Please Note: These minutes are pending Board approval.
Board of Education
Newtown, Connecticut

Minutes of the Board of Education meeting on April 3, 2018 at 7:30 p.m. in the council chambers at 3 Primrose Street.

M. Ku, Chair	L. Rodrigue
R. Harriman-Stites, Vice Chair	J. Evans Davila (absent)
D. Cruson, Secretary	R. Bienkowski
D. Leidlein	Staff
J. Vouros	Public
A. Clure	Press
D. Delia	

Mrs. Ku called the meeting to order at 7:32 p.m.

Item 1 – Pledge of Allegiance

Item 2 - Celebration of Excellence

Dr. Rodrigue presented Talia Hankin, and Rory Edwards with a gift of appreciation as March was Board member appreciation month and thanked them for their work on the Board. She also presented a gift to Debbie Leidlein and acknowledged her years on the Board and her dedication to the community. She also spoke about Les Miserable which was the first production in the new auditorium. She praised the teachers, cast, and crew for their outstanding work. She recognized teachers Jane Matson, Brian Tenney, Kurt Eckhardt, and Janice Gabriel along with cast and crew members Barrett DeYoung, Phoebe Doscher, M. J. Glover, Talia Hankin, Harrison Hoffert, McKenzie Iazzetta, Aiden Moulder, Todd Perrin, Brooks Petershack, Dan Riley, and Nina Soriano. A certificate of excellence was also presented.

Item 3 – Consent Agenda

MOTION: Mr. Cruson moved that the Board of Education approve the consent agenda which includes the donation to the Newtown High School Drama Program, the resignation of Kat Bivona and the correspondence report. Mrs. Harriman-Stites seconded.

Mr. Clure thanked Todd Ingersoll and Ingersoll Auto for their generous donation and how much we appreciate all they do for Newtown.

Mrs. Ku thanked Mr. Cruson for the correspondence report and representing the Board with responding to the public.

Motion passes unanimously.

Item 4 – Public Participation

Mrs. Ku asked those who agreed to what was being said to raise their hand.

Scott Skrzypczak , 5 Great Hill Road, was concerned about long bus rides if this current proposal comes into place and that 50 minutes was too long. His daughter will start school in three years. The majority of bullying is on the bus ride. He asked the Board to go back and look at the amount of time students are on the buses.

Katie Burke, 48 Taunton Hill Road, asked to not stagger the start times at Reed and the elementary schools. It's good for the teachers but not for the students. Other solutions are available. The elementary school ride times will be 40 to 50 minutes. The road behind Reed will not be open to traffic because there would be an officer at the light. The benefits of a later start time are being tracked at the high school and middle school. Numerous studies on adults show negative impact riding for 30 minutes. The parent surveys at Head O'Meadow, Middle Gate and Sandy Hook Schools indicate they want to keep the schedule as this year.

Joe Skrzypczak, 3 Glenmoor Drive, spoke about having kindergarten students on a bus for 50 minutes. Look at what is good for that child. It's a ridiculous amount of time after being in school all day. He spoke to educators in parts of the country and their ride times are 30 to 40 minutes maximum. He asked the Board to give this a lot of consideration.

Sherry Wright, 10 Boulder Creek Road, said the current plan was not well vetted. We have no concrete data on this system. She is interested to see how people feel about going back to the three tier system. The new proposal to stagger times doesn't solve problems either. Any change requires more work and more buses. We are faced with two bad options. She asked the Board to stop changing things and wait to find a plan for both teachers and students.

Jennifer Kelly, 14 Cobblestone Lane, has a daughter at Head O'Meadow School. Her daughter is first to get picked up and she doesn't want her child on bus longer.

Kristen Alesovich, 16 Fieldstone Drive, said the system doesn't work now and the proposed plan will not work. Regarding the calendar change for April 4, she said that many parents had morning appointments before school. She suggested making changes with time for parents to adjust their schedules.

Mike Garabowski, 47 Robin Hill Road, said the current system does not work and it's time to go back to what worked. He is concerned about students being on the buses for a long time. We are too spread out to have this work. Find another way to save money instead of cutting buses.

John Feder, 27 Poverty Hollow Road, has two children in kindergarten and one in fourth grade. His children aren't riding the bus because they didn't want their kindergarten children to ride with fifth graders because of what they might hear. Some parents heard that bullying went on and there were three and four younger students in one seat when there was just one fifth grader in a seat. Last June he felt like the decision was being rushed.

Tracy Galassi, 21 Tunnel Road, felt that everyone who spoke had valid points. As teachers we do not want the town divided. She hopes that all parties and issues are addressed with the chosen plan. We don't want it to be divided between students and staff.

