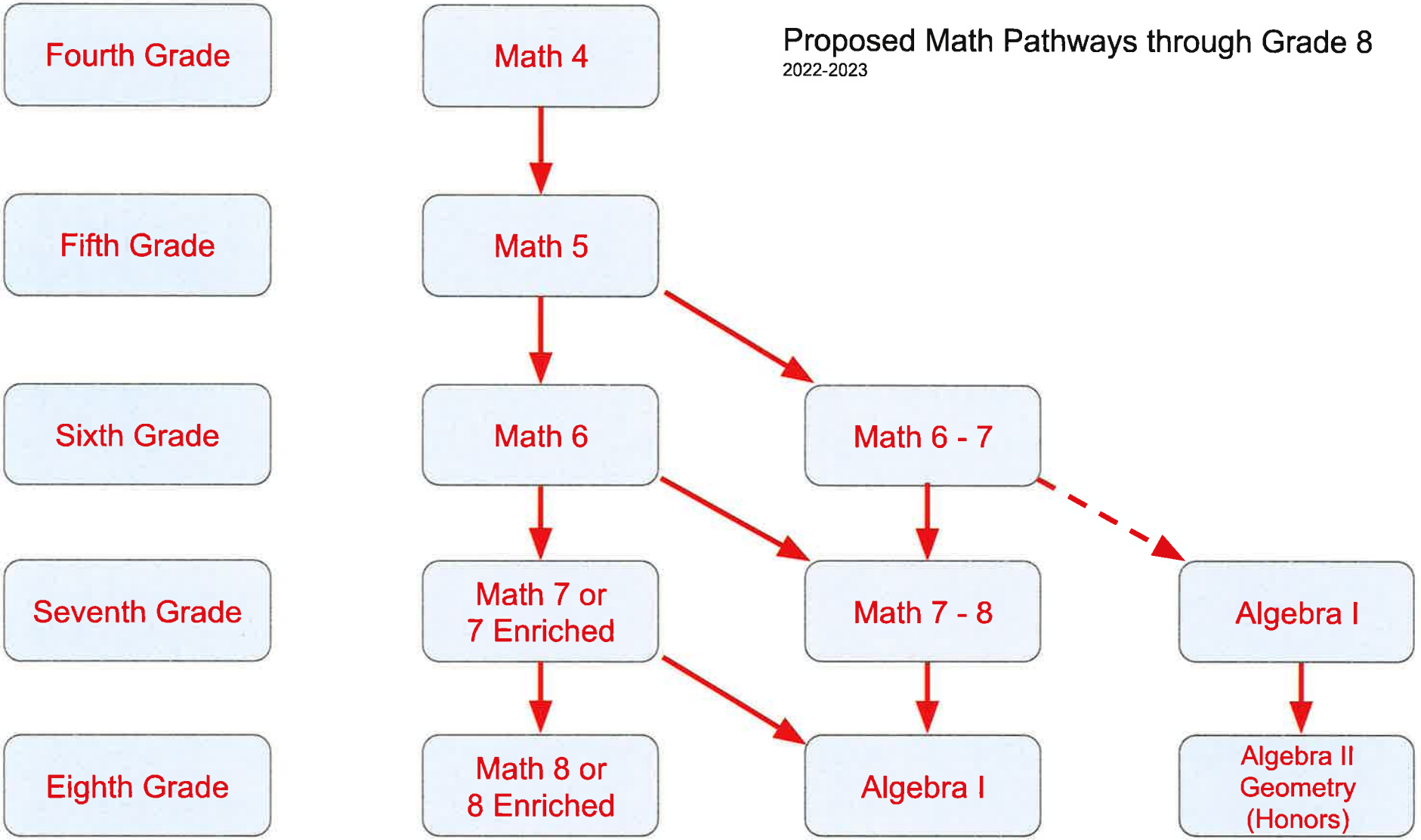
Proposed Math Pathways through Grade 8

2021-2022



Proposed Math Pathways through Grade 8

2022-2023



Reed Intermediate STEM Curriculum

Thanks to Anne Uberti and Jess Fonovic for initially conceiving a STEM class and for allowing me to design and teach it.

Thanks also to Todd Stentiford for many, many hours of curriculum writing support throughout the development of these courses. These courses would not be as rich without his wise and expert input.

And to Carla Tischio (and the members of the Curriculum Council) for essential guidance about the ins and outs of concept-based curriculum writing.

RIS STEM Course Goals

- inspire curiosity
- incorporate engineering experiences
- support classroom science, math and tech instruction
  - Review/extend content already taught
  - Introduce concepts that will be taught in the future
- Focus on Science and Engineering Practices

Based on *Next Generation Science Standards*

RIS STEM Assessment

- Largely formative due to the introductory nature of much of the material
- Summative assessment at the end of longer units
  - Focus on collaboration among pairs/small groups
  - Analytic rubric with collaborative descriptors as well as unit-specific criteria

STEM 5 Curriculum

Unit: **Paper Bridge Building Challenge**

Conceptual Lens: **Structure and Function**

Student groups learn about conducting fair tests and data collection, and then explore how the manipulation of structure can impact the function of construction materials by designing, building and testing the ability of bridges made of paper to support a static load.

Assessment: Students are assessed using an analytic rubric that focuses on general collaborative behaviors and task-specific criteria.


REED
R
Student
Dictionary

Over 3 lbs.

Almost 4 1/2 lbs.

STEM 5 Curriculum

Unit: **Seasonal Changes in Daylight**

Conceptual Lens: **Patterns**

Connecting to 5th grade Earth and Space Science topics, student groups engage in sense-making and scientific argumentation about patterns that can be used to explain the relationship between the Earth and Sun. The limitations of scientific models are also explored.

Assessment: Students complete a formative assessment probe to elicit preconceptions and misconceptions, and are observed practicing evidence-based argumentation.

STEM 5 Curriculum

Unit: **Introduction to Coding**

Conceptual Lens: **Human/Machine Interaction**

Along with millions of students around the world during Computer Science Education Week in mid-December, students begin to explore how computers can be controlled by people using block-based computer programming and are introduced to machine learning.

Assessment: The *code.org* platform syncs with Google Classroom and allows students and teachers to monitor their progress. It allows support in real time as students progress through coding tutorials.

STEM 5 Curriculum

Unit: KEVA Marble Run Challenge

Conceptual Lens: The Engineering Design Process

Student groups learn about and engage in the Engineering Design Process through the design, construction and testing of marble runs made of wood planks that strive to meet specified criteria and constraints.

Assessment: In addition to ongoing formative assessment and support throughout the unit, summative assessment for all engineering units is based on the same collaborative work rubric with different unit-specific elements.

STEM 5 Curriculum

Unit: **Cycling of Matter/Waste Management**

Conceptual Lens: **Energy and Matter**

Student groups explore the cycling of matter through natural ecosystems, and then learn how liquid and solid waste are disposed of in Newtown and larger municipalities. As a pilot project to reduce the school's waste stream and contribute compost to our new courtyard greenhouse, we're now diverting organic waste from the cafeteria, then design and conduct investigations of variables that might accelerate the composting process.

Assessment: Students are formatively assessed on their understanding of matter flow within ecosystems and their observation artifacts from the composting investigation.

NGSS Test Preparation

Two cycles are used in fifth grade to prepare students for their Next Generation Science Standards standardized test each April.

In session one, we review different item types and the tools and strategies necessary for completing them as a whole class.

In the second session, student log in and practice items independently.

STEM 5 Curriculum

Unit: **Edison Robot Programming**

Conceptual Lens: **Human/Machine Interaction**

Student groups explore multiple programming methods to control Edison robots, utilize their sensors, and problem solve how to debug faulty programming.

Assessment: Anecdotal observation of student interactions with partners and robots

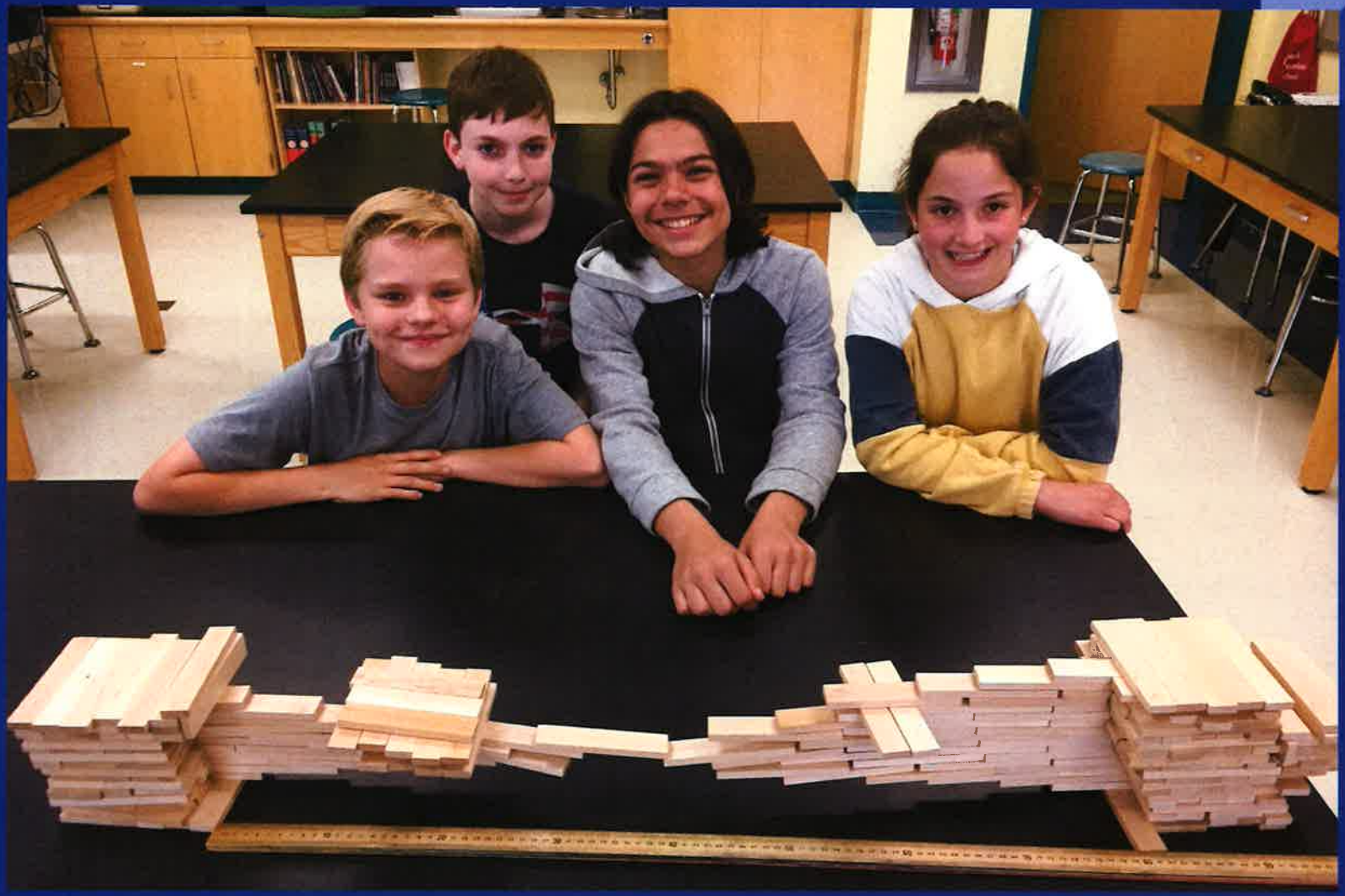
STEM 5 Curriculum

Unit: **KEVA Bridge Span Challenge**

Conceptual Lens: **Cause and Effect**

Student groups use KEVA blocks again, this time to explore constraints of the material and of their designs as they build bridges that try to span the greatest unsupported distance.

Assessment: Students use iPads to photodocument their maximum span length and share successful techniques with classmates in other groups.



STEM 6 Curriculum

Unit: **Robots Over Paper Bridges**

Conceptual Lens: **Structure and Function**

Student groups leverage bridge design and robotics experience from fifth grade to build paper bridges again, this time with a goal of making them sturdy enough to support a dynamic load. They reprogram discarded TV remotes and use them to control their Edison robots' movement as they navigate over the bridges they design based on specified criteria.

Assessment: The collaborative design rubric is used here again as with most engineering challenges to provide a summative assessment.

STEM 6 Curriculum

Unit: **Computer Programming**

Conceptual Lens: **Human Machine Interaction**

Having experienced block-based visual coding in 5th grade, students now are introduced to the type of language-based coding that is used in more advanced programming and especially web design. They create a meme as a product of a JavaScript tutorial.

Assessment: Final products are posted on Padlet, an electronic bulletin board in order to share them with the other class members. Students self-assess their comfort level with JavaScript and provide feedback to their classmates after viewing their memes.

STEM 6 Curriculum

Unit: **Lux Blox Slower Coasters**

Conceptual Lens: **Energy and Matter**

Students are introduced to the many types of energy, with a focus on the transformations between potential and kinetic energy. Groups are challenged to design and build a ping pong ball roller coaster with criteria including a goal to make it take the longest time possible.

Assessment: The collaborative design rubric is used here again for summative assessment. Students also videotape their best run and mark up a screenshot of their coaster to demonstrate their understanding of potential and kinetic energy.

Collaborative Group Challenge Rubric: *Edison Bridges (6th)* 8/27-10/8/19

Day _____ Period _____

Group Members (First/Last Names): _____

	Exemplary (100)	**Proficient (92)**	**Partial Mastery (85)**	**Did Not Meet Expectations (60)**
Planning/Communication	Exceptionally effective working as a group to solve problems and/or resolve disputes among group	Worked collaboratively to generate group plan	Contributions by all were not encouraged; members sometimes unreceptive to the ideas of others	All members did not participate fully *and/or* group was often not receptive to the contributions of all members
Execution/Effort	Highly engaged and encouraged participation by all members of group	Worked effectively for duration of class	Had some difficulty maintaining focus on task.	Required multiple prompts to remain on task
Individual Problem Solving	Generated ideas for group/ communicated them in an effective way. Noteworthy contribution to cleanup.	Engaged in working toward meeting task criteria. Appropriate contribution to cleanup.	Mainly relied on others to overcome difficulties in meeting task criteria. Limited contribution to cleanup.	Hindered group's progress toward meeting task criteria. Inappropriate cleanup behaviors demonstrated.
Task-specific criteria: *- Minimum span distance 50cm* *-Edison should cross bridge twice* *-Supports take up < 50% of span* *Highly successful bridge* ★ *More than 2 crossings* ★ *Crossed both directions* ★ *Additional element added*	*Highly successful bridge* ★ *Multiple crossings* ____ ★ *Crossed both directions* ★ *Additional element added* _____	*Crossed twice with <50% support without rebuilding*	*Edison crossed bridge with supports >50% of span or robot crossed once*	*Edison could not cross bridge*
____ encouraging creative dominant dependent argumentative disengaged ____% ____ encouraging creative dominant dependent argumentative disengaged ____% ____ encouraging creative dominant dependent argumentative disengaged ____% ____ encouraging creative dominant dependent argumentative disengaged ____% ____ encouraging creative dominant dependent argumentative disengaged ____%				**Grade**

STEM 6 Curriculum

Unit: **Flat Earth - Claims or Evidence?**

Conceptual Lens: **Scientific Argumentation**

Students analyze the statements of "Flat Earthers" in order to evaluate the validity of their claims. They practice distinguishing between unsupported claims and those based on verifiable evidence. They also explore techniques for evaluating the credibility of information from different internet sources.

Assessment: Students complete a formative probe of their current understanding of gravity on Earth, and take a video quiz on the Edpuzzle platform in which they critically evaluate Flat Earth claims.

“Slower” Coaster Samples

STEM 6 Curriculum

Unit: **Water Cycle Investigations**

Conceptual Lens: **Systems and System Models**

Student groups explore the phase changes that occur within the water cycle and engage in an engineering design challenge. Using PocketLab sensors paired with iPads, they measure changes in temperature, humidity and dewpoint under various conditions. Groups then plan and conduct investigations that lead to the design of virus mitigation strategies based on the control of humidity or other variables.

Assessment: Students complete a formative assessment probe, create models in small groups in a shared Google Slide, complete an investigation design plan, and record their observations in a lab writeup.

STEM 6 Curriculum

Unit: **Edison Robot Mazes**

Conceptual Lens: **Human/Machine Interaction**

Student groups design mazes and then program their robots to navigate them. They choose between programming methods already practiced in earlier units or may explore autonomous navigation by writing programs that utilize the robots' on board sensors instead of explicitly programming it to follow a preset route.

Assessment: The collaborative design rubric is used here again for summative assessment. Groups are scored on the complexity of their maze and programming sophistication.