Donna Albano, 1 Rockwood Lane, Danbury, teaches at Hawley School. She had spoken to Dr. Rodrigue about the additional pressures on teachers by adding 25 minutes per day of non-instructional time to watch the students. There is a lot of stress with five-year-olds in her class and this has been a huge impact this year.

Tom Kuroski, is a teacher at Newtown High School with 30 years in the district. He discussed this with Dr. Erardi. The charge he had was that the cost of buses was not going to increase which handcuffed the committee from making decisions with the students in mind. It is unrealistic to make this change and we probably need to invest in buses. If it comes down to fixing this it may come down to more buses to get it right.

Item 5 –Reports
Chair Report: Mrs. Ku said that Mr. Vouros would be involved in high school principal search. She asked the Board for retreat dates and it looks like May 5 will be the date with the location to be determined. Mrs. Ku, Dr. Rodrigue, and Mr. Bienkowski have been attending the Legislative Council meetings and tomorrow night they may adopt the budget. The Board members were asked to stay after the meeting for an update on the paraeducator negotiations.

Superintendent's Report: Dr. Rodrigue has been meeting with the Newtown Center for Wellness and is impressed with the behavioral health in the town. She complimented Jenn Crane who

has facilitated this group which also aligns with the district focus on social emotional learning. She has met with various PTA's regarding the budget. Many parents have questions about sustaining and enhancing our education. She will be talking with seniors regarding our budget and the state budget. The middle school production of Alice in Wonderful, Jr. is this weekend. She reminded everyone that whenever there is a concern to not hesitate to contact her or the administrators. Social media is not always the place to get information. She thanked Mr. Cruson and the Board members for their responses to the community.

Committee Reports:
Mrs. Leidlein said the CIP and Facilities Committee met tonight and will meet before the next Board meeting regarding the Hawley and Middle Gate roof projects.

Mrs. Harriman-Stites said the Policy Committee is moving through the 5000 series and some out of series policies which need to be updated dealing with graduation ceremonies, promotion/acceleration/retention, and the service animal policy.

Student Representative Reports:
Talia Hankin: Two weekends ago Les Miserables successfully opened the new auditorium. She thanked the administration and Board of Education for their continuous support of the arts and also thanked Mr. Roach and Mr. Harrison for being in the play.
Rory Edwards: The high school had their annual career day this week with interviews by professionals.
Talia: March 27 the secondary options fair was held for options other than college.
Rory: Spring athletics have begun.
Talia: There have been junior class counselor work sessions where seniors answer questions about the college application process.
Rory: April is National Autism Awareness Month. Teams are selling pins and chocolate with the money being donation to Families United in Newtown.

Mr. Clure thanked Matt Memoli for scheduling the freshman girls' softball team for games with teams in other towns. They won at Milford this Saturday.

Item 6- Old Business
Second Read K-1 Math curriculum
MOTION: Mr. Cruson moved that the Board of Education approve the K-1 Math Curriculum. Mr. Vouros seconded.

Mr. Delia wanted to make sure there was training and support in place and if they needed any resources.
Jill Bracksieck said there is ongoing training being offered and the district has been very supportive with things in place to move forward.

Motion passes unanimously.
Ms. Bracksieck thanked the K-1 teachers and they looked forward to working with the other grades.

Transportation:
Dr. Rodrigue said their purpose was to find solutions to some of the issues and they had countless conversations with the leadership team who has done an outstanding job with the changes this year.

Mr. Moretti said there is no perfect plan. The Task Force landed in a place that would be safe and make ride times better and more equitable between the elementary and Reed Schools. We

have looked at every avenue and reviewed plans that we said wouldn't work and covered everything. We have done all that we can do.

Mr. Clure reviewed the presentation and reached out to get some questions answered from All-Start and the Superintendent. He would appreciate moving this decision to the next meeting so he can follow up with them.
Mrs. Ku said they were here at the last meeting. She would like to see us move on with this as the task forces have worked on this for two years.

Mr. Vouros said the task force came up with an honest plan, which is not perfect but won't be perfect unless we spend money, which is not an option. Whatever we do we always have to monitor and adjust.   We need to decide if we are willing to add that much more money to the budget or take the option from the task force which he is willing to do. Our charge was for the high school and middle school for the mental health of the adolescents. You will find that statistically it is working for students and parents. We have to work on the elementary schools. If passed, it will be monitored. Washington told us it would never be perfect. If we had waited to do this, he feels it would never have gotten done.

MOTION: Mr. Vouros moved that the Board of Education accept the recommendation of the Superintendent's Transportation Task Force for the 2018-19 school year by setting Reed Intermediate School start and end times at 8:55 a.m. and 3:27 p.m. and setting the elementary schools start and end times at 9:05 a.m. and 3:37 p.m. with the understanding that the Task Force's general transportation plan will be implemented. Mrs. Ku seconded.

Mr. Delia said the task force did a wonderful job but he was concerned that we were being hasty. We should be patient and thoughtful in our decisions to come up with something better for the community. He has questions and needs to talk to All-Star before he votes.

Mrs. Harriman-Stites agreed with Mr. Delia. In listening to the community and Mrs. Galassi perhaps there is a hybrid plan. She has a hard time coming to terms with this plan or a plan that was well researched by the task force that doesn't meet the needs of the community. There are serious concerns because of the impact on teachers and students. How many Kindergarten students will ride a bus for 50 minutes? She would appreciate more time to discuss and does not want to make a decision where we have to pick up the pieces. She applauded the first and second task force. Teachers were told they would not be impacted but that was not true. She would support a motion to postpone.

Mr. Cruson said there were numbers with the length of bus rides. He asked if All-Star ran any tests on the routes.
Dr. Rodrigue said they normally do that. She stated that we need to know that some routes change over the summer. All of the data we were given was checked and rechecked. She would suggest that we stay where we are and have time to implement the plan.

Mr. Cruson said last year we were given ride time numbers and we had problems with routes taking longer. 40 to 50 minutes is tough.
Dr. Rodrigue said that having five schools start at the same time was the issue as well as the elementary teachers starting earlier with students.

Mr. Cruson said the morning is an unknown with buses getting into Reed and then to the elementary schools. He doesn't need more time to vote on the motion and could vote tonight.
Mrs. Leidlein said three members want more information before voting. If their questions can be answered at the next meeting that would be alright with her. Regarding the motion tonight, staggering start times is a difficult issue and still impacts teachers. If we make a change it will

impact students. Neither is fair. There should be a better solution than putting the burden on younger students. Middle school students riding buses this long has an impact so it would also impact the younger students. She would need more information also. If this motion doesn't pass where do we go from here?

Dr. Rodrigue said we would stay where we are and work on the student downtime in the morning and afternoon at elementary schools.
Mr. Vouros asked how that would work and how much it would cost. We don't want to pit us against the teachers.

Dr. Rodrigue thought we would hire paras to watch students as some are there for five to ten minutes before they could go to their classroom. Our task force goal was to determine how we move forward to make the system better. The teachers said they would rather be in the classroom to avoid students being put in a gym even though they cannot get things done in their classroom. We also took five minutes away from Reed because buses were late.

Mr. Vouros asked to get the ride time for kindergarten students. If we go back to the option we have now, that information is important. Many children have after school activities. He also asked how much staff would be needed to help in the morning at the elementary schools and how that would be paid.

Dr. Rodrigue said that was not part of the work of the task force. The administration did not want to see that happening in the morning.
Dr. Gombos said the elementary administrators thought about that 10 minutes in the morning and felt it was not good to have these children who arrive early be in another location other than their classroom. It would be stressful to begin their day in a different room. The teachers didn't want their students to start the day like that either.

Mr. Delia said his questions are about long bus rides not being good for the children.
Dr. Gombos said her buses clear by 4:32 p.m. but she doesn't know how long they are on the bus and she isn't sure of the morning rides but no parents have complained
Mr. Delia asked for a week to get his questions answered
Tracy Galassi said Dr. Rodrigue worked with staff to decide what to do in the morning. The students are all in the building by 8:45 a.m. It would be difficult to have holding stations. You would need staff to handle 60 children.
Dr. Rodrigue said the issue is also the space for these students.

Mr. Cruson said Mr. Napolitano stated that there were a large number of drop-offs this year.
Dr. Gombos said all of the elementary schools have more this year.
Mr. Cruson indicated that some Head O'Meadow parents would start dropping off with this change.

Mrs. Ku asked what information the Board needs to make a decision. She did not want to ask another group to work and come up with a different solution. The first tasks force came up with the same solution as what this task force is recommending. The former superintendent thought he had a better solution and we went with that plan. She gave a document with bus ride information. No one wants children on buses a long time but we have to look at what is reasonable for a town the size of Newtown. 18% of the buses have a 46-50 minute run once a day. Given 20% of the students are on for the full run, then 3.6% of the 1,337 elementary students or 50 elementary students in the district would be on the bus for 46-50 minutes once a day.

Mr. Vouros said there isn't an implicit trust in what All-Star has reported. We need to know if that's the case.
Dr. Rodrigue said that was the issue last year and there's been an issue of trusting the ride time for the routes. A lot of this information has been shared over time.