STEM 6 Curriculum

Unit: **KEVA Cantilever Challenge**

Conceptual Lens: **Systems**

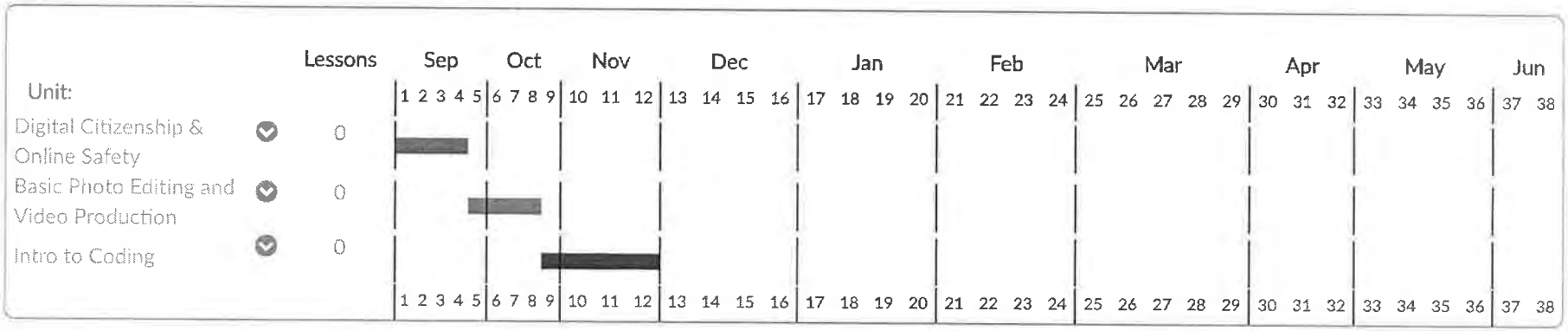
Students learn about cantilevers, and then groups design and build cantilevers with the challenge of creating the longest unsupported span possible. Initially they are constrained by the number of blocks allowed in their structures, and their final project allows them to use an unlimited number of planks.

Assessment: Students demonstrate understanding of cantilevers by completing a video-based quiz and through anecdotal observation of their level of collaboration and engineering success.

Newtown Public Schools

Computer Integration Gr. 7

2 Curriculum Developers



Unit Planner: Digital Citizenship & Online Safety
Computer Integration Gr. 7

Newtown Middle School / 2021-2022 / Grade 7 / F&AA: Technology / Computer Integration Gr. 7 / Week 1 - Week 4

Last Updated: Friday, February 18, 2022 by Austin Cirella

Digital Citizenship & Online Safety

Cirella, Austin; Swift, Kathleen

- Unit Planner
- Lesson Planner

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens

Please attach your completed Unit Web Template here

Lens: Safety, Responsibility

Concepts: Discussion, Perspective, Self-awareness, Communication, Balance, Consequences, Data, Rigor, Awareness, Screen time and offline time

Computer Microconcepts: Digital Literacy, Online Safety, Content-specific Vocabulary, Online Etiquette, Digital Footprint, Security Threats, Online Actions, Social Media

G

Generalizations / Enduring Understandings

1. Consider how online actions impact the real world

2. An imbalance between screen time and offline time creates consequences.

3. Data protection requires rigor and awareness on the part of the user.

4. Online actions reverberate for years due to their near permanent status.

5. Tracking one's digital footprint reduces online security threats.

Guiding Questions

Please identify the type of question: (F) Factual, (C) Conceptual, (P) Provocative [Debatable]

1a. What *is* social media? (F)
1b. What actions online can cause problems in the real world? (F)
1c. What is intellectual property? (F)
1d. What are the real world effects that result from online actions? (C)
1e. Should users face consequences in the real world for online actions? (P)
1f. How long should online content be able to impact the user? (P)

2a. What are detrimental effects on one's mind and/or body from too much screen time? (F?)
2b. How can people avoid having too much screen time in a world where screens are so pervasive? (C)
2c. Is it worth balancing screen time vs. offline time, if screen time brings enjoyment? (P)

3a.What are the most important ways to prevent a security breach? (F)
3b. Do pre-emptive safety procedures meaningfully reduce risk online? (C)
3c. Are safety procedures worth practicing, if they take extra effort or time? (P)

4a.How does one protect privacy online to prevent their media from being seen? (F)
4b. Can a user fully erase personal content from the internet? (C)
4c. Is saving other people's media ethical? (P)

5a. What is a digital footprint? (F)
5b. What are the best ways to track one's digital

	footprint? (F) **5c.** Can a person fully repair a damaged digital footprint? (C) **5d.** Is it ethical to investigate others' digital footprints without their permission? (P)

Standard(s)

Connecticut Core Standards / Content Standards

ISTE: Educational Technology (2016)

ISTE: All Grades

1. Empowered Learner

Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. Students:

a. articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.

c. use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.

2. Digital Citizen

Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical. Students:

a. cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.

b. engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.

c. demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.

d. manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online.

2016 ISTE Standards

Critical Content & Skills

*What students must **KNOW and be able to DO***

Students will know the permanence of their actions online.
Students will know the real world implications of their online actions.
Students will be able to critically analyze and discuss digital citizenship problems and ethical dilemmas.
Students will be able to demonstrate understanding and comprehension of online safety procedures and protocol as well as mitigation strategies.
Students will be able to successfully identify potential threats online before they succumb to them.
Students will be able to understand and respect the rights and obligations of using and sharing intellectual property.

Core Learning Activities

Formative:

Connections & Community assignment questions and discussion.
Safety & Privacy assignment questions and discussion.
Screen Time vs. Offline Time assignment, research, and discussion.
Technology & Data assignment questions and discussion.
Online Rights & Literacy assignment questions and discussion.
Evaluating Content assignment, research, and discussion.

Summative:

The Importance of Digital Safety Writing Assignment.
Connections & Community Lesson 1 Questions.pdf
Safety & Privacy Lesson 2 Questions.pdf
Screen Time vs. Offline Time Lesson 3 Questions.pdf
Technology & Data Lesson 4 Questions.pdf

Online Rights & Literacy Lesson 5 Questions.pdf
Evaluating Content Lesson 6 Questions.pdf
The Importance of Digital Safety Essay Assignment Sheet

Assessments

The Importance of Digital Safety Writing Assignment
Summative: Other written assessments
Summative Digital Safety Assignment
Classroom Discussion
Formative: Other oral assessments
The Importance of Digital Safety Essay Assignment Sheet

Resources

Professional & Student
Guided/Self-Paced Ever-Fi Software
EverFi Course Description
EverFi Login/Registration

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

- Information Literacy
- Critical Thinking
- Spoken Communication
- Written Performance

Information Literacy, Critical Thinking, Spoken Communication, and Written Performance will all be utilized in this unit.

Interdisciplinary Connections

English
Health

Unit Planner: Basic Photo Editing and Video Production
Computer Integration Gr. 7

Newtown Middle School / 2021-2022 / Grade 7 / F&AA: Technology / Computer Integration Gr. 7 / Week 5 - Week 8

Last Updated: Friday, February 18, 2022 by Austin Cirella

Basic Photo Editing and Video Production

Cirella, Austin; Swift, Kathleen

- Unit Planner
- Lesson Planner

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens

Please attach your completed Unit Web Template here

Lens: Creativity, Practicality

Concepts: Process, Understanding, Creation, Design, Skill,

Computer Microconcepts: Video Production, Photo Editing, Ethics, Software, Message, Tools

G

Generalizations / Enduring Understandings

1. The skills of creating and editing videos and images enable one to become proficient in cultivating a message.

2. Effective photo editing and and video production necessitate specialized tools and software.

3. Learning multiple specific tools for photo editing and video production permits one to be effective at creating a cohesive product/message.

4. The specialized skills of video production and photo editing unlock a plethora of professional opportunities.

5. The dangers and ethics of photo and video editing evolve constantly.

Guiding Questions

Please identify the type of question: (F) Factual, (C) Conceptual, (P) Provocative [Debatable]

1a. What is video production and photo editing and how do they work? (F)
1b. Why is video/photo editing an effective way to cultivate a powerful/memorable message? (C)
1c. Can editing a photo or video change the tone in a meaningful way? (P)

2a. What are specific tools for modern photo or video editing? (F)
2b. What photo and video editing methods are the most drastic/effective? (P)
2c. Which tools are the most effective at changing a photo or video? (F)

3a. What are programs that use modern tools for photo and video editing? (F)
3b. Why are there multiple photo and video editing programs that function similarly ? (C)
3c. Is learning a single editing program sufficient? (P)

4a. What are professional opportunities that require proficiency in photo or video editing and production? (F)
4b. What are differences between amateur and professional photo and video editing and production? (F)
4b. What are ways to professionalize photo and video editing and production? (C)
4c. Are there most effective ways to make photo or video work stand out through editing techniques or production techniques? (P)

5a. What are major ethics pitfalls you can be penalized for to consider when editing or creating a photo or video? (F)
5b. How can one anticipate ethics pitfalls before they occur? (C)

	5c. Are ethical pitfalls worth considering, if they are not against the law? (P)

Standard(s)

Connecticut Core Standards / Content Standards

ISTE: Educational Technology (2016)

ISTE: All Grades

1. Empowered Learner

Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. Students:

a. articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.

c. use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.

2. Digital Citizen

Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical. Students:

c. demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.

3. Knowledge Constructor

Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others. Students:

b. evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources.

4. Innovative Designer

Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions. Students:

a. know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.

b. select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.

c. develop, test and refine prototypes as part of a cyclical design process.

6. Creative Communicator

Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals. Students:

a. choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.

b. create original works or responsibly repurpose or remix digital resources into new creations.

c. communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations.

d. publish or present content that customizes the message and medium for their intended audiences.

2016 ISTE Standards

Critical Content & Skills

*What students must **KNOW and be able to DO***

Students will cultivate a specific message with video production and photo editing.
Students will use specialized tools necessary to be proficient in video production and photo editing in the modern age.
Students will effectively employ multiple programs to improve their video production and photo editing capabilities.
Students will use video production and photo editing skills in a professional environment.

Students will know the challenges and how to avoid ethics complications in video production and photo editing.
Students will create an original video and image.
Students will edit an original video and image.
Students will practice video editing with multiple software.
Students will experience examples of multiple types of video production hardware.
Students will demonstrate proficiency in video production and editing across multiple platforms.

Core Learning Activities

Formative:
Video Production and Photo Editing: The Basics. - Multiple Classroom Demonstration and Activity
How to create a specific message or tone with editing techniques - Classroom Demonstration and Activity
Different Photo and Video Tools for Different Tasks- Classroom Demonstration and Activity
How to use different programs in unison- Classroom Demonstration and Activity
Ethical dilemmas in video production and photo editing and how to avoid them - Classroom Discussion and Writing Exercise
Careers and opportunities in video production and photo editing - Classroom Discussion and Research Activity
Summative:
Create original video or complex edited photo- Technology Project

Assessments

Classroom Demonstration Follow Up Hands-on Activities
Formative: Other Visual Assessments
Ethical Dilemmas Writing Exercise
Formative: Written Report
After a classroom discussion about the potential ethical pitfalls surrounding photo and video editing and production students are asked to identify ways to avoid these problems and additionally find more ethical dilemmas they may not have considered previously.
Careers and Opportunities Research Activity
Formative: Other written assessments
After a classroom discussion surrounding students expectations about the potential for photo and video editing to turn into a professional career, they are tasked with researching to find 3 additional careers that might interest them in the field of video or photo production and editing.
Create Your Own Video
Summative: Technology Project
Students are asked to create a single complex photo or video that has edits made to it to create multiple tones or themes. This is a summative assessment that culminates all the skills they have learned throughout the unit.

- Silhouette Art
- Overlay Lesson
- Word Picstitch
- Animated Pumpkin Lesson Pixlr
- Hex Code Coloring
- Colorizing and Combining
- Video Production and Photo Editing Summative Assessment Sheet

Resources

Professional & Student
Photoshop or Pixlr
Adobe Premier Pro or ClipChamp

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

Interdisciplinary Connections

Art

• Information Literacy • Critical Thinking • Spoken Communication • Written Performance •	

Unit Planner: Intro to Coding
Computer Integration Gr. 7

Newtown Middle School / 2021-2022 / Grade 7 / F&AA: Technology / Computer Integration Gr. 7 / Week 9 - Week 12

Last Updated: Friday, February 18, 2022 by Austin Cirella

Intro to Coding

Cirella, Austin; Swift, Kathleen

- Unit Planner
- Lesson Planner

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens

Please attach your completed Unit Web Template here

Lens: Logical & Analytical Problem Solving, Creativity

Concepts: Data, Rigor, Systems, Patterns, Process, Logic, Analysis, Paths, Results

Computer Microconcepts: Coding, Efficiency, Content-specific Vocabulary, Coding Syntax, Coders, Instructions, Outcomes

G

Generalizations / Enduring Understandings

1. Coders employ a sequence of instructions to create desired outcomes.

2. Coding requires problem solving and presents alternative paths to the same result.

3. Sharing basic structure and syntax like loops, variables, and array indexing enable basic coding to be universal.

4. Effective coding saves time and energy.

5. Loops allow for more efficient coding.

Guiding Questions

Please identify the type of question: (F) Factual, (C) Conceptual, (P) Provocative [Debatable]

1a. What is text based coding (F)
1b. What are the steps to basic coding? (F)
1c. How does coding work? (C)
1d. How is the sequence of coding similar to other systems? (C)
1e. Is coding more similar to math- based sequencing or science -based sequencing? (P)

2a. What are effective uses of coding in the modern world to solve problems? (F)
2b. What potential negative effects does coding lead to? (F)
2c. Why do people code? (C)
2d. Does using code to solve problems raise any ethical dilemmas? (P)

3a. What is coding syntax? (F)
3b. What are examples of syntax outside of coding? (F)
3c. Why is syntax important for coding? (C)
3d. Are individual coding languages worth learning? (P)

4a. What are examples of how people use code to save time? (F)
4b. What are basic strategies to make coding more efficient? (F)
4c. What are real world benefits of efficiency in coding? (C)
4d. Is efficiency in coding important if the same task can be done inefficiently? (P)

5a. What are "loops" in coding? (F)
5b. Why do people use loops in coding? (C)
5c. How do loops make coding more efficient? (C)
5d. Is looping necessary to make a code effective? (P)

Standard(s)

Connecticut Core Standards / Content Standards

ISTE: Educational Technology (2016)

ISTE: All Grades

1. Empowered Learner

Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. Students:

c. use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.

4. Innovative Designer

Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions. Students:

a. know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.

5. Computational Thinker

Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions. Students:

a. formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions.

c. break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.

d. understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.

2016 ISTE Standards

Critical Content & Skills

*What students must **KNOW and be able to DO***

Students will know how coding is used to achieve real world results.
Students will know how to start coding effectively.
Students will know the basics of coding loops.
Students will be able to effectively demonstrate coding syntax.
Students will be able to understand how coding affects everyday life.
Students will be able to use coding to solve basic abstract problems.
Students will be able to understand what coding is at a core level.
Students will be able to demonstrate effective coding by producing their own code.
Students will produce multiple of their own unique levels in the provided software.

Core Learning Activities

Formative:

What is coding? Activity and Worksheet
Why do people code? Classroom discussion
Misconceptions and how coding works in the real world. Video and discussion
How important is coding syntax? Online coding activity with JavaScript and discussion
What are loops? Video and discussion

Summative:

Challenge Assignment - Technology Project
What is coding?
How does coding work in the real world?
How important is coding syntax?
What are loops?
Create a Challenge Assessment.

Assessments

What is coding?
Formative: Other Visual Assessments
What is coding?
How does coding work in the real world?
Formative: Other oral assessments
This video accompanied with a brief oral discussion both prior and after the video is the core of this assessment. Ideally you will go over misconceptions of how coding works first including depictions of coding in popular media and "hacking". After the video you would host a classroom discussion highlighting the differences between perceptions and reality. This is a participation based activity that includes turn and talks as well as whole room discussion.
How does coding work in the real world?
How important is coding syntax?
Formative: Technology Project
What are loops?
Formative: Other oral assessments
This video accompanied with a brief oral discussion both prior and after the video is the core of this assessment. Ideally you will go over what students think looping is and a brief explanation. After the video you would host a classroom discussion where the reasons for looping in coding become clear. This is a participation based activity that includes turn and talks as well as whole room discussion.
Create a Challenge Assessment-
Summative: Technology Project
Create a Challenge Assessment.