Mrs. Ku asked the Board what they needed to make a decision.
Mrs. Harriman-Stites feels it is important for her to wait a week to sit with this information. We have been inundated with public comments and she asked for more time.

Mr. Delia values the work of the task force but needs answers to a few questions to be able to vote.
Mr. Clure agreed with Mr. Delia. He is not trying to undermine the task force work in delaying this decision. It took time to review the presentation but he was unable to get all questions answered by tonight. He publicly thanked everyone who contacted him and the Board regarding this issue. He also wants more time.

Mrs. Ku asked the Board to submit their questions to Dr. Rodrigue so everyone will get the answers.
Mr. Clure said he has data to share with All-Star but one person is out of town, one is in the hospital and one is sick. He hopes to have this done by next week.

Mr. Vouros felt it was important for Dr. Rodrigue and Mr. Bienkowski to be there when we speak to All-Star.
Dr. Rodrigue agreed. We want the Board to have every bit of information they need.
Mr. Cruson said some might be solved if they were at the next meeting.
Dr. Rodrigue said we can invite them but there needs to be enough time to process the information.

Mr. Vouros withdrew his motion.
Mrs. Ku asked to get the questions to Dr. Rodrigue as soon as possible.

Item 7 – New Business
MOTION: Mrs. Harriman-Stites moved that the Board of Education set the 2018 Newtown High School graduation date for June 18 at 4:00 p.m. at the O'Neill Center and the Newtown Middle School Moving-Up Ceremonies for June 19 at 4:30 p.m. and 7:15 p.m. in the Newtown High School gymnasium. Mr. Vouros seconded. Motion passes unanimously.

Mr. Clure asked if seniors do not need to be in school 180 days.
Dr. Rodrigue said this year we would ask seniors to come back the day after to get their diplomas. We will set up an exit survey with lunch for them with that being their 180th day.

Mr. Clure asked what would happen for seniors if we have another weather day.
Mrs. Ku said that would have to be discussed at that time. We can talk about possibly having school on Memorial Day.
Dr. Rodrigue stated that we would have to ask students to come back.

Motion passes.

Use of the Last Days of School:
Dr. Rodrigue proposed that the last two days of school, June 21 and June 22, to be teacher professional development days. The last day for students would be June 20. Teachers have to work 187 days and the students would go 181 days. Head O'Meadow students would go 180 days due to the school being closed due to burst pipes. We are within the guidelines.

MOTION: Mr. Delia moved that because of the unusual weather-related changes in the school calendar, the Board of Education designate the last two days of school, currently June 21 and June 22, 2018, for teacher professional development and designate those last two days as non-attendance days for students. Mr. Vouros seconded.

Mr. Delia amended the motion to remove June 21 and June 22, 2018 as stated days. He had a concern about teachers who had plans to leave on June 22 and he asked how paraeducators are impacted.

Mr. Cruson didn't like removing two more days with all the days we missed.
Dr. Rodrigue said we now have an opportunity to look at future calendars to avoid the last week in June. It's also difficult to take dates from the April break.

Mr. Clure asked if it was possible that June 20 might not be the last day of school.
Dr Rodrigue said that was correct if we had to add a day.
Mr. Clure asked if we could use Memorial Day.
Mrs. Ku said we would have to plan for that 30 days ahead of time. If we have more, that would move the last day to June 21.

Motion passes

Minutes of March 20, 2018:
MOTION: Mr. Cruson moved that the Board of Education approve the minutes of March 20, 2018. Mrs. Harriman-Stites seconded. Vote: 5 ayes, 2 abstained (Mrs. Leidlein, Mr. Clure) Motion passes.

Item 8 – Public Participation
Tom Kuroski thanked the incredible work done by both task forces. The proposed plan is almost like the one proposed initially which the union and teachers thought would be for this year. That plan would not have affected the teachers and is in alignment with the group who went to Washington. The Board voted on a hybrid plan. He was bombarded by elementary teachers with this change. He cannot applaud these teachers enough. The last meeting was a well articulated plan. He spoke to Dr. Rodrigue when this unfolded and he doesn't see keeping this plan.

John Feder, 27 Poverty Hollow Road, said we need money for buses which is the answer. Go back to three tiers with no shuttle and 20 to 25 minute bus rides.

Katie Burke, 48 Taunton Hill Road, thanked the Board for taking the time to get answers. The. Charter says the Board could propose an amendment to add buses. We have 44 buses on tier two and if you pull 22 out that it takes care of the elementary schools. You could also just have them in the morning and use the shuttle in the afternoon. If the task force was given the cost constraint of cost neutral there would be a different transportation plan. Looking at the 50 students each bus will have one or more students on a 50 minute ride.

Deborah Lubin-Pond, 24 Pearl Street, inquired if a grant could be written for this.

Chris Moretti, Task Force Member and Principal of Hawley School, said there is no answer unless you change the parameters. He would want to know if anyone had a 50 minute ride last year or the year before. Not all will have a 50 minute ride. Find out what the average ride time is. What is appropriate for the children and affordable for the town? Children should not have been in school earlier as it's putting teachers on the spot. If you are not going to accept the

staggered times the biggest question is what will you do if you don't accept this plan. Next year students will not go directly to class. Someone will have to watch them.

Jill Beaudry, 36 Queen Street, said that regarding 40 buses leaving Reed, they arrive in 10 minutes and leave in 10 minutes. It is very possible. This year there has only been six reports of bad behavior.   We have great students, teachers talked about it, and parents are saying the right things.

MOTION: Mr. Clure moved to adjourn. Mr. Cruson seconded. Motion passes unanimously.

Item 9 – Adjournment
The meeting adjourned at 10:23 p.m.

Respectfully submitted:

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                    Daniel J. Cruson, Jr.
                        Secretary

March 28, 2018

TO: Dr. Rodrigue

FROM: David Roach

Please accept the donation of $7,500 from Ingersoll Auto of Danbury to the Musical. This is a very generous gift to the Newtown High School Drama program. Newtown High School students will certainly benefit from this donation.

Thank you.

Gmail
by Google

Next Year

Bivona, Kat <bivonak@newtown.k12.ct.us>   Fri, Mar 16, 2018 at 3:07 PM
To: Anne Uberti <ubertia@newtown.k12.ct.us>, Jill Beaudry <beaudryj@newtown.k12.ct.us>, Suzanne Deramo <deramos@newtown.k12.ct.us>

Hi Anne, Jill, and Suzanne,
   I'm sending this email to officially inform you that I will not be returning for the 2018-2019 school year. I am resigning from my position at the conclusion of this school year.
   Suzanne, please let me know what more you need from me.
   Have a great weekend!! :)
   ~Kat

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Kat Bivona
Project Adventure and 21st Century Skills Teacher
Reed Intermediate School
3 Trades Ln
Newtown CT 06470

Correspondence Report
3/20/2018 – 4/2/2018

Date	Name	Subject
3/20/18	Kathleen Bateman	Last day of school decision
3/20/18	Laura Brennan	School Calendar Discussion
3/20/18	Kathryn Metzker	School Calendar
3/20/18	Bethany Phillips	Snow Days
3/20/18	Meghan Glynn	School Calendar Discussion
3/21/18	Alexandra Kennedy	End of School Year
3/21/18	Joanna Rosen	School calendar considerations
3/21/18	Laura Brennan	Transportation Task Force Presentation Followup
3/21/18	Katie Burke	Fwd: Proposed 18-19 busing scenario
3/22/18	Joseph Skrzypczak	School Budget Error!
3/24/18	Joseph Skrzypczak	School Budget Error!
3/24/18	Donna Lindsay	Re: Last Day of School
3/26/18	Katie Burke	Possible Alternatives to Staggering Start Times
3/28/18	Lynn Edwards	Reducing required student days
3/29/18	Frederick Roy	Article about school safety
4/2/18	Susan Chung	Revised School Calendar – Affects People Too
4/2/18	Jennifer Endres	Proposed bus changes
4/2/18	Miranda Dauti	New transportation Proposal
4/2/18	Katie Michael	Proposed Transportation
4/2/18	Elisabeth Gietz	Newtown 2 hour delay Wednesday 4/4
4/2/18	Todd & Karen Bobowick	Last day of school
4/2/18	Shari Wright	Question regarding the last day of school
4/2/18	Judy Dubois	Last day of school opinion
4/2/18	Nicole Lourenco	Re: Transportation Update
4/2/18	Erica Venezia	Last day of school
4/2/18	Merredith Christos	Transportation plan
4/2/18	Melissa Singlak	Last Day of School
4/2/18	Shaunna Heibeck	New transportation plan
4/2/18	Deborah Lubin Pond	Summer Vacation
4/2/18	Aaron and Christi Carlson	School Days
4/2/18	Amy Naughton	Transportation: k-6
4/2/18	Jessica Anderson	School Calendar
4/2/18	Sabrina Hull	Elementary School Transportation/Task Force Recommendations

How many students will have long ride times? And what is a long ride time?

Nobody wants children to be on a bus for a long ride. But what is reasonable for a rural town such as Newtown?