Resources

Professional & Student
Code.org
Vidcode.com
Codemonkey.com
Code.org
vidcode.com
codemonkey.com

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

- Information Literacy
- Critical Thinking
- Spoken Communication
- Written Performance

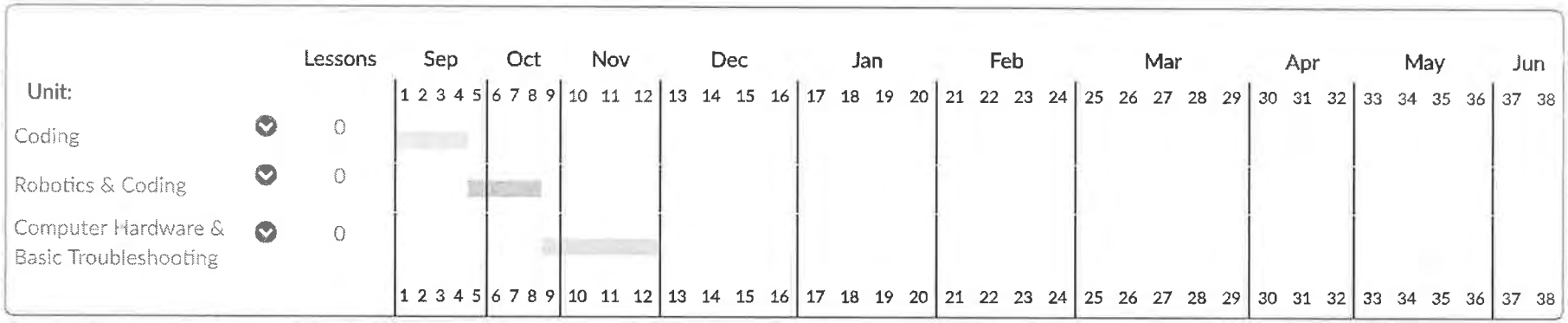
Interdisciplinary Connections

Science
Math

Newtown Public Schools

Computer Integration Gr. 8

2 Curriculum Developers



Unit Planner: Coding
Computer Integration Gr. 8

Newtown Middle School / 2021-2022 / Grade 8 / F&AA: Technology / Computer Integration Gr. 8 / Week 1 - Week 4

Last Updated: Friday, February 18, 2022 by Austin Cirella

Coding

Cirella, Austin; Swift, Kathleen

- Unit Planner
- Lesson Planner

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens

Please attach your completed Unit Web Template here

Lens: Logical & Analytical Problem Solving, Creativity
Concepts: Data, Rigor, Systems, Patterns, Process, Logic, Analysis
Computer Microconcepts: Coding, Amateur Coding, Efficiency, Content-specific Vocabulary, For-loops, Arrays, Indexing, Variables, Formulas & Strings in Coding

G

Generalizations / Enduring Understandings

1. Coders utilize variables to increase the efficiency of desired outcomes.

2. Coding efficiency depends on indexing and arrays.

3. Implementing formulas in coding increases efficiency

4. For-loops, an effective tool, cut down on unnecessary code in most coding languages.

5. Amateur level coding effectively solves abstract problems.

Guiding Questions

Please identify the type of question: (F) Factual, (C) Conceptual, (P) Provocative [Debatable]

1a. What are variables in coding? (F)
1b. How does one create a coding variable? (F)
1c. How do variables work? (C)
1d. How are variables in coding similar to variables in math or science? (C)
1e. Are coding variables worth using if they require prior planning? (P)

2a. What is indexing? (F)
2b. What are arrays in coding? (F)
2c. How do indexes and arrays work together to create efficient coding? (C)?
2c. When would it be applicable to use an index/array? (F)?
2d. Do the limitations on arrays make their implementation worthwhile? (P)

3a. What are formulas in coding? (F)
3b. What are some examples of formulas outside of coding? (F)
3c. How does the introduction of a formula make a code more efficient? (C)
3d. Are there any potential situations when using a formula wouldn't be worth the time and effort? (P)
3e. Are formulas more effective than indexing or arrays for making code more efficient? (P)

4a. What are for-loops in coding? (F)
4b. How are for-loops different from regular coding loops? (F)
4c. How do for-loops impact a code? (C)
4d. Are for-loops as effective as regular loops at

	increasing efficiency? (P) **5a.** What makes coding "amateur?" (F) **5b.** What kind of problems does amateur coding solve? (F) **5c.** How does amateur coding differ from professional-level coding? (F) **5d.** How can someone approach an abstract problem with only amateur level coding? (C) **5d.** Is creating media as an amateur coder an efficient way to learn coding? (P)

Standard(s)

Connecticut Core Standards / Content Standards

ISTE: Educational Technology (2016)

ISTE: All Grades

1. Empowered Learner

Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. Students:

c. use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.

5. Computational Thinker

Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions. Students:

a. formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions.

b. collect data or identify relevant data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making.

c. break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.

d. understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.

2016 ISTE Standards

Critical Content & Skills

*What students must **KNOW and be able to DO***

Students will know how amateur coding can be used to achieve real world results.
Students will know how to use basic coding protocols.
Students will know to make their own coding more efficient.
Students will effectively demonstrate formulas in coding.
Students will effectively demonstrate for-loops in coding.
Students will understand and utilize what an array and index is as pertaining to coding.
Students will solve basic abstract problems with coding.
Students will produce a final product that shows proficiency in coding.

Core Learning Activities

Formative:

What are variables? Demonstration and code production. Check
How does one implement formulas in code? Demonstration and code production.
Indexes and arrays in a nutshell. Demonstration and code production.
What are for-loops? Demonstration and code production.
Amateur coding solutions. Demonstration and code production.

Summative:

Create a Game Assignment

Assessments

Create a Game Assignment
Summative: Technology Project
Create a Game In CodeMonkey Assignment.
Online Code Productions
Formative: Technology Project
codemonkey.com
Create a Game In CodeMonkey Assignment.

Resources

Professional & Student
Codemonkey.com
codemonkey.com

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

- Information Literacy
- Critical Thinking
- Spoken Communication
- Written Performance

Interdisciplinary Connections

Math
Science

Unit Planner: Robotics & Coding
Computer Integration Gr. 8

Newtown Middle School / 2021-2022 / Grade 8 / F&AA: Technology / Computer Integration Gr. 8 / Week 5 - Week 8

Last Updated: Saturday, February 19, 2022 by Austin Cirella

Robotics & Coding

Cirella, Austin; Swift, Kathleen

- Unit Planner
- Lesson Planner

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens

Please attach your completed Unit Web Template here

Lens: Practicality, Analysis

Concepts: Analysis, Logic, Understanding, Design

Computer Microconcepts: Robotics, Coding, AI, Automation, 2d vs 3d space, inputs, program languages, robotic movement, functionality, challenges

G

Generalizations / Enduring Understandings

1. Robotics enable efficiency in the real world with automation & AI.

2. Functionality in robotics demands effective and efficient coding to be successful in desired task.

3. 2d vs 3d space presents unique challenges for coding robotic movement.

4. Robots interpret precise human inputs to complete tasks.

5. Successfully coding robots allows choosing among multiple program languages.

Guiding Questions

Please identify the type of question: (F) Factual, (C) Conceptual, (P) Provocative [Debatable]

1a. What are tasks that robots make faster? (F)
1b. Why do people create robots to complete tasks? (C)
1c. How do robots make tasks more efficient? (C)
1d. Is relying on robots to complete tasks a dangerous exercise practice? (P)

2a. What are some issues that arise in robotics if the robotic code is not efficient? (F)
2b. Why is efficient coding important in robotics? (C)
2c. Are the problems created by inefficiency worth tackling in a working system? (P)

3a. What are the differences to consider when coding something virtually in 2d space compared to 3d space? (F)
3b. How might the differences in 2d coding vs 3d coding present themselves in the real world? (C)
3c. Are the differences in 2d space vs 3d space worth taking into account? (P)

4a. Are robots capable of doing things completing tasks on their own? (F)
4b. Why are precise inputs imperative to successful outcomes with robotics? (C)
4c. Is it valuable to create a robot that requires less than precise inputs? (P)

5a. What coding languages are used for the most popular robotics today? (F)
5b. Why is each of these languages used specifically? (F)
5c. What coding languages seem the most accessible and why? (C)
5d. Which coding language is most essential to learn for

	robotics? (P)

Standard(s)

Connecticut Core Standards / Content Standards

ISTE: Educational Technology (2016)

ISTE: All Grades

1. Empowered Learner

Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. Students:

a. articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.

c. use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.

d. understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

3. Knowledge Constructor

Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others. Students:

a. plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.

b. evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources.

c. curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions.

d. build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.

4. Innovative Designer

Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions. Students:

a. know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.

b. select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.

c. develop, test and refine prototypes as part of a cyclical design process.

d. exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.

6. Creative Communicator

Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals. Students:

b. create original works or responsibly repurpose or remix digital resources into new creations.

c. communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations.

d. publish or present content that customizes the message and medium for their intended audiences.

2016 ISTE Standards

Critical Content & Skills

*What students must **KNOW and be able to DO***

Students will know how automation and AI are used to increase efficiency.
Students will know how coding is essential to robotics.
Students will know multiple approaches to coding in robotics and different programming languages.
Students will know robots are only capable of taking input.
Students will code a spherical robot in 3d space.
Students will create a multimedia presentation about a piece of robotics.
Students will understand the challenges and limitations of robotics in the real world.

Core Learning Activities

Formative:
Automation and AI in Robotics - Classroom discussion and Video
Efficiency in Robots - Video and Demonstration
Robots interpret precise human inputs to complete tasks - Classroom demonstration and activity
What are the differences between coding in virtual space and in the real world? - Classroom activity & demonstration
Learning the basics of robotics and coding- Classroom discussion and activity
Summative:
Choose a Robot Slideshow and Research - Technology Project and Research Project
Robotics Obstacle Course - Technology Project and Classroom Activity

Assessments

Classroom Discussions
Formative: Other oral assessments
Classroom Activities
Formative: Other Visual Assessments
Choose a Robot Slideshow and Research
Summative: Technology Project
For this project students are going to research and create a slideshow on the things you learned.

The goal of the project will be presented in the the following fashion :

1. Pick a piece of technology that you are interested in and you think has the ability to or already does change the world for the better.
You can choose any piece of technology.

2. Once you have chosen a piece of technology, do safe research on the internet about it.

3. Use your research to answer the following questions with multiple complete sentences in the attached Google Doc:

1. When & where was this technology invented?
2. Has this technology changed over time? How?
3. Who invented this technology?
4. What are some examples of this technology in action? Make sure to give multiple examples.
5. Is coding involved in making this technology work?
6. How/Where does this technology get made? How much does it cost?
7. Why did they invent this technology?
8. How does this technology make the world a better place?
9. Does this technology affect people in their everyday lives?
10. Is there any similar technology that tries to do the same thing?
11. How do you think you could change or add to this technology to make it better?

Resources

Professional & Student
Sphero Robots & Application

12. What would the world be like without this technology? Be specific.
{-(! Make sure you cite your sources !)-}

4. Create a slideshow in Google Slides that goes over the answers to all of these questions and presents your information.
This slideshow should be about 15-20 slides and include multiple pictures of your technology or any related images. Make sure you have a works cited slide!

5. When you are done filling in the answers in Google Docs and have completed your slideshow make sure they are both handed in!

An example of a piece of technology that makes the world a better place is smartphones. Smartphones help keep families connected and let people communicate in emergencies. You can choose whatever topic you want, this is just an example.
Robotics Obstacle Course
Technology Project
https://www.youtube.com/watch?v=Jky9l1ihAkg
Tech Project Assignment Sheet
https://www.youtube.com/watch?v=FjSyv2N5QEQ

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

- Information Literacy
- Critical Thinking
- Spoken Communication
- Written Performance

Interdisciplinary Connections

Science
Math

Unit Planner: Computer Hardware & Basic Troubleshooting
Computer Integration Gr. 8

Newtown Middle School / 2021-2022 / Grade 8 / F&AA: Technology / Computer Integration Gr. 8 / Week 9 - Week 12

Last Updated: Friday, February 18, 2022 by Austin Cirella

Computer Hardware & Basic Troubleshooting

Cirella, Austin; Swift, Kathleen

- Unit Planner
- Lesson Planner

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens

Please attach your completed Unit Web Template here

Lens: Logical & Analytical Problem Solving, Practical

Concepts: Process, Logic, Sequence, Analysis, Understanding

Computer Microconcepts: Troubleshooting, Software, Hardware, Computer Repair, Components, End User Experience, Skill, Computer Skills, Building, Information

G

Generalizations / Enduring Understandings

1. The accessible skill of software troubleshooting enables one to extend the life of a personal computer.

2. Repairing a computer exemplifies an accessible and essential skill in the modern age.

3. Understanding the components of a computer enables successful hardware troubleshooting.

4. The components inside a computer all work cohesively and in unison to deliver the end user experience.

5. Building a computer requires the right information, rendering it accessible to all.

Guiding Questions

Please identify the type of question: (F) Factual, (C) Conceptual, (P) Provocative [Debatable]

1a. What is software troubleshooting and how is it beneficial? (F)
1b. What are some generic approaches to troubleshooting software issues? (F)
1c. How can troubleshooting extend the life of a personal computer? (C)
1d. Are specific troubleshooting solutions worth learning? (P)

2a. What is computer repair? (F)
2b. What are some effective software repair solutions? (F)
2c. What are some effective hardware repair solutions? (F)
2d. Why is troubleshooting a computer important for extending its life? (C)
2e. Are there times where software or hardware repair may not be worth it? (P)

3a. What are the essential components of a computer? (F)
3b. Do all computers have the same components? (F)
3c. Why are some components specialized? (C)
3d. Which component is the most essential for a computer to operate? (P)

4a. Which components interact with each other on the inside of a computer? (F)
4b. Why do almost the all of the parts of a computer have to be working for a computer to function effectively? (C)
4c. Can one component work cohesively? (P)

	5a. What is needed to build a computer? (F) 5b. Which kind of tasks and environments call for different types of computers and why? (C) 5c. Is learning to build a computer a valuable skill when one can buy a pre-made computer? (P)

Standard(s)

Connecticut Core Standards / Content Standards

ISTE: ISTE Students (2019)

ISTE: All Grades

1.1 Empowered Learner

Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. Students:

1.1.a. articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.

1.1.d. understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

1.3 Knowledge Constructor

Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others. Students:

1.3.c. curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions.

1.3.d. build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.

2016 ISTE Standards

Critical Content & Skills

*What students must **KNOW and be able to DO***

Students will know the basics of software and hardware troubleshooting.
Students will know the importance of troubleshooting for extending the life of a computer.
Students will have a strong grasp on the components inside a computer and how they operate in tandem to deliver the end user experience most everyone is familiar with.
Students will understand the importance of being able to build your own computer and how to get started doing it themselves.
Students will troubleshoot basic computer issues.
Students will access the materials needed to build their own computer with ease.
Students will explain how computer components work together.