The proposal

- 82% of elementary school students will be on a bus with a maximum ride length of 25-45 minutes (in the morning only)
- In the afternoon, those same elementary students will be on the bus for about 10-15 minutes less time than in the morning (and the Reed students will be on 10-15 minutes longer).
- The percentage of students who are on the full length of the bus run is small
- The number of students with the longest rides (46-50 minutes): 18% of buses have a 46-50 minute run once a day. Given 20% of students are on for the full run, then 3.6% of 1337 elementary students or **50 elementary students in the district would be on a bus for 46-50 minutes once a day**

Is this reasonable for elementary school transportation in a rural town?

	bus run start time to school start time				Town Size	population density
	average	shortest	longest			
Litchfield	70	58	80		56.1	200/sq mi
Oxford	51	40	60		32.9	386/sq mi
New Milford	52	42	65		61.6	440/sq mi
Newtown (2018-19)	44 and 54	30	60		57.8	470/sq mi
New Fairfield	49	39	59		20.5	681/sq mi
Monroe	41	21	51		26.1	759/sq mi
Brookfield	40	22	55		19.8	867/sq mi
Bethel	48 and 50	27	71		16.8	1076/sq mi

The average time from the first pick-up of a bus run to the first bell at a school is highly dependent on the population density of the town. Newtown's projected times are comparable to New Milford, Oxford, New Fairfield, and Bethel.

Information prepared by Michelle Ku 4/3/2018
NOT THE WORK OF THE TASK FORCE

Kindergarten Math

Collaboration

Unit:	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
	1 2 3 4	5 6 7 8	9 10 11 12	13 14 15	16 17 18 19 20	21 22 23 24	25 26 27	28 29 30 31	32 33 34 35 36	37 38
Counting and Cardinality										
Measurement and Data										
Addition and Subtraction										
Geometry										
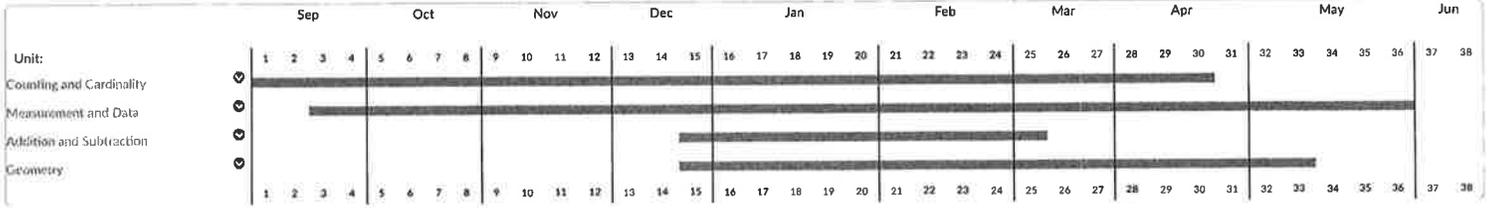
Counting and Cardinality

Collaboration

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens
Please attach your completed Unit Web Template here

Quantity

Generalizations / Enduring Understandings

Strand 1: Number names/Count sequence
Generalization: Counting articulates a sequence of numerals.
Concepts:

- sequence
- count
- numeral

Strand 2: Count to tell the number of objects
Generalization: One to one correspondence pairs one number name with one object.
Concepts:

- one to one correspondence
- count
- representation
- subitization- perceive at a glance the number of items presented up to 7 digits
- number conservation- quantity does not change with physical rearrangement

Strand 3: Compare numbers
Generalization: Matching and counting strategies compare numbers.
Concepts:

- equality
- comparison

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

Factual:
How many in this group?
What is a numeral?

Conceptual:
How do you know whether two sets have the same quantity?
How do we use numbers every day?
How can we show numbers in different ways?
Can a set have 0 objects?
What is the difference between "more" and "less"?

Provocative:
Should things always be put in number order?

Standard(s)
Connecticut Core Standards / Content Standards

CCSS: Mathematics

CCSS: Kindergarten

Counting & Cardinality

K.CC.A. Know number names and the count sequence.

- K.CC.A.1. Count to 100 by ones and by tens.
- K.CC.A.2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1).
- K.CC.A.3. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).

K.CC.B. Count to tell the number of objects.

- K.CC.B.4. Understand the relationship between numbers and quantities; connect counting to cardinality.
- K.CC.B.4a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
- K.CC.B.4b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
- K.CC.B.4c. Understand that each successive number name refers to a quantity that is one larger.
- K.CC.B.5. Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

K.CC.C. Compare numbers.

- K.CC.C.6. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.
- K.CC.C.7. Compare two numbers between 1 and 10 presented as written numerals.

Operations & Algebraic Thinking

K.OA.A. Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

- K.OA.A.2. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

Number & Operations in Base Ten

K.NBT.A. Work with numbers 11-19 to gain foundations for place value.