Core Learning Activities

Formative:

How to troubleshoot basic software issues - Classroom Discussion and Guided Walkthrough Activity
How to troubleshoot basic hardware issues - Classroom Discussion and Guided Walkthrough Activity
What are the components inside a computer and how do they work? - Research and Discussion
How to repair/replace a computer component - Demonstrations/Hands-on activity
How to extend the life of your PC - Classroom Discussion and Video Video

Summative:

Build a computer with PC part picker - Online Activity and Classroom Discussion

Assessments

Research Questions
Formative: Other written assessments

Resources

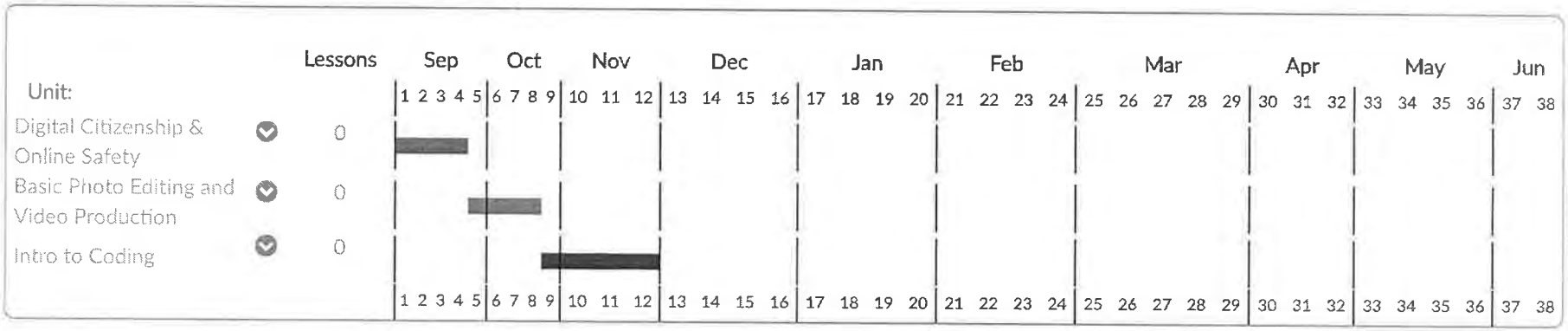
Professional & Student
https://pcpartpicker.com/list/

Written Report Students will research questions presented to them to find correct information and find reliable sources. **Classroom Discussions and Activities** **Formative: Other oral assessments** **Build a Computer with PC Part Picker** **Summative: Technology Project** Students are tasked with using the online tool introduced to them to build a compatible computer setup for multiple different uses and price points. https://pcpartpicker.com/list/ PC Life Extension Video Hardware Questions #1 Hardware Questions #2 Hardware Questions #3	Computer case and parts
Student Learning Expectation & 21st Century Skills Information Literacy Critical Thinking Spoken Communication Written Performance • Information Literacy • Critical Thinking • Spoken Communication •	Interdisciplinary Connections Science

Newtown Public Schools

Computer Integration Gr. 7

2 Curriculum Developers



Unit Planner: Digital Citizenship & Online Safety
Computer Integration Gr. 7

Newtown Middle School / 2021-2022 / Grade 7 / F&AA: Technology / Computer Integration Gr. 7 / Week 1 - Week 4

Last Updated: Friday, February 18, 2022 by Austin Cirella

Digital Citizenship & Online Safety

Cirella, Austin; Swift, Kathleen

- Unit Planner
- Lesson Planner

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens

Please attach your completed Unit Web Template here

Lens: Safety, Responsibility

Concepts: Discussion, Perspective, Self-awareness, Communication, Balance, Consequences, Data, Rigor, Awareness, Screen time and offline time

Computer Microconcepts: Digital Literacy, Online Safety, Content-specific Vocabulary, Online Etiquette, Digital Footprint, Security Threats, Online Actions, Social Media

G

Generalizations / Enduring Understandings

1. Consider how online actions impact the real world

2. An imbalance between screen time and offline time creates consequences.

3. Data protection requires rigor and awareness on the part of the user.

4. Online actions reverberate for years due to their near permanent status.

5. Tracking one's digital footprint reduces online security threats.

Guiding Questions

Please identify the type of question: (F) Factual, (C) Conceptual, (P) Provocative [Debatable]

1a. What *is* social media? (F)
1b. What actions online can cause problems in the real world? (F)
1c. What is intellectual property? (F)
1d. What are the real world effects that result from online actions? (C)
1e. Should users face consequences in the real world for online actions? (P)
1f. How long should online content be able to impact the user? (P)

2a. What are detrimental effects on one's mind and/or body from too much screen time? (F?)
2b. How can people avoid having too much screen time in a world where screens are so pervasive? (C)
2c. Is it worth balancing screen time vs. offline time, if screen time brings enjoyment? (P)

3a.What are the most important ways to prevent a security breach? (F)
3b. Do pre-emptive safety procedures meaningfully reduce risk online? (C)
3c. Are safety procedures worth practicing, if they take extra effort or time? (P)

4a.How does one protect privacy online to prevent their media from being seen? (F)
4b. Can a user fully erase personal content from the internet? (C)
4c. Is saving other people's media ethical? (P)

5a. What is a digital footprint? (F)
5b. What are the best ways to track one's digital

	footprint? (F) **5c.** Can a person fully repair a damaged digital footprint? (C) **5d.** Is it ethical to investigate others' digital footprints without their permission? (P)

Standard(s)

Connecticut Core Standards / Content Standards

ISTE: Educational Technology (2016)

ISTE: All Grades

1. Empowered Learner

Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. Students:

a. articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.

c. use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.

2. Digital Citizen

Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical. Students:

a. cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.

b. engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.

c. demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.

d. manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online.

2016 ISTE Standards

Critical Content & Skills

*What students must **KNOW and be able to DO***

Students will know the permanence of their actions online.
Students will know the real world implications of their online actions.
Students will be able to critically analyze and discuss digital citizenship problems and ethical dilemmas.
Students will be able to demonstrate understanding and comprehension of online safety procedures and protocol as well as mitigation strategies.
Students will be able to successfully identify potential threats online before they succumb to them.
Students will be able to understand and respect the rights and obligations of using and sharing intellectual property.

Core Learning Activities

Formative:

Connections & Community assignment questions and discussion.
Safety & Privacy assignment questions and discussion.
Screen Time vs. Offline Time assignment, research, and discussion.
Technology & Data assignment questions and discussion.
Online Rights & Literacy assignment questions and discussion.
Evaluating Content assignment, research, and discussion.

Summative:

The Importance of Digital Safety Writing Assignment.
Connections & Community Lesson 1 Questions.pdf
Safety & Privacy Lesson 2 Questions.pdf
Screen Time vs. Offline Time Lesson 3 Questions.pdf
Technology & Data Lesson 4 Questions.pdf

Online Rights & Literacy Lesson 5 Questions.pdf
Evaluating Content Lesson 6 Questions.pdf
The Importance of Digital Safety Essay Assignment Sheet

Assessments

The Importance of Digital Safety Writing Assignment
Summative: Other written assessments
Summative Digital Safety Assignment
Classroom Discussion
Formative: Other oral assessments
The Importance of Digital Safety Essay Assignment Sheet

Resources

Professional & Student
Guided/Self-Paced Ever-Fi Software
EverFi Course Description
EverFi Login/Registration

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

- Information Literacy
- Critical Thinking
- Spoken Communication
- Written Performance

Information Literacy, Critical Thinking, Spoken Communication, and Written Performance will all be utilized in this unit.

Interdisciplinary Connections

English
Health

Unit Planner: Basic Photo Editing and Video Production
Computer Integration Gr. 7

Newtown Middle School / 2021-2022 / Grade 7 / F&AA: Technology / Computer Integration Gr. 7 / Week 5 - Week 8

Last Updated: Friday, February 18, 2022 by Austin Cirella

Basic Photo Editing and Video Production

Cirella, Austin; Swift, Kathleen

- Unit Planner
- Lesson Planner

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens

Please attach your completed Unit Web Template here

Lens: Creativity, Practicality

Concepts: Process, Understanding, Creation, Design, Skill,

Computer Microconcepts: Video Production, Photo Editing, Ethics, Software, Message, Tools

G

Generalizations / Enduring Understandings

1. The skills of creating and editing videos and images enable one to become proficient in cultivating a message.

2. Effective photo editing and and video production necessitate specialized tools and software.

3. Learning multiple specific tools for photo editing and video production permits one to be effective at creating a cohesive product/message.

4. The specialized skills of video production and photo editing unlock a plethora of professional opportunities.

5. The dangers and ethics of photo and video editing evolve constantly.

Guiding Questions

Please identify the type of question: (F) Factual, (C) Conceptual, (P) Provocative [Debatable]

1a. What is video production and photo editing and how do they work? (F)
1b. Why is video/photo editing an effective way to cultivate a powerful/memorable message? (C)
1c. Can editing a photo or video change the tone in a meaningful way? (P)

2a. What are specific tools for modern photo or video editing? (F)
2b. What photo and video editing methods are the most drastic/effective? (P)
2c. Which tools are the most effective at changing a photo or video? (F)

3a. What are programs that use modern tools for photo and video editing? (F)
3b. Why are there multiple photo and video editing programs that function similarly ? (C)
3c. Is learning a single editing program sufficient? (P)

4a. What are professional opportunities that require proficiency in photo or video editing and production? (F)
4b. What are differences between amateur and professional photo and video editing and production? (F)
4b. What are ways to professionalize photo and video editing and production? (C)
4c. Are there most effective ways to make photo or video work stand out through editing techniques or production techniques? (P)

5a. What are major ethics pitfalls you can be penalized for to consider when editing or creating a photo or video? (F)
5b. How can one anticipate ethics pitfalls before they occur? (C)

	5c. Are ethical pitfalls worth considering, if they are not against the law? (P)

Standard(s)

Connecticut Core Standards / Content Standards

ISTE: Educational Technology (2016)

ISTE: All Grades

1. Empowered Learner

Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. Students:

a. articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.

c. use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.

2. Digital Citizen

Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical. Students:

c. demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.

3. Knowledge Constructor

Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others. Students:

b. evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources.

4. Innovative Designer

Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions. Students:

a. know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.

b. select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.

c. develop, test and refine prototypes as part of a cyclical design process.

6. Creative Communicator

Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals. Students:

a. choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.

b. create original works or responsibly repurpose or remix digital resources into new creations.

c. communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations.

d. publish or present content that customizes the message and medium for their intended audiences.

2016 ISTE Standards

Critical Content & Skills

*What students must **KNOW and be able to DO***

Students will cultivate a specific message with video production and photo editing.
Students will use specialized tools necessary to be proficient in video production and photo editing in the modern age.
Students will effectively employ multiple programs to improve their video production and photo editing capabilities.
Students will use video production and photo editing skills in a professional environment.

Students will know the challenges and how to avoid ethics complications in video production and photo editing.
Students will create an original video and image.
Students will edit an original video and image.
Students will practice video editing with multiple software.
Students will experience examples of multiple types of video production hardware.
Students will demonstrate proficiency in video production and editing across multiple platforms.

Core Learning Activities

Formative:
Video Production and Photo Editing: The Basics. - Multiple Classroom Demonstration and Activity
How to create a specific message or tone with editing techniques - Classroom Demonstration and Activity
Different Photo and Video Tools for Different Tasks- Classroom Demonstration and Activity
How to use different programs in unison- Classroom Demonstration and Activity
Ethical dilemmas in video production and photo editing and how to avoid them - Classroom Discussion and Writing Exercise
Careers and opportunities in video production and photo editing - Classroom Discussion and Research Activity
Summative:
Create original video or complex edited photo- Technology Project

Assessments

Classroom Demonstration Follow Up Hands-on Activities
Formative: Other Visual Assessments
Ethical Dilemmas Writing Exercise
Formative: Written Report
After a classroom discussion about the potential ethical pitfalls surrounding photo and video editing and production students are asked to identify ways to avoid these problems and additionally find more ethical dilemmas they may not have considered previously.
Careers and Opportunities Research Activity
Formative: Other written assessments
After a classroom discussion surrounding students expectations about the potential for photo and video editing to turn into a professional career, they are tasked with researching to find 3 additional careers that might interest them in the field of video or photo production and editing.
Create Your Own Video
Summative: Technology Project
Students are asked to create a single complex photo or video that has edits made to it to create multiple tones or themes. This is a summative assessment that culminates all the skills they have learned throughout the unit.

- Silhouette Art
- Overlay Lesson
- Word Picstitch
- Animated Pumpkin Lesson Pixlr
- Hex Code Coloring
- Colorizing and Combining
- Video Production and Photo Editing Summative Assessment Sheet

Resources

Professional & Student
Photoshop or Pixlr
Adobe Premier Pro or ClipChamp

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

Interdisciplinary Connections

Art

• Information Literacy • Critical Thinking • Spoken Communication • Written Performance •	

Unit Planner: Intro to Coding
Computer Integration Gr. 7

Newtown Middle School / 2021-2022 / Grade 7 / F&AA: Technology / Computer Integration Gr. 7 / Week 9 - Week 12

Last Updated: Friday, February 18, 2022 by Austin Cirella

Intro to Coding

Cirella, Austin; Swift, Kathleen

- Unit Planner
- Lesson Planner

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens

Please attach your completed Unit Web Template here

Lens: Logical & Analytical Problem Solving, Creativity

Concepts: Data, Rigor, Systems, Patterns, Process, Logic, Analysis, Paths, Results

Computer Microconcepts: Coding, Efficiency, Content-specific Vocabulary, Coding Syntax, Coders, Instructions, Outcomes

G

Generalizations / Enduring Understandings

1. Coders employ a sequence of instructions to create desired outcomes.

2. Coding requires problem solving and presents alternative paths to the same result.

3. Sharing basic structure and syntax like loops, variables, and array indexing enable basic coding to be universal.

4. Effective coding saves time and energy.

5. Loops allow for more efficient coding.

Guiding Questions

Please identify the type of question: (F) Factual, (C) Conceptual, (P) Provocative [Debatable]

1a. What is text based coding (F)
1b. What are the steps to basic coding? (F)
1c. How does coding work? (C)
1d. How is the sequence of coding similar to other systems? (C)
1e. Is coding more similar to math- based sequencing or science -based sequencing? (P)

2a. What are effective uses of coding in the modern world to solve problems? (F)
2b. What potential negative effects does coding lead to? (F)
2c. Why do people code? (C)
2d. Does using code to solve problems raise any ethical dilemmas? (P)

3a. What is coding syntax? (F)
3b. What are examples of syntax outside of coding? (F)
3c. Why is syntax important for coding? (C)
3d. Are individual coding languages worth learning? (P)

4a. What are examples of how people use code to save time? (F)
4b. What are basic strategies to make coding more efficient? (F)
4c. What are real world benefits of efficiency in coding? (C)
4d. Is efficiency in coding important if the same task can be done inefficiently? (P)

5a. What are "loops" in coding? (F)
5b. Why do people use loops in coding? (C)
5c. How do loops make coding more efficient? (C)
5d. Is looping necessary to make a code effective? (P)

Standard(s)

Connecticut Core Standards / Content Standards

ISTE: Educational Technology (2016)

ISTE: All Grades

1. Empowered Learner

Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. Students:

c. use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.

4. Innovative Designer

Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions. Students:

a. know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.

5. Computational Thinker

Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions. Students:

a. formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions.

c. break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.

d. understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.

2016 ISTE Standards

Critical Content & Skills

*What students must **KNOW and be able to DO***

Students will know how coding is used to achieve real world results.
Students will know how to start coding effectively.
Students will know the basics of coding loops.
Students will be able to effectively demonstrate coding syntax.
Students will be able to understand how coding affects everyday life.
Students will be able to use coding to solve basic abstract problems.
Students will be able to understand what coding is at a core level.
Students will be able to demonstrate effective coding by producing their own code.
Students will produce multiple of their own unique levels in the provided software.

Core Learning Activities

Formative:

What is coding? Activity and Worksheet
Why do people code? Classroom discussion
Misconceptions and how coding works in the real world. Video and discussion
How important is coding syntax? Online coding activity with JavaScript and discussion
What are loops? Video and discussion

Summative:

Challenge Assignment - Technology Project
What is coding?
How does coding work in the real world?
How important is coding syntax?
What are loops?
Create a Challenge Assessment.

Assessments

What is coding?
Formative: Other Visual Assessments
What is coding?
How does coding work in the real world?
Formative: Other oral assessments
This video accompanied with a brief oral discussion both prior and after the video is the core of this assessment. Ideally you will go over misconceptions of how coding works first including depictions of coding in popular media and "hacking". After the video you would host a classroom discussion highlighting the differences between perceptions and reality. This is a participation based activity that includes turn and talks as well as whole room discussion.
How does coding work in the real world?
How important is coding syntax?
Formative: Technology Project
What are loops?
Formative: Other oral assessments
This video accompanied with a brief oral discussion both prior and after the video is the core of this assessment. Ideally you will go over what students think looping is and a brief explanation. After the video you would host a classroom discussion where the reasons for looping in coding become clear. This is a participation based activity that includes turn and talks as well as whole room discussion.
Create a Challenge Assessment-
Summative: Technology Project
Create a Challenge Assessment.