- K.NBT.A.1. Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (such as 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

Mathematical Practice

MP.The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students.

- MP.1. Make sense of problems and persevere in solving them.
- MP.2. Reason abstractly and quantitatively.
- MP.3. Construct viable arguments and critique the reasoning of others.
- MP.4. Model with mathematics.
- MP.5. Use appropriate tools strategically.
- MP.6. Attend to precision.
- MP.7. Look for and make use of structure.
- MP.8. Look for and express regularity in repeated reasoning.

Objective(s)
Bloom/ Anderson Taxonomy / DOK Language

Students will be able to...

- represent numbers up to 10 using pictures, numerals, and number names
- count up to 20 items demonstrating the one-to-one principle, the order-irrelevance principle, and the cardinality principle
- rote count forward to and backward from 15 from any number
- identify missing numbers in a sequence
- identify numbers one more and one less than a given number
- use concrete materials and/or numerals to compare numbers up to 20
- identify a teen number as having one group of ten ones and some extra ones
- rote count from 0 to 100

Critical Content & Skills
What students must KNOW and be able to DO

- A number can be represented by a set of objects, then by a word, and finally by a numeral.
- The last number word when counting names the quantity in set.
- Counting tells how many things are in a set.
- Numbers correspond to each other through a variety of relationships.

Core Learning Activities

A number can be represented by a set of objects, then by a word, and finally by a numeral.

- thread beads
- making sets of 1-5
- using five frame dominoes
- making matching quantities
- finger paint numbers
- sand writing
- building a 1-10 number track
- writing before and after numbers
- matching numeral, number name or group
- write what you roll
- representing numbers with counters
- five/ten frame domino trail
- writing numerals

The last number word when counting names the quantity in set.

- making a matching group

- making groups of 4
- creating matching groups with numerals 1-5
- snap(subitizing with unstructured numbers)
- matching number representations
- matching teen representations
-

Counting tells how many things are in a set.

- representing numbers with counters
- five/ten frame domino trail
- making groups of teen numbers

Numbers correspond to each other through a variety of relationships.

- determining more and less
- comparing quantities
- comparing numerals on a track
- moving forward and back on a number track
- nearby numbers
- guess my number
- showing one more and one less
- identifying one more and one less

Assessments

Resources
Professional & Student

Professional Resources

- Stepping Stones pre-tests and check-ups are found in the assessment tab of each module
- Stepping Stones Math Ed videos:

  - (JTN1) *Teaching Number: Counting Principles* (Module 1 &2)
  - (JTN1) *Teaching Number: Subitizing Quantities* (Module 1&2)
  - (JTN3) *Teaching Number: 0-9* (Module 1&2)
  - (RTN3) *Teaching Number: Relative Position* (Module 2)
  - (BH01) *Using a Hands-On Approach to Represent Numbers to 10* (Module 4)
  - (BH02) *Using a Hands-On Approach to Represent Tens and Ones* (Module 7)

Student Resources

- Stepping Stones Student Journal
- Stepping Stones Number Case
- Stepping Stones Big Books: Hip Hop Hippos, (Module 2) The Clowns New Clothes, (Module 3), Sweet Dreams (Module 2) Bug's Day Out (Module 7)
- materials:

  - pan balances
  - various counters
  - jump rope

- district-approved websites and apps as needed

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

Interdisciplinary Connections

Stepping Stones

Module 1

- Sorting Seasons (Science)
- My Name and Number (Language Arts)
- Sorting Collage (Music and the Arts)

Module 2

- Writing Numerals 1 to 6 , 7 to 10, 0 (Language Arts)

- Action Numbers (Sports and Recreation)
- Before and After (Sports and Recreation)

Module 3

- Read How Do Dinosaurs Count to Ten (Language Arts)
- Read More, Fewer, Less (Language Arts)

Module 4

- Name Sort (Language Arts)
- Number Jump (Sports and Recreation)
- Caterpillar Counting (Music and Arts)

Module 7

- Read Counting is for Birds (Language Arts)
- Read Meet the Teens (Language Arts)
- Number Match (Sports and Recreation)

Module 9

- Read More of Less (Language Arts)
- Name Game (Language Arts)
- Number Challenge (Sports and Recreation)
- Number Collage (Music and Arts)

Measurement and Data

Collaboration

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens
Please attach your completed Unit Web Template here

Process

Generalizations / Enduring Understandings

Strand 1: Data
Generalization: Attributes categorize items.
Concepts:

- classification
- comparison
- attribute
- representation

Strand 2: Comparisons
Generalization: Experiences with length, mass and capacity develops measurement vocabulary.
Concepts:

- length
- mass
- capacity
- measurement

Strand 3: Money
Generalization: Knowing coin names and values promotes understanding of coin combinations.
Concepts:

- coin name and value
- sorting
- combinations

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

Factual:
Is there more than one way to sort an object?
What is the name of "this" coin?
What is the value of "this" coin?
What attributes of an object can be measured?