Resources

Professional & Student
Code.org
Vidcode.com
Codemonkey.com
Code.org
vidcode.com
codemonkey.com

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

- Information Literacy
- Critical Thinking
- Spoken Communication
- Written Performance

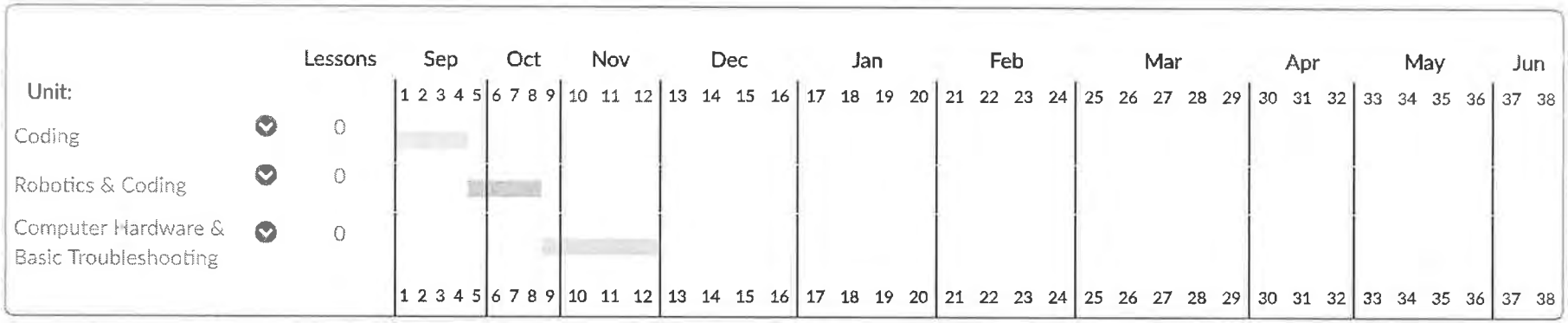
Interdisciplinary Connections

Science
Math

Newtown Public Schools

Computer Integration Gr. 8

2 Curriculum Developers



Unit Planner: Coding
Computer Integration Gr. 8

Newtown Middle School / 2021-2022 / Grade 8 / F&AA: Technology / Computer Integration Gr. 8 / Week 1 - Week 4

Last Updated: Friday, February 18, 2022 by Austin Cirella

Coding

Cirella, Austin; Swift, Kathleen

- Unit Planner
- Lesson Planner

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens

Please attach your completed Unit Web Template here

Lens: Logical & Analytical Problem Solving, Creativity
Concepts: Data, Rigor, Systems, Patterns, Process, Logic, Analysis
Computer Microconcepts: Coding, Amateur Coding, Efficiency, Content-specific Vocabulary, For-loops, Arrays, Indexing, Variables, Formulas & Strings in Coding

G

Generalizations / Enduring Understandings

1. Coders utilize variables to increase the efficiency of desired outcomes.

2. Coding efficiency depends on indexing and arrays.

3. Implementing formulas in coding increases efficiency

4. For-loops, an effective tool, cut down on unnecessary code in most coding languages.

5. Amateur level coding effectively solves abstract problems.

Guiding Questions

Please identify the type of question: (F) Factual, (C) Conceptual, (P) Provocative [Debatable]

1a. What are variables in coding? (F)
1b. How does one create a coding variable? (F)
1c. How do variables work? (C)
1d. How are variables in coding similar to variables in math or science? (C)
1e. Are coding variables worth using if they require prior planning? (P)

2a. What is indexing? (F)
2b. What are arrays in coding? (F)
2c. How do indexes and arrays work together to create efficient coding? (C)?
2c. When would it be applicable to use an index/array? (F)?
2d. Do the limitations on arrays make their implementation worthwhile? (P)

3a. What are formulas in coding? (F)
3b. What are some examples of formulas outside of coding? (F)
3c. How does the introduction of a formula make a code more efficient? (C)
3d. Are there any potential situations when using a formula wouldn't be worth the time and effort? (P)
3e. Are formulas more effective than indexing or arrays for making code more efficient? (P)

4a. What are for-loops in coding? (F)
4b. How are for-loops different from regular coding loops? (F)
4c. How do for-loops impact a code? (C)
4d. Are for-loops as effective as regular loops at

	increasing efficiency? (P) **5a.** What makes coding "amateur?" (F) **5b.** What kind of problems does amateur coding solve? (F) **5c.** How does amateur coding differ from professional-level coding? (F) **5d.** How can someone approach an abstract problem with only amateur level coding? (C) **5d.** Is creating media as an amateur coder an efficient way to learn coding? (P)

Standard(s)

Connecticut Core Standards / Content Standards

ISTE: Educational Technology (2016)

ISTE: All Grades

1. Empowered Learner

Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. Students:

c. use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.

5. Computational Thinker

Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions. Students:

a. formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions.

b. collect data or identify relevant data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making.

c. break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.

d. understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.

2016 ISTE Standards

Critical Content & Skills

*What students must **KNOW and be able to DO***

Students will know how amateur coding can be used to achieve real world results.
Students will know how to use basic coding protocols.
Students will know to make their own coding more efficient.
Students will effectively demonstrate formulas in coding.
Students will effectively demonstrate for-loops in coding.
Students will understand and utilize what an array and index is as pertaining to coding.
Students will solve basic abstract problems with coding.
Students will produce a final product that shows proficiency in coding.

Core Learning Activities

Formative:

What are variables? Demonstration and code production. Check
How does one implement formulas in code? Demonstration and code production.
Indexes and arrays in a nutshell. Demonstration and code production.
What are for-loops? Demonstration and code production.
Amateur coding solutions. Demonstration and code production.

Summative:

Create a Game Assignment

Assessments

Create a Game Assignment
Summative: Technology Project
Create a Game In CodeMonkey Assignment.
Online Code Productions
Formative: Technology Project
codemonkey.com
Create a Game In CodeMonkey Assignment.

Resources

Professional & Student
Codemonkey.com
codemonkey.com

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

- Information Literacy
- Critical Thinking
- Spoken Communication
- Written Performance

Interdisciplinary Connections

Math
Science

Unit Planner: Robotics & Coding
Computer Integration Gr. 8

Newtown Middle School / 2021-2022 / Grade 8 / F&AA: Technology / Computer Integration Gr. 8 / Week 5 - Week 8

Last Updated: Saturday, February 19, 2022 by Austin Cirella

Robotics & Coding

Cirella, Austin; Swift, Kathleen

- Unit Planner
- Lesson Planner

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens

Please attach your completed Unit Web Template here

Lens: Practicality, Analysis

Concepts: Analysis, Logic, Understanding, Design

Computer Microconcepts: Robotics, Coding, AI, Automation, 2d vs 3d space, inputs, program languages, robotic movement, functionality, challenges

G

Generalizations / Enduring Understandings

1. Robotics enable efficiency in the real world with automation & AI.

2. Functionality in robotics demands effective and efficient coding to be successful in desired task.

3. 2d vs 3d space presents unique challenges for coding robotic movement.

4. Robots interpret precise human inputs to complete tasks.

5. Successfully coding robots allows choosing among multiple program languages.

Guiding Questions

Please identify the type of question: (F) Factual, (C) Conceptual, (P) Provocative [Debatable]

1a. What are tasks that robots make faster? (F)
1b. Why do people create robots to complete tasks? (C)
1c. How do robots make tasks more efficient? (C)
1d. Is relying on robots to complete tasks a dangerous exercise practice? (P)

2a. What are some issues that arise in robotics if the robotic code is not efficient? (F)
2b. Why is efficient coding important in robotics? (C)
2c. Are the problems created by inefficiency worth tackling in a working system? (P)

3a. What are the differences to consider when coding something virtually in 2d space compared to 3d space? (F)
3b. How might the differences in 2d coding vs 3d coding present themselves in the real world? (C)
3c. Are the differences in 2d space vs 3d space worth taking into account? (P)

4a. Are robots capable of doing things completing tasks on their own? (F)
4b. Why are precise inputs imperative to successful outcomes with robotics? (C)
4c. Is it valuable to create a robot that requires less than precise inputs? (P)

5a. What coding languages are used for the most popular robotics today? (F)
5b. Why is each of these languages used specifically? (F)
5c. What coding languages seem the most accessible and why? (C)
5d. Which coding language is most essential to learn for

	robotics? (P)

Standard(s)

Connecticut Core Standards / Content Standards

ISTE: Educational Technology (2016)

ISTE: All Grades

1. Empowered Learner

Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. Students:

a. articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.

c. use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.

d. understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

3. Knowledge Constructor

Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others. Students:

a. plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.

b. evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources.

c. curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions.

d. build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.

4. Innovative Designer

Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions. Students:

a. know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.

b. select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.

c. develop, test and refine prototypes as part of a cyclical design process.

d. exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.

6. Creative Communicator

Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals. Students:

b. create original works or responsibly repurpose or remix digital resources into new creations.

c. communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations.

d. publish or present content that customizes the message and medium for their intended audiences.

2016 ISTE Standards

Critical Content & Skills

*What students must **KNOW and be able to DO***

Students will know how automation and AI are used to increase efficiency.
Students will know how coding is essential to robotics.
Students will know multiple approaches to coding in robotics and different programming languages.
Students will know robots are only capable of taking input.
Students will code a spherical robot in 3d space.
Students will create a multimedia presentation about a piece of robotics.
Students will understand the challenges and limitations of robotics in the real world.

Core Learning Activities

Formative:
Automation and AI in Robotics - Classroom discussion and Video
Efficiency in Robots - Video and Demonstration
Robots interpret precise human inputs to complete tasks - Classroom demonstration and activity
What are the differences between coding in virtual space and in the real world? - Classroom activity & demonstration
Learning the basics of robotics and coding- Classroom discussion and activity
Summative:
Choose a Robot Slideshow and Research - Technology Project and Research Project
Robotics Obstacle Course - Technology Project and Classroom Activity

Assessments

Classroom Discussions
Formative: Other oral assessments
Classroom Activities
Formative: Other Visual Assessments
Choose a Robot Slideshow and Research
Summative: Technology Project
For this project students are going to research and create a slideshow on the things you learned.

The goal of the project will be presented in the the following fashion :

1. Pick a piece of technology that you are interested in and you think has the ability to or already does change the world for the better.
You can choose any piece of technology.

2. Once you have chosen a piece of technology, do safe research on the internet about it.

3. Use your research to answer the following questions with multiple complete sentences in the attached Google Doc:

1. When & where was this technology invented?
2. Has this technology changed over time? How?
3. Who invented this technology?
4. What are some examples of this technology in action? Make sure to give multiple examples.
5. Is coding involved in making this technology work?
6. How/Where does this technology get made? How much does it cost?
7. Why did they invent this technology?
8. How does this technology make the world a better place?
9. Does this technology affect people in their everyday lives?
10. Is there any similar technology that tries to do the same thing?
11. How do you think you could change or add to this technology to make it better?

Resources

Professional & Student
Sphero Robots & Application

12. What would the world be like without this technology? Be specific.
{-(! Make sure you cite your sources !)-}

4. Create a slideshow in Google Slides that goes over the answers to all of these questions and presents your information.
This slideshow should be about 15-20 slides and include multiple pictures of your technology or any related images. Make sure you have a works cited slide!

5. When you are done filling in the answers in Google Docs and have completed your slideshow make sure they are both handed in!

An example of a piece of technology that makes the world a better place is smartphones. Smartphones help keep families connected and let people communicate in emergencies. You can choose whatever topic you want, this is just an example.
Robotics Obstacle Course
Technology Project
https://www.youtube.com/watch?v=Jky9l1ihAkg
Tech Project Assignment Sheet
https://www.youtube.com/watch?v=FjSyv2N5QEQ

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

- Information Literacy
- Critical Thinking
- Spoken Communication
- Written Performance

Interdisciplinary Connections

Science
Math

Unit Planner: Computer Hardware & Basic Troubleshooting
Computer Integration Gr. 8

Newtown Middle School / 2021-2022 / Grade 8 / F&AA: Technology / Computer Integration Gr. 8 / Week 9 - Week 12

Last Updated: Friday, February 18, 2022 by Austin Cirella

Computer Hardware & Basic Troubleshooting

Cirella, Austin; Swift, Kathleen

- Unit Planner
- Lesson Planner

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens

Please attach your completed Unit Web Template here

Lens: Logical & Analytical Problem Solving, Practical

Concepts: Process, Logic, Sequence, Analysis, Understanding

Computer Microconcepts: Troubleshooting, Software, Hardware, Computer Repair, Components, End User Experience, Skill, Computer Skills, Building, Information

G

Generalizations / Enduring Understandings

1. The accessible skill of software troubleshooting enables one to extend the life of a personal computer.

2. Repairing a computer exemplifies an accessible and essential skill in the modern age.

3. Understanding the components of a computer enables successful hardware troubleshooting.

4. The components inside a computer all work cohesively and in unison to deliver the end user experience.

5. Building a computer requires the right information, rendering it accessible to all.

Guiding Questions

Please identify the type of question: (F) Factual, (C) Conceptual, (P) Provocative [Debatable]

1a. What is software troubleshooting and how is it beneficial? (F)
1b. What are some generic approaches to troubleshooting software issues? (F)
1c. How can troubleshooting extend the life of a personal computer? (C)
1d. Are specific troubleshooting solutions worth learning? (P)

2a. What is computer repair? (F)
2b. What are some effective software repair solutions? (F)
2c. What are some effective hardware repair solutions? (F)
2d. Why is troubleshooting a computer important for extending its life? (C)
2e. Are there times where software or hardware repair may not be worth it? (P)

3a. What are the essential components of a computer? (F)
3b. Do all computers have the same components? (F)
3c. Why are some components specialized? (C)
3d. Which component is the most essential for a computer to operate? (P)

4a. Which components interact with each other on the inside of a computer? (F)
4b. Why do almost the all of the parts of a computer have to be working for a computer to function effectively? (C)
4c. Can one component work cohesively? (P)

	5a. What is needed to build a computer? (F) 5b. Which kind of tasks and environments call for different types of computers and why? (C) 5c. Is learning to build a computer a valuable skill when one can buy a pre-made computer? (P)

Standard(s)

Connecticut Core Standards / Content Standards

ISTE: ISTE Students (2019)

ISTE: All Grades

1.1 Empowered Learner

Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. Students:

1.1.a. articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.

1.1.d. understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

1.3 Knowledge Constructor

Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others. Students:

1.3.c. curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions.

1.3.d. build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.

2016 ISTE Standards

Critical Content & Skills

*What students must **KNOW and be able to DO***

Students will know the basics of software and hardware troubleshooting.
Students will know the importance of troubleshooting for extending the life of a computer.
Students will have a strong grasp on the components inside a computer and how they operate in tandem to deliver the end user experience most everyone is familiar with.
Students will understand the importance of being able to build your own computer and how to get started doing it themselves.
Students will troubleshoot basic computer issues.
Students will access the materials needed to build their own computer with ease.
Students will explain how computer components work together.

Core Learning Activities

Formative:

How to troubleshoot basic software issues - Classroom Discussion and Guided Walkthrough Activity
How to troubleshoot basic hardware issues - Classroom Discussion and Guided Walkthrough Activity
What are the components inside a computer and how do they work? - Research and Discussion
How to repair/replace a computer component - Demonstrations/Hands-on activity
How to extend the life of your PC - Classroom Discussion and Video Video

Summative:

Build a computer with PC part picker - Online Activity and Classroom Discussion

Assessments

Research Questions
Formative: Other written assessments

Resources

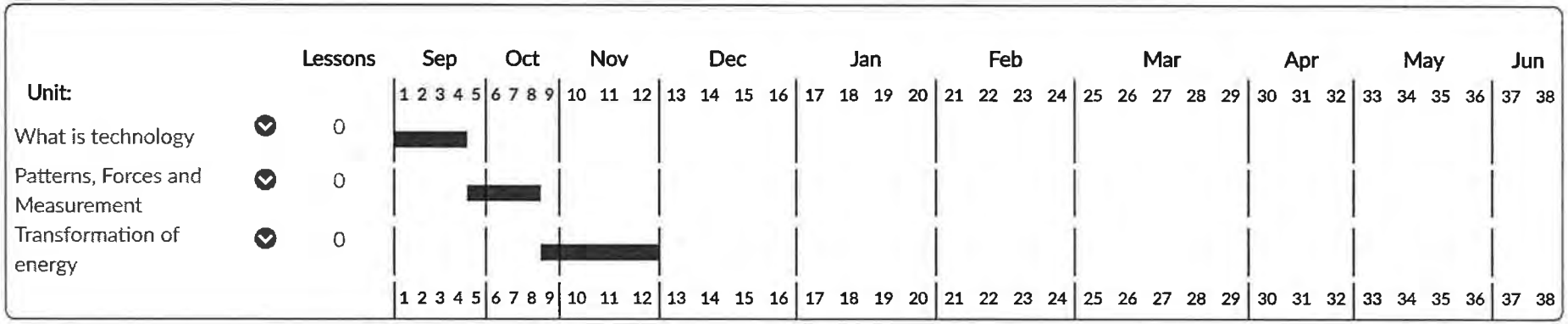
Professional & Student
https://pcpartpicker.com/list/

Written Report Students will research questions presented to them to find correct information and find reliable sources. **Classroom Discussions and Activities** **Formative: Other oral assessments** **Build a Computer with PC Part Picker** **Summative: Technology Project** Students are tasked with using the online tool introduced to them to build a compatible computer setup for multiple different uses and price points. https://pcpartpicker.com/list/ PC Life Extension Video Hardware Questions #1 Hardware Questions #2 Hardware Questions #3	Computer case and parts
Student Learning Expectation & 21st Century Skills Information Literacy Critical Thinking Spoken Communication Written Performance • Information Literacy • Critical Thinking • Spoken Communication •	Interdisciplinary Connections Science

Newtown Public Schools

Technology Education Gr. 7

2 Curriculum Developers



Previous Year

Unit Planner: What is technology
Technology Education Gr. 7

Tuesday, February 22, 2022 8:27 AM

Newtown Middle School / 2021-2022 / Grade 7 / F&AA: Technology / Technology Education Gr. 7 / Week 1 - Week 4

Last Updated: Friday, February 18, 2022 by Kevin Eppley

What is technology

Connors, Jenna; Eppley, Kevin

- Unit Planner
- Lesson Planner

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens

Please attach your completed Unit Web Template here

Concepts / Conceptual Lens

Please attach your completed Unit Web Template here

Concepts / Conceptual Lens **SAFETY**

1. Tools
2. Safety
3. Decision making
4. Consequences
5. Preparation
6. Waste

G

Generalizations / Enduring Understandings

1. Appropriate use of tools promotes safety
2. Decision making enables students to understand positive and negative consequences of safety.
3. Preparation improves safety and reduces waste

Guiding Questions

Please identify the type of question: (F) Factual, (C) Conceptual, (P) Provocative [Debatable]

1.
a. How far should fingers stay from a moving blade? (F)
b. What is the appropriate attire and equipment needed to use power tools in the classroom? (F)
c. Is there a time when it's appropriate to ignore safety protocols?(P)

2.
a. Why is it important to perform a maintenance check on a saw prior to using it?? (C)
b. Are machines dangerous if you know how to use them?(c)

3.
a. What is the biggest pollutant from humans? (F)
b. Are all building materials "recyclable?" (P)
c. Why should you measure before cutting? (c)
d. Is it ever possible to leave no waste after a building project?(P)

Standard(s)

Connecticut Core Standards / Content Standards

scroll saw standards.docx

Critical Content & Skills

*What students must **KNOW and be able to DO***

- Students will complete a safety exam
- Students will understand safety procedures for using tools and machinery
- Students will use practical skills to solve real world problems by utilizing the engineering design process.
- Students will identify how engineers are able to use power tools safety
- Students will understand waste and how to avoid it in the classroom

Core Learning Activities

- Safety demonstration and lab
- Safety Demo and assessment
- How to use the design process
- Going Green research, slideshow, and presentation
- What is Technology challenge

Assessments

What is technology
Formative: Group Project
what is technology questions.docx
peer rubric
Technology Project
peer rubric (1).docx
Saw assesment
Summative: Other written assessments
Lab Assignment
Scroll saw saftey assesment.pdf

Resources

Professional & Student
scroll saw

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

Interdisciplinary Connections

Unit Planner: Patterns, Forces and Measurement
Technology Education Gr. 7

Tuesday, February 22, 2022 8:28 AM

Newtown Middle School / 2021-2022 / Grade 7 / F&AA: Technology / Technology Education Gr. 7 / Week 5 - Week 8

Last Updated: Friday, February 18, 2022 by Kevin Eppley

Patterns, Forces and Measurement

Connors, Jenna; Eppley, Kevin

- Unit Planner
- Lesson Planner

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens

Please attach your completed Unit Web Template here

Structure

1. Measurement
2. Design
3. Forces
4. Patterns
5. Data
6. Structures
7. 2D/3D Shapes
8. Climate
9. Geography

G

Generalizations / Enduring Understandings

1. Structures are constructed from specific patterns and shapes.
.2 Forces affect structural designs.
3. Culture, Climate and geography greatly influence the design of structures.

Guiding Questions

Please identify the type of question: (F) Factual, (C) Conceptual, (P) Provocative [Debatable]

1.
a. What is a pattern? (F)
b. What is a 2d/3d shape? (F)
c. Is honeycomb a structurally strong pattern(F)
d. Where can we find patterns in nature? (C)
2.
a. What makes a structure safe ?(F)
b. What are the forces acting on a building?(F)
c. Can triangles be used to support structures(F)
d. How can we combat forces on a structure(c)
3.
a. Can a house be built in every continent on the planet (f)
b. How does culture influence design? (C)
c. Are there certain materials that must be used to keep buildings safe and comfortable? (P)
d. How does climate influence design? (C)
e. How does geography influence design? (C)
f. What material are houses made out of? (F)

Standard(s)

Connecticut Core Standards / Content Standards

measurment standards.docx

Critical Content & Skills

*What students must **KNOW and be able to DO***

- Students will understand that patterns can create data to be analyzed.
- Students will understand that design involves a set of steps, which can be performed in different sequences and repeated as needed.
- Students will be able to model, test, evaluate, and modify their structural solutions.

Core Learning Activities

- Students will utilize zometools to correctly build and then identify 2d/ 3d shapes while labeling the faces, edges and vertices. Students will be able to correctly calculate the perimeter and volume of the shapes they create.
- Students will learn about local architecture and how to design buildings, bridges, and structures. (RIS)
- Students will work in groups as they create zometools structures based on a set of criteria and constraints.
- Students will work in groups to design and create the most efficient structure based on the formula E=Force/Mass. Students will explore multiple materials fasteners and adhesives as they collect data to design the most efficient building.

Assessments

Safe Structure Project
Summative: Group Project
Oral Report
7th grade Architectural Project .docx
Shape assessments
Summative: Group Project
2d shape assesment.pdf
3d shapes assesment.pdf
How to measure assessment
Formative: Lab Assignment
How to measure assesment.pdf

Resources

Professional & Student
Zome tool kits
Building materials

2D_3D Figures Introduction.pptx

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

Interdisciplinary Connections

Unit Planner: Transformation of energy
Technology Education Gr. 7

Tuesday, February 22, 2022 10:42 AM

Newtown Middle School / 2021-2022 / Grade 7 / F&AA: Technology / Technology Education Gr. 7 / Week 9 - Week 12

Last Updated: Friday, February 18, 2022 by Kevin Eppley

Transformation of energy

Connors, Jenna; Eppley, Kevin

- Unit Planner
- Lesson Planner

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens

Please attach your completed Unit Web Template here

Concepts: Energy

1. Kinetic energy
2. Compression
3. Strain
4. Structure
5. Stress
6. Projectiles
7. Designs
8. Forces

G

Generalizations / Enduring Understandings

1.Compression weakens structures.
2. Energy moves projectiles.
3.Forces can strain/stress designs.

Guiding Questions

Please identify the type of question: (F) Factual, (C) Conceptual, (P) Provocative [Debatable]

1.
a. What is compression? (F)
b. How do natural forces cause compression on a structure? (C)
c.Is any structure immune to compression forces? (P)
2.
a. How do you store potential energy in a rubber band? (C)
b. How do you turn potential energy into kinetic energy? (C)
c. Is there an object that has both kinetic and potential energy? (P)
3.
A. How can compression, torsion, tension, and shear weaken the design of a structure?(c)
B. How do earthquakes destroy buildings? ©
C. Is there any building that is earthquake proof? (P)

Standard(s)

Connecticut Core Standards / Content Standards

energy standards.docx

Critical Content & Skills

*What students must **KNOW and be able to DO***

- Students will understand and apply the 4 forces of compression, tension, torsion, and shear.
- Students will be able to model, test, evaluate, and modify their potential and kinetic energy testers.
- Students will understand that design involves a set of steps, which can be performed in different sequences and

repeated as needed.

Core Learning Activities

- Students will build on previous knowledge of potential and kinetic energy as they develop towers, catapults and vehicles based on a specific set of criteria and constraints with the main focus on energy transfer.
- Tension spring test
- Compression book challenge

Assessments

potential and kinetic energy
Formative: Other written assessments
Potential and kinetic energy reflection-assesment.pdf
potential and kinteic energy cost analysis.pdf
Energy Assesment
Formative: Technology Project
efficency tower rubric.pdf
efficency tower assesment-reflection.pdf

Resources

Professional & Student
Efficiency Tower building kits
Potential and kinetic kits
The Leaning Tower Of Pisa Italy's Legendary Architectural Mistake Massive Engineering Mistakes.mp4

Student Learning Expectation & 21st Century Skills

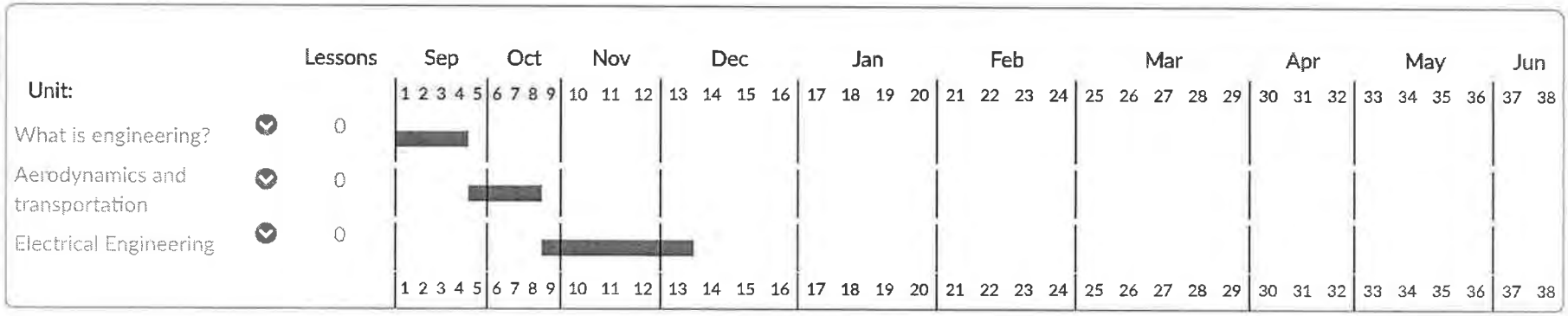
Information Literacy
Critical Thinking
Spoken Communication
Written Performance

Interdisciplinary Connections

Newtown Public Schools

Technology Education Gr. 8

2 Curriculum Developers



Previous Year

Unit Planner: What is engineering?
Technology Education Gr. 8

Tuesday, February 22, 2022 8:52AM

Newtown Middle School / 2021-2022 / Grade 8 / F&AA: Technology / Technology Education Gr. 8 / Week 1 - Week 4

Last Updated: Friday, February 18, 2022 by Kevin Eppley

What is engineering?

Connors, Jenna; Eppley, Kevin

- Unit Planner
- Lesson Planner

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens

Please attach your completed Unit Web Template here

1. Tools
2. Precision
3. Accuracy
4. Efficiency
5. Decisions

Lenses: Safety, (drill press)

G

Generalizations / Enduring Understandings

1. Decision making enables students to understand positive and negative consequences of safety.
2. Preparation improves safety and reduces waste
3. What does it mean to be efficient in school? In construction?

Guiding Questions

Please identify the type of question: (F) Factual, (C) Conceptual, (P) Provocative [Debatable]

1.
a. Why should you work slowly when using power tools (c)
b. How far should your fingers stay from the drill press when engaged (F)
c. What is the appropriate attire and equipment needed to use power tools in the classroom?(f)
d. Is there a time when it's appropriate to ignore the safety protocols? (P)

2.
a. Why should you measure before drilling? (c)
b. If you do not perform a maintenance check on the drill press what might happen? (C)
c. Are machines dangerous if you know how to use them (p)

3.
a. Is it ever possible to use all building materials, leaving no waste? (P)
b. How can you drill two holes in separate pieces of wood and have them align perfectly (P)
c. How do different cultures use tools to safely construct buildings? (P)

Standard(s)

Connecticut Core Standards / Content Standards

drill standards.docx

Critical Content & Skills

*What students must **KNOW and be able to DO***

1. Students will safely use the drill press.
2. Students will minimize waste
3. Students will be able to clean their area when they are finished working.
4. Students will pass a drill press exam

Core Learning Activities

- Safety demonstration and lab
- Safety exam
- Clean up demonstration
- What is Engineering (Careers)
- Hobby Organizer
- Class discussion

Assessments

Engineers that changed the world
Formative: Group Project
Engineers that changed the world (1).docx
Hobby Organizer
Formative: Group Project
HobbyOrganizerDesignBrief (1).docx
Scale Model Project
Summative: Personal Project
2021-2022 Scale Model Assignment .docx
Engineers that changed the world
Summative: Group Project
Group Project
Engineers that changed the world .docx
Drill press safety assessment
Formative: Written Test
drill press saftey.png

Resources

Professional & Student
drill press
practice kits
Engineers that changed the world

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

Interdisciplinary Connections

Unit Planner: Aerodynamics and transportation
Technology Education Gr. 8

Tuesday, February 22, 2022, 10:47 AM

Newtown Middle School / 2021-2022 / Grade 8 / F&AA: Technology / Technology Education Gr. 8 / Week 5 - Week 8

Last Updated: Tuesday, February 15, 2022 by Kevin Eppley

Aerodynamics and transportation

Connors, Jenna; Eppley, Kevin

- Unit Planner
- Lesson Planner

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens

Please attach your completed Unit Web Template here

Concepts / Conceptual Lens
Motion

Newton's laws
Gravity
Inertia
Gyroscopic rotation
Fins
Patterns

G

Generalizations / Enduring Understandings

1. 1. The interaction of gravity and inertia allows for the predictable patterns of motion in the universe.
   2. Every action has an equal and opposite reaction.
   3. Slanted fins allow rockets to achieve gyroscopic rotation.

Guiding Questions

Please identify the type of question: (F) Factual, (C) Conceptual, (P) Provocative [Debatable]

1.
A. How does gravity affect rockets? (F)
B. Can rockets fly with no gravity? (C)
C. Is a balloon a rocket? (P)
D. Who uses rockets? (P)
2.
A. What are Newton's Laws of Motion(f)
B. What happens when a ball is thrown at the floor? (F)
C. Why does this happen? (C)
3.
A. What is a gyroscope (F)
B. Why do you throw a football with a spiral (c)
C. Why does the "bike tire" self- balance when it is spinning (C)

Standard(s)

Connecticut Core Standards / Content Standards
transportation standards.docx

Critical Content & Skills

*What students must **KNOW and be able to DO***

1. Students will be able to design, build, test and re-engineer a rocket based on a set of criteria and constraints.

2. Students will identify Newton's Laws of Motion and how they apply to the rocket by drawing a model or using 3D modeling software.
3. Students will launch rockets outside and record data.

Core Learning Activities

- Gyroscope tire demonstration
- Inertia stick demonstration
- Rocket nose cone and fin build demonstration
- 3d modeling of rocket on computer
- 2d sketch on paper
- Rocket launch
- Rocket redesign
- Reflection

Assessments

peer rubric
Technology Project
peer rubric (1).docx
rocket assessment
Summative: Group Project
Rocket assesment.pdf
rocket saftey.pdf

Resources

Professional & Student
Gyroscope tire demonstration
Inertia stick demonstration
3d software

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

Interdisciplinary Connections

Math
Science

Unit Planner: Electrical Engineering Technology Education Gr. 8

Tuesday, February 22, 2022, 10:09 AM

Newtown Middle School / 2021-2022 / Grade 8 / F&AA: Technology / Technology Education Gr. 8 / Week 9 - Week 13

Last Updated: Tuesday, February 15, 2022 by Kevin Eppley

Electrical Engineering

Connors, Jenna; Eppley, Kevin

- Unit Planner
- Lesson Planner

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens

Please attach your completed Unit Web Template here

Concepts/lens: Safety

Electricity
Electrons
Insulators
Circuits
Wires
Short circuits
Magnets
Conductors

G

Generalizations / Enduring Understandings

1. Insulators disrupts the flow of electrons
2. Spinning magnets around conductors (wires) creates electricity
3. Short circuits left unprotect can cause injury.

Guiding Questions

Please identify the type of question: (F) Factual, (C) Conceptual, (P) Provocative [Debatable]

1.
A. What is electricity? (F)
B. What is an electron (F)
C. What are insulators and conductors? (C)
2.
A. How do you generate electricity?(c)
B. What direction do electrons flow? (f)
C. When was the last time electricity did not work? (c)
3.
A. What is a short circuit ?(F)
B. Why is a short circuit dangerous? (P)
C. What can we do to protect ourselves from short circuits? (F)
D. How much should electricity cost? (P)

Standard(s)

***Connecticut** Core Standards / Content Standards*

electrical standrds.docx

Critical Content & Skills

*What students must **KNOW and be able to DO***

1. Students will define insulators and conductors based on electricity.
2. Students will identify insulators and conductors around the classroom.
3.Students will create circuits based on their skill level and experience.

4. Students will identify and construct parallel and series circuits by following a procedure.
5. Students will use technology to measure electricity accurately and precisely.
6. Students will share knowledge about innovations in technology as related to electricity.

Core Learning Activities

- Insulators and conductors testing activity
- Magneto generator
- Snap circuit lessons
- Students will design, build and test electrical circuits based on a set of criteria and constraints.
- Students will design, build, and test, and redesign an Electromagnet and collect data on their results.
- Students will design, build, test and redesign an Electromotor
- Students will design, build, and test a electrical "operation" game
- Students will follow a procedure to complete a series of circuits and record their data

Assessments

Circuit assessment
Summative: Technology Project
Snap circuit assesment 1.pdf
Electromagnet relfection-assesment.pdf
insulators and conductors assement 1.pdf
electrical assesments
Formative: Written Test
Electricty assement 1 Bill Nye.pdf
insulators and conductors assement 1.pdf

Resources

Professional & Student
Insulators and conductors testing activity
Magneto generator
Snap circuit lessons/kits

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

Interdisciplinary Connections

Math
Science

Personnel - Certified/Non-Certified

Equal Employment Opportunity (Affirmative Action)

The Board of Education (Board) will provide equal employment opportunities for all persons without regard to race, color, religion, age, marital status, national origin, alienage, ancestry, sex, sexual orientation, disability, pregnancy, genetic information, veteran status, or gender identity or expression. ~~The Board directs the administration to set as a goal the recruitment, selection, and employment of qualified people among racial and ethnic minority groups.~~

The Board requests an annual report from the Superintendent of Schools concerning the extent to which the abovementioned affirmative action program goals are being achieved.

No advertisement of employment opportunities may by intent or design restrict employment based upon discrimination as defined by law.

Legal Reference: Connecticut General Statutes

4a-60 Nondiscrimination and affirmative action provisions in contracts of the state and political subdivisions rather than municipalities

4a-60a Contracts of the state and political subdivisions, oer than municipalities, to contain provisions re nondiscrimination on the basis of sexual orientation

10153 Discrimination on account of marital status.

46a60 Discriminatory employment practices prohibited.

46a-81a Discrimination on the basis of sexual orientation

Title VII, Civil Rights Act 42 U.S.C. 2000e, et seq.

Personnel - Certified/Non-Certified

Plan for Minority Recruitment and Selection

The Board of Education (Board) believes that a skillful and diverse staff contributes significantly to high quality, engaging learning environments, predicated on a climate of inclusion, and directs the Superintendent to enact a planning process that supports efforts to encourage, recruit, employ, and retain a qualified diverse staff.

In compliance with all applicable State statutes pertaining to a written plan for racially and ethnically diverse staff recruitment and retention, the District will:

1. Inform all recruiting sources of the Board's non-discrimination policy.
2. Develop contacts with community organizations and educational institutions, to publicize job openings within the school district and to solicit referrals of racially and ethnically diverse candidates.
3. Maintain or expand as appropriate the help-wanted advertising to include print and/or broadcast media that is targeted to diverse applicants.
4. Utilize the Connecticut Regional Education Service Centers (RESCs) and Connecticut Regional Educational Application Placement (CT REAP) websites to publicize available positions within the District.
5. Participate in local job fairs, including those that are sponsored by community organizations that embrace and celebrate diversity.
6. Annually review and report to the Board the plan and the efforts to employ and retain a qualified, racially and ethnically diverse staff.

(cf. 4111/4211 - Recruitment and Selection)
(cf. 4111.1/4211.1 - Equal Opportunity Employment: Affirmative Action)

Legal Reference: Connecticut General Statutes
4a-60 Nondiscrimination and affirmative action provisions in contracts of the state and political subdivisions rather than municipalities
4a-60a Contracts of the state and political subdivisions, other than municipalities, to contain provisions re nondiscrimination on the basis of sexual orientation
10-153 Discrimination on account of marital status
46a-60 Discriminatory employment practices prohibited
46a-81a Discrimination on the basis of sexual orientation
Title VII, Civil Rights Act U.S.C. 2000e, et. seq.
PA 16-41 An Act Concerning the Recommendations of the Minority Teacher Recruitment Task Force
PA 18-34 An Act Concerning Minority Teacher Recruitment and Retention
PA 19-74 An Act Concerning Minority Teacher Recruitment and Retention

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Personnel - Certified/Non-Certified

Required COVID-19 Vaccinations

The Newtown Board of Education (the "Board") recognizes the importance of protecting the health and safety of students, staff and the community during the COVID-19 pandemic. Therefore, in accordance with the Governor's Executive Order, the Board authorizes the administration to develop a regulation concerning vaccination against COVID-19.

Legal Reference Connecticut General Statutes

10-145 Certificate necessary to employment. Forfeiture for noncompliance. Substitute teachers.

Governor's Executive Order No. 13G, September 10, 2021

Governor's Executive Order No. 14, September 28, 2021

Governor's Executive Order No. 14a, September 30, 2021

Policy adopted: January, 18, 2022

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Personnel - Certified/Non-Certified

Required COVID-19 Vaccinations

Definitions

For purposes of this policy, the following definitions shall apply:

"Fully vaccinated" means at least 14 days have elapsed since a person has received the final dose of a vaccine approved for use against COVID-19 by the U.S. Food and Drug Administration, or as otherwise defined by the Centers for Disease Control.

"Contract Worker" means any person who provides service to the Board requiring such person to make regular and frequent visits to district schools or to have regular or frequent contact with students or staff, but who is not employed by the Board, excluding any person who visits a Board school only to provide one-time or limited-duration repairs, services, or construction, or a volunteer.

"Covered Worker" refers to all employees, both full and part-time, contract workers, contractors, providers, assistants, substitutes, and other individuals working in a district school including individuals providing operational or custodial services or administrative support or any person whose job duties require them to make regular or frequent visits to any district schools or to have regular or frequent contact with students or staff.

Covered Worker does not include a contractor or employee of an outside vendor who visits a district school only to provide one-time or limited-duration repairs, services, or construction, or a volunteer.

"Contractor" refers to any person or business entity, including a vendor of support services or subcontractor, that provides the personnel who function as contract workers, or covered workers for the Board.

COVID-19 Vaccination Requirements

Vaccines shall be required as provided below.

Personnel - Certified/Non-Certified

Required COVID-19 Vaccinations

COVID-19 Vaccination Requirements (continued)

On and after September 27, 2021, the Board shall not employ, or maintain a contract for the provision of in-person services of, any covered worker or an entity that employs a covered worker, unless such covered worker:

1. is fully vaccinated against COVID-19,
2. has received the first dose and has either received a second dose or has an appointment for the second dose in a two-dose series vaccination, such as Pfizer or Moderna vaccines, or has received a single-dose vaccine, such as Johnson & Johnson's Janssen vaccine, or
3. is exempt from this requirement because a physician, physician's assistant, or advanced practice registered nurse determined that the administration of COVID-19 vaccine is likely to be detrimental to the covered worker's health, or the individual objects to vaccination on the basis of a sincerely held religious or spiritual belief, and the covered worker is able to perform their essential job functions with a reasonable accommodation that is not an undue burden on the school board or child care facility; provided that any school board or childcare facility employee claiming such exemption shall apply for an exemption due to medical conditions or sincerely held religious or spiritual beliefs.

   Each request for an exemption will be considered on an individualized, case by case basis. Employees who have applied for an exemption must provide appropriate supporting documentation upon request.
4. A covered worker who is hired before September 27, 2021 may, as an alternative to vaccination, and regardless of whether such worker has a medical or religious exemption, comply with the testing requirements contained within this policy.
5. The Board will not employ, or contract for the provision of services from, any covered worker or entity that employs a covered worker subject to the conditions above and is not exempt who has received the first dose of a two-dose series vaccination but fails to receive the second dose on the appropriate date as recommended by CDC or at the scheduled appointment without good cause.

Vaccination Verification and Testing for Covered Workers

The school board shall authenticate, or where applicable require that the contractor providing the services of a covered worker authenticate, the vaccination status of covered workers, maintain documentation of vaccination or exemption of such covered workers and report compliance with this order, in a form and manner directed by the Department of Public Health.

Beginning September 27, 2021, covered workers who have not demonstrated proof of full vaccination are required to submit to COVID-19 testing one time per week on an ongoing basis until fully vaccinated. Adequate proof of the test results on a weekly basis shall be presented to the Board in a form prescribed by the Board.

Personnel - Certified/Non-Certified

Required COVID-19 Vaccinations (continued)

Vaccination Verification and Testing for Volunteers

While we appreciate and recognize community members who want to volunteer in our schools, we also want to keep our staff and students safe. As of January 15, we will be asking volunteers to present proof of COVID-19 vaccination OR a negative COVID test result within the previous 72 hours of the time a volunteer will be working in the school. If a volunteer will be present in the school beyond one week (5 school days) from the date of the negative test, he or she would be asked to test again for each subsequent week.

Acceptable Proof of Vaccination

Covered workers may demonstrate proof of vaccination by providing one of the following:

1. A valid CDC COVID-19 Vaccination Record Card or photo of the Vaccination Record Card;
2. Documentation from a health care provider or electronic health care records;
3. A certificate from the Vaccine Administration Management System (VAMS), if the individual received vaccination through the VAMS system; or
4. A copy of the individual's official immunization record from the Connecticut Immunization Information System, CT WiZ.

Covered workers must also complete and sign a Declaration Attesting to the Authenticity of an Individual's COVID-19 Vaccination Record, provided by the Board. Proof of vaccination will not be deemed valid unless accompanied by the individual's signed declaration. The District reserves the right to authenticate a Vaccination Record Card in a manner consistent with any binding standards issues by the Commissioner of Public Health for such authentication.

Personal attestation will not be accepted as an acceptable form of proof of a COVID-19 vaccination. (*The Commissioner of Public Health may promulgate binding standards for authentication of a Vaccination Record Card.)*

All proof of vaccination must contain the name and date of birth of the individual, the manufacturer of the COVID-19 vaccine that was administered, and the date(s) on which the vaccine was administered. Employees must not include any additional medical or genetic information with proof of vaccination.

Violations and Enforcement

Any covered worker who fails to comply with this policy shall not be allowed on the premises of the school board until the individual provides adequate proof of compliance or without prior written authorization of the school board.

Personnel - Certified/Non-Certified

Required COVID-19 Vaccinations (continued)

The school board recognizes that it will be in violation of this policy, based on the Governor's Executive Order, when it permits a covered worker who has not complied with this policy to be in a pre-K through grade 12 school, to make regular or frequent visits to any such school facility, or to have regular or frequent contact with children in child care, students, or staff.

The school board also commits a violation if it fails to authenticate the vaccination status of a covered worker or contract worker, maintain documentation of vaccination, testing, or allowable exemptions as required.

The Board recognizes that if the State Department of Education (SDE) determines that the Board is not in compliance with the requirements of this policy, the SDE may require Board to forfeit a portion of the total sum which is paid to the school board from the State Treasury in an amount to be determined by the Commissioner of Education, which amount shall be not less than one thousand dollars nor more than ten thousand dollars.

Any forfeited amount shall be withheld from a grant payment, as determined by the Commissioner, during the fiscal year following the fiscal year in which noncompliance is determined. (The Commissioner of Education may waive such forfeiture if the Commissioner determines that the failure of a school board to comply with such a provision was due to circumstances beyond its control.)

Policy Duration

This policy shall remain in effect through February 15, 2022 unless earlier modified or terminated by the Board.

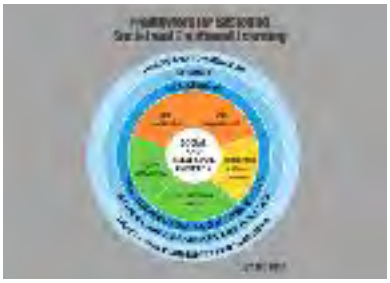
Regulation Approved: January, 18, 2022

DISTRICT HIGHLIGHTS

NEWTOWN BOARD OF EDUCATION BUDGET HIGHLIGHTS FOR THE 2022 -2023 SCHOOL YEAR

EDUCLIMBER
"Student data comes from a lot of sources and takes a lot of resources to utilize. This year the district introduced EduClimber to help."
- Dan Cruson, BOE Member

BRIDGES MATH
"The pandemic changed so much about what an elementary classroom looked and felt like that a new math program sounded like something my kids and I could tackle together and move us in a positive direction."
- Karen Dreger, HOM 2nd Grade Teacher



SOCIAL EMOTIONAL LEARNI G
"SEL work is needed now more than ever and I'm so grateful that Newtown Public Schools has made SEL such an important part of student growth and development." - Lisa Kilcourse, HOM school counselor

Dear Newtown Community,

Municipal budgets for a growing diverse community like Newtown is a rather complex process with many steps to achieve sound and practical fiscal integrity. Within the school district, we are most proud of the support of staff professionals, who under the direction of our Superintendent, gather data from schools, outside contractors, and special programs to compile our yearly Budget Presentation to the public and other town councils. During and after the pandemic, the process has been even more comprehensive including grants to facilitate Covid-19 mitigation strategies and subsequent issues associated with social/emotional
development and student achievement.

Some of the (more positive) things evolving from the pandemic are the levels of Parent Partnerships (PEAC), more community participation at Board of Education Meetings and BOE Sub-Committee Meetings, Comprehensive Curriculum Development Strategies, and "Grass Roots" Instructional Innovation to better address the needs of students. The ability to zoom in on some of these efforts enhances our ability to communicate to all stakeholders in the community in a way that makes the larger Budget Process a little more "user friendly" during times of greater complexity and accountability. Such things as EduCLIMBER, iReady, the Bridges Math Program, Newtown's Social Emotional Learning program, and a new more specialized "Behavior Interventionist" Para Professional Staff provide meaningful ways for measurable enhancement of student achievement and well-being.

As you read the March/April Newsletter, our hope is that it will provide a more colorful and Readable vignette of encouragement as you move along with us through the "Budget Season" all the way to the Newtown Community Referendum in April and the application thereafter for the school year 2022-2023.

Don Ramsey, BOE Communications Sub Committee Chairman

By Dr. Lorrie Rodrigue

Building the budget is pivotal to ensuring staff and leaders have the needed resources to support student learning. Navigating the development of a new operational plan is a collective effort requiring a thoughtful review of school leaders' requests, assessing enrollment trends and class size, discussing staffing needs, analyzing fixed salary and benefit costs, as well as considering other budget drivers such as technology, equipment and facilities. Each of these drivers contributes to the ongoing operation of our district and resources to support programs and services that will benefit students, staff, and families.

In the last several years, we have managed our budget by balancing fixed costs (e.g. salaries and benefits) with educational priorities, specifically the fiscal support of programs and services that will enhance learning and student achievement goals. Some of our educational needs became more prevalent following the pandemic, particularly in providing for anticipated learning loss, special education services, and academic support. The 2022-23 budget accounts for staffing to secure a co-teaching model at the middle school, interventionists in math at the elementary level, and elementary classroom teachers to maintain reasonable class sizes.

More importantly, curriculum projects and professional development are an important facet of our budget. Staff work in the summer under the direction of district leadership to create or revise curriculum so it reflects a strong concept-based design and offers challenging classroom learning experiences. These projects are included in the budget and allow for the strengthening of classroom instruction, activities, and assessment opportunities for students. Further, with the addition of a new math program K-6 and a pilot at the middle school level, ongoing staff training will be needed to ensure teachers have a thorough understanding of changes to instruction and assessment. With the integration of our Educlimber data platform, key staff and leaders will be able to develop instructional plans for students based on their needs in both literacy and math.

"Some of our educational needs became more prevalent following the pandemic, particularly in providing for anticipated learning loss, special education services, and academic support."

-DR. LORRIE RODRIGUE

Throughout the budget process, Newtown administrators work collaboratively with our Central Office leaders to forward requests that will both sustain and enhance programming. What is important to note is that these requests reflect a direct relationship to district goals, Board of Education priorities, and the impact on taxpayers. Through multiple conversations with school leaders, we prioritize needs and underscore the programs and services essential in maintaining the integrity of our current operation and continuous improvement.

Continuous improvement does not necessarily come in the form of direct costs to the budget. Our district has also relied on alternative funding to mitigate budget impact - primarily grant funding and Town support. In recent years, we have been able to support the addition of counselors at the elementary level through private funding. ESSER (Elementary Secondary School Emergency Relief) funding was distributed to districts to address future educational needs as a result

of the pandemic while lessening the financial burden. As a result of ESSER funding, Newtown has been able to include additional special education teachers, support personnel, and interventionists for the 2022-23 school year. In addition, the Town has provided support through funds from their capital non-recurring account to offset capital projects (such as technology and property) in order to reduce the burden on the Board's budget and ultimately on taxpayers.

Following the BOE approved budget of $83,051,179, the BOF made adjustments through the use of the Town's Capital Non-Recurring fund, supporting technology and facilities projects for a total of $616,540. These adjustments reduced the Board's budget to $82,434,639 or a 3.43% increase over the current year's budget. The BOF budget will move the budget on to the Legislative Council before it goes to the voters during the April referendum.

Our students and staff are our highest priority as we navigate the building of our budget each year. The 2022-23 budget reflects a strong foundation for teaching and learning. Despite the challenges of the pandemic, our staff and leadership team have worked to ensure budget requests address district goals, and that students receive instruction that builds critical and creative thinking skills, allows for voice and choice, and provides appropriate support, both academic and social-emotional.

EDUCLIMBER

By Dan Cruson

Over the course of 13 years, a lot of academic data is collected on each student in our district. This data is used for tracking a student's academic progression from Kindergarten through graduation to ensure they have reached all of the benchmarks necessary. However, it is also useful to help identify a student's needs throughout their time within the schools. Unfortunately monitoring students required reviewing data from multiple disparate sources of data housed in different locations. The solution to this, introduced during the 2021-2022 school year, is EduClimber.

EduClimber is an interactive system that integrates all data into a single platform and provides tools for tracking progress and watching for trends. In addition to tracking academic data, such as grades and assements, it provides the ability to track a student's interventions, behavior and even attendance across all schools within the district. This data is gathered from every source throughout the district to build a complete picture of a student's progress. Much of this gathering is done automatically, with integration to systems already in use like Power School and i-Ready. This means no extra work is required by school staff to record data in multiple places.

Once the data has been captured, EduClimber creates reports that can be used to find trends and determine where a student might be struggling. Then the reports can help with the process to determine if a student requires extra support or specialized programs to ensure they are successful in

school. The availability of these reports and the fact they are using a consistent set of data across all academic programs, allows for better collaboration between staff within the district.

This year was the first school year that EduClimber was available in the Newtown Public Schools and it was rolled out to counselors, interventionalists, specialists and administrators throughout the district. This selective start to the program was so that those who would use the system the most would get a chance to review it and help build the system, making sur that the information they would need on each student was tracked by the system and that it was providing the most complete data for their work. The idea is that starting next year access to the system will be opened to all classroom teachers in the district so that they have all the data on the students in their classrooms in one place.

During the roll out this year each of the groups involved have attended workshops and after these sessions feedback has been positive. This is a tool that has been needed for a long time in the district. It's inclusion in the toolbox of our district staff is seen as positive upgrade to the existing systems. It is expected that it will improve the ability to address the needs and post pandemic learning gaps of all students in Newtown Public Schools.

Thank you to Frank Purcaro, Director of Teaching and Learning, for taking the time to speak with me about EduClimber.

BRIDGES MATH PROGRAM

As an Educator myself, I could strongly identify with this "Closer Look" story told by our own Karen Dreger, 2nd Grade Teacher (Head O'Meadow) who, with the encouragement of Frank Purcaro (Director of Teaching and Learning), piloted a brand new approach to teaching mathematics at the elementary school level. During the pandemic no less, Karen took a leap of faith to initiate change in herself professionally as well as her students. The "Bridges Math Program," characterized by courageous innovation that educators sometimes delay with all the other modern demands of the profession, was piloted by Karen during the school year 2020 - 2021. Metaphorically, because math is associated with problem solving, I was particularly impacted by Karen's story simply because it appears that she looked for the "gift in the problem" along with her students. Happy reading of this "Closure Look" story told in the first person by Karen herself.

~Don Ramsey

By Karen Dreger, HOM Elementary Teacher

I will never forget being asked to pilot a new math program during a pandemic. At first, my honest reaction was a strong no. I felt like I was treading water and could not take on one more thing. I had a virtual meeting with Frank Purcaro, our Director of Teaching and Learning to talk about the pilot process and left the meeting feeling excited and eager to join the other staff in this journey. Frank Purcaro helped me work through, talk about and reflect on the potential positive outcomes of piloting the Bridges Program and sharing my experiences doing so. I thought perhaps, this just may be the right thing to focus on and bring meaning back to my classroom during such a difficult year. The pandemic changed so much about what an elementary classroom looked and felt like that a new math program sounded like something my kids and I could tackle together and move us in a positive direction. Together we would be actively doing something to help our District to evolve.

I piloted the program (with several modifications due to Covid) in the 2020-2021 school year. Like many things that year I found the work cumbersome. However, everytime I spoke with colleagues I kept catching myself saying that even though this program is a heavy lift, what I am seeing and hearing in the classroom makes it all worthwhile. I will gladly put in the extra work to see my students succeed, and engage in math in a positive way with growth that makes them feel proud.

Now, in my second year with the program, I have a better sense of where we are and knowing how it connects to where we need to be by the closing of the unit. The connections that Bridges makes are purposeful and powerful. I have great appreciation for how Bridges allows students to see multiple solutions to a math problem. It teaches students to listen to the strategies of others and learn to explain their own. Students in my room get excited for math, even when they struggle, because they know that if one strategy isn't working for them there will be others that might. Bridges utilizes Work Places (small groups of students working on game-like tasks together) to strengthen their foundation in numbers and place value. The skills acquired in Work Places directly spill over to the lessons each day. The Work Places also allow me time to observe, conference and sometimes even get in there and play with the students!

Another component that has kids talking is the Number Corner Piece. This section of the day involves looking for patterns on the daily calendar chart, learning about fractions, arrays and telling time in unique and creative ways that again will be connected to future lessons and Work Places. I describe the program as a braid where three major components (The Lesson, The Work Places and Number Corner) all criss-cross together making a solid mathematical foundation.

My students are not alone in this feeling of growth, development, and excitement for math. Many of my colleagues in second grade and across Head O’ Meadow will agree that Bridges is providing just what we had hoped; a rigorous and invigorating program that aligns to our standards. It is always difficult when big changes come your way, but in this case I am confident that we made a good one in adopting Bridges as our math program. The hard work in implementing a new program is justified when your data shows continuous growth, when you as a teacher feel motivated, and when you see the kids engaging in mathematics with smiles on their faces and confidence in what they are learning.

SOCIAL EMOTIONAL LEARNING PROGRAM

By Janet Kuzma

As we finally move forward from the pandemic, we can reflect and acknowledge that the past two years have proven to be extremely challenging for school staff, students, and families. Following a presentation of standardized assessments, by our Director of Teaching and Learning in January of 2021, it was clear that students were going to need academic and emotional support as we transitioned back to in-person learning. As the district began to look at the budgetary needs for the upcoming school year, efforts to meet the academic and social-emotional needs of our students played a critical role in the design of the 2022-23 operational budget plan. While the budget includes some staffing cuts in certified and non-certified staff, the additional staff for classroom and support positions will address learning gaps and the social emotional needs of our students.

Newtown Public Schools has shown a strong commitment to the development of our Social Emotional Learning (SEL) program over the past several years. The vision for SEL on our district website, states:

“We believe social emotional learning competencies are essential for students to be successful in our schools and become contributing citizens in our local and global communities.”

Social Emotional Learning programs and practices benefit the development of all students in grades K-12. Additional support is provided in our physical education, health departments, Project Adventure course, and school counseling. In order to get a deeper look in to our Social Emotional Learning program, I interviewed Head O’ Meadow school counselor, Lisa Kilcourse. Lisa volunteers on the Connecticut School Counselor Association, serving on the board of directors, and has recently been nominated for the LifeChanger of the Year award, sponsored by the National Life Group Foundation. Newtown schools, staff, and families have immense gratitude for the hard work that she has done before and throughout the pandemic to strengthen our SEL programs and practices.

Thank you Lisa for taking the time to answer the following questions for our reader’s.

Can you define what SEL is, and why it is important in our district?
I like to use CASEL's (Collaborative for Academic, Social, and Emotional Learning) definition of SEL: Social and emotional learning (SEL) is an integral part of education and human development. SEL is the process through which all young people and adults acquire and apply the knowledge, skills, and attitudes to develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions.
SEL advances educational equity and excellence through authentic school-family-community partnerships to establish learning environments and experiences that feature trusting and collaborative relationships, rigorous and meaningful curriculum and instruction, and ongoing evaluation. SEL can

help address various forms of inequity and empower young people and adults to co-create thriving schools and contribute to safe, healthy, and just communities.

CASEL's Mission:
CASEL's mission is to help make evidence-based social and emotional learning (SEL) an integral part of education from preschool through high school.
The elementary school counselors use these skills to help drive many of our developmental counseling lessons, K-4.
"Social and Emotional Learning (SEL) is in demand. 76% of high schoolers say that they want to attend a school that prioritizes SEL."
Forbes: "An emerging benefit of explicit SEL instruction is that it builds the emotional intelligence and agility that business and industry is starting to name among the most desired workforce skills."

How will SEL prepare students for a successful life?
We know through research that resiliency and college & career readiness come from strong SEL skills and healthy relationships. CASEL has cited many studies.
We also know through research that "teaching SEL helps children to better understand and identify their emotions; it can help them develop empathy, increase self-control and manage stress. SEL also helps our students build better relationships and interpersonal skills that will serve them in school and beyond, helping them succeed as adults." (Forbes)

What are the most important SEL practices at each school level (if you don't know beyond elementary it's ok)?
While I can really only speak to elementary, in my opinion, some of the most important work Newtown as a whole is doing is building positive connections with our students and families. "Research has shown that young people who feel connected to their school are less likely to engage in many risk behaviors, including early sexual initiation, alcohol, tobacco, and other drug use, and violence and gang involvement." School counselors provide this connection for our students through minute meetings with each student, small lunch groups & check-ins. In addition, School Counselors work hard to create a positive safe school climate. The CDC also states that "students who feel connected to their school are also more likely to have better academic achievement, including higher grades and test scores, have better school attendance, and stay in school longer." Our Safe School Climate Committees are meeting to build positive, safe, and inclusive school environments. The school counselors also provide developmental counseling lessons for all K-4 students with the purpose of directly teaching and reviewing SEL language and topics.

Are you anticipating adjustments to SEL due to the pandemic?
We are already seeing changes. The school counselors have noted an uptick in anxiety, depression, and behavioral changes. We have noted that many students have recently struggled with play skills and initiating conversations. We have also noticed a challenge to sustain attention for the expected amount of time in the classroom. This has required the counselors (and teachers) to adjust the lessons delivered and how they are delivered to our population.

Unfortunately, prior to the pandemic we were in a mental health crisis. Outside therapists no longer have the openings that they used to which puts a strain on our school resources.

How can parents, and community members, support our SEL programs?
Each season the elementary school counselors publish a newsletter with hot current topics. I would recommend reading those over and then having discussions at home. Here are our past newsletters. Also, asking your child about highs and lows of the day instead of just “how was school”. It prompts more discussion and can work through problem solving skills.
It's great to see what our community is already doing for our students. After school activities to build social connections as well as sports to develop team building skills have already been put in place. There is also a Parenting Program that has been put in place for our families as well as another program available for Greater Danbury.
It's important for students to see that all emotions are ok but there are appropriate ways to handle those strong feelings so we can continue to model for our students in school, at home, and in the community. The elementary schools have been lucky enough to each have a Behavior Interventionist to help support student’s plans, work proactively with students, and also respond to immediate needs.

Links to our newsletters, local parenting programs, as well as mental health resources are available in our Newtown Elementary School Counseling Website: https://sites.google.com/view/newtown-elementary-counseling/home
As a community as a whole, we can continue to advocate for the importance of SEL just like we advocate for ELA/Math programs and supports.

Is there anything else you would like to add?

SEL work is needed now more than ever and I’m so grateful that Newtown Public Schools has made SEL such an important part of student growth and development. At the elementary level, teachers are implicitly and explicitly providing SEL with Responsive Classroom, Morning meetings, and Second Step, and best teaching practices. We also use Restorative Practices as part of building a positive, safe, and inclusive school climate.

-A CLOSER LOOK-

Behavior Interventionist - Marlene Bucci, Vicky Amidon, Geraldine Jackman, & Betsey Rickert

By Don Ramsey

Though I normally wear the BOE hat, I took great pleasure in playing journalist to highlight an inspirational story of responsive and creative paraprofessionals on the elementary level. In 2014,

Marlene Bucci (Middle Gate Paraprofessional), along with Chris Geissler (Middle Gate Principal), attended the State of Connecticut “Para Educator of the Year Award Ceremony." Since then Marlene has continued to recognize and prioritize the impact paraprofessionals can make on our students. Marlene shares an experience that highlights the power of initiative, collaboration, and school district support to meet the needs of students in real time. The seed was planted to address a growing number of situations where students were struggling with behavioral issues in typical classroom settings. Three other Paraprofessionals, Vicky Amidon (Head O’Meadow), Geraldine Jackman (Sandy Hook), and Betsey Rickert (Hawley), joined together with Marlene to permanently implement the piloted “Behavior Interventionists” initiative, the evolution of which is told in wonderful fashion below. Also noteworthy is the growing collaboration with the Newtown Community Center, SEL programs, Guidance Counselors, and of course the Administrators and Teachers. Enjoy!

Behavior Interventionist
By Marlen Bucci, Middle Gate Paraprofessional

POSITION HISTORY

The position was built from the ground up. As a Kindergarten paraprofessional, I noticed the teacher I worked with spending an increasing amount of time redirecting students to attend to lessons and giving directions, taking away from the learning time of the class as a whole. At the State Paraeducator of the Year recognition ceremony in Fall, 2014, the recipient was a Behavior Coach from Simsbury Public Schools. Under the leadership of Chris Geissler a team at Middle Gate Elementary School reviewed the Behavior Coach model from Simsbury and with the support of the district we were able to modify the role to meet the needs of Newtown. The objective was to identify students who struggle behaviorally in the classroom and be able to support them through use of strategies such as sensory or movement breaks. The intention of the role was also to use proactive measures in supporting students so they could experience success.

The position moved into a piloted position in the Fall, 2015. Data was collected on calls for support focusing on students, grade, time of day, behavior along with the intensity and duration of, and strategies to get the student de-escalated and back to completing their assigned work. Through this process we implemented daily check-ins / check-outs and implemented movement breaks during their day. After 3 years of data collection, modifying the role to meet the needs of the students and staff, the position moved to that of Behavior Interventionist under Dr. Rodrigue with the addition of a behavior interventionist at each elementary school. In 2018, the position was introduced to Hawley as well as continuing at Middle Gate. In 2020, Sandy Hook and Head of Meadow both hired Behavior Interventionists.

During the temporary closures in the 2020-2021 school year due to COVID, the Behavior Interventionist were available for support to our students at Newtown Community Center and NYA.

POSITION SUMMARY

The Behavior Interventionist works under the supervision of the elementary school counselors providing support and monitoring students identified through the MTSS process. The BI uses

replacement strategies/redirection and the utilization of student self-monitoring systems when implementing behavior support for students with behavioral challenges. We also assist the instructional staff and Paraeduators in the implementation of effective behavior support strategies used within the classroom setting. The BI will assist in developing behavior support plans along with collecting, graphing, and interpreting data for these plans. The BI monitors and provides feedback to staff on student behavior progress.

The Behavior Interventionist is a member of the schools' crisis team and assists in implementing behavior and crisis intervention plans as needed.
In addition to the school counselor, the BI works in close collaboration with the school occupational therapist in supporting students identified as needing sensory breaks. This collaboration has led to the design of the sensory pathways found in each elementary school. The BI leads morning groups incorporating different activities reinforcing Second Step problem solving steps, mindfulness, and sensory integration to set students up for success.

The Behavior Interventionist are all trained in Mindful Schools © Mindfulness Fundamentals, Mindfulness Educator Essentials, and Mindfulness in the Classroom. The purpose of this training is to support students in developing attentional control, emotional awareness, and self-regulation strategies. Practicing these skills cultivates empathy and kindness in students to build stronger relationships with peers.

NEWTOWN BOARD OF EDUCATION
3 PRIMROSE STREET
NEWTOWN, CT 06470
WWW.NEWTOWN.K12.CT.US

PHONE: (203) 426-7600
EMAIL: NEWTOWNBOE@NEWTOWN.K12.CT.US

Board of Education
Newtown, Connecticut

Minutes of the special virtual Board of Education meeting held on March 24, 2022 at 6:30 p.m.

D. Zukowski, Chair
J. Vouros, Vice Chair
D. Ramsey, Secretary
R. Harriman (left 7:06 p.m.)
D. Cruson
J. Kuzma
J. Larkin
L. Rodrigue
T. Vadas
L. Asklof, Board Counsel

Item 1 – Call to Order
Ms. Zukowski called the meeting to order at 6:33 p.m.

Item 1 – Pledge of Allegiance

Item 2 – Consent Agenda
MOTION: Ms. Zukowski moved that the Board of Education go into executive session for a discussion of the attorney-client privileged communication regarding the transportation RFP and transportation contract and invite Dr. Rodrigue, Tanja Vadas, and Attorney Laurann Asklof _____seconded. Motion passes unanimously.

Mrs. Larkin moved to adjourn. Mrs. Kuzma seconded. Motion passes unanimously.

Item 3 – Adjournment
The meeting adjourned at 8:11 p.m.

Respectfully submitted:

_____
Donald Ramsey
Secretary

Board of Education
Newtown, Connecticut

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D. Ramsey, Secretary
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D. Cruson (absent)
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J. Larkin
L. Rodrigue
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