Conceptual:
Does how I measure matter?
How can information be organized?
What are some ways to sort data?
What ways can an object be measured?
How can two objects be compared by their size and/or weight?
What categories can be used to identify the different attributes of objects?

Provocative:
Can all things be measured?
Why do we collect data?
Should all things be measured in the same way?

Standard(s)
Connecticut Core Standards / Content Standards

CCSS: Mathematics

CCSS: Kindergarten

Operations & Algebraic Thinking

K.OA.A. Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

- K.OA.A.2. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

Measurement & Data

K.MD.A. Describe and compare measurable attributes.

- K.MD.A.1. Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.
- K.MD.A.2. Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference.

K.MD.B. Classify objects and count the number of objects in each category.

- K.MD.B.3. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

Mathematical Practice

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- MP.1. Make sense of problems and persevere in solving them.
- MP.2. Reason abstractly and quantitatively.
- MP.3. Construct viable arguments and critique the reasoning of others.
- MP.4. Model with mathematics.
- MP.5. Use appropriate tools strategically.
- MP.6. Attend to precision.
- MP.7. Look for and make use of structure.
- MP.8. Look for and express regularity in repeated reasoning.

Objective(s)
Bloom/ Anderson Taxonomy / DOK Language

Students will be able to...

- sort into two categories
- make yes /no graphs
- make comparisons using length, mass and capacity
- identify coins and their values (penny, nickel, dime, quarter)
- show groups of coins

Critical Content & Skills
What students must KNOW and be able to DO

- Sort and classify objects according to a rule.
- Describe and compare measurable attributes (length, mass, and capacity) of an object using non-standard units.
- Organize and record information.
- Identify pennies, nickels, dimes, and quarters.
- Identify a teen number as having a group of ten ones and some extra ones.

Core Learning Activities

Sort and classify objects according to a rule.

- sort collage materials, vehicles, and animals

Describe and compare measurable attributes (length, mass and capacity) of an object using non-standard units.

- identify a heavier object
- use modeling clay to create models showing size
- use different non-standard units to measure length of objects
- use a pan balance to compare mass of objects
- use containers of various sizes to compare capacity of containers

Organize and record information.

- make a yes/no graph

Identify pennies, nickels, dimes, and quarters.
Identify a teen number as having a group of ten ones and some extra ones.

- coin rubbings
- lucky dip (coin hiding/guessing)
- treasure hunt (coin match)
- shopping- match money to price tag

Assessments

Resources
Professional & Student

Professional Resources

- Stepping Stones pre-test and check-ups are found in the assessment tab of each module.
- Stepping Stones Math Ed videos:

    - (JTD) Data: *Collecting and Displaying Information for Early Learners (Module 1)*

📎 K M1.2.pdf

📎 K. M3.2.pdf

- (JCM1) *Measurement: Teaching Comparison Language (Module 3)*

Student Resources

- Stepping Stones Student Journal
- Stepping Stones Number Case
- Stepping Stones Big Books: The Clown's New Clothes, *(Module 3)*
- materials:

    - various color animal counters
    - collection of toys in a box, at least six of each toy, such as trucks, puppets, bears, and animals or insects
    - magazine
    - bags of rice, beans, pasta, etc
    - books of similar size
    - varied measurement container
    - objects of similar size
    - pan balance
    - straws of different length
    - collection of small objects; heavy and light
    - play money
    - money
    - bean bags
    - varied balls of different sizes

- district-approved websites and apps as needed

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

Interdisciplinary Connections

Stepping Stones

Module 1

- Sorting Seasons (Science)
- Sorting Collage (Music and the Arts)

Module 3

- Rocky Outdoors (Science)
- Read Who Sank the Boat (Language Arts)
- Copy Cat (Sports and Recreation)
- Classroom Store (Social Studies)

Addition and Subtraction

Collaboration

Concept–Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens

Please attach your completed Unit Web Template here

Patterns and Equality

Generalizations / Enduring Understandings

Strand 1: Equality
Generalization: Balance represents equality.
Concepts:

- equality
- balance

Strand 2: Parts and Total
Generalization: Addition represents put-together situations; subtraction represents take-apart situations.
Concepts:

- composition
- decomposition
- representation
- addition
- subtraction
- commutative property

Strand 3: Fluency
Generalization: Strategies promote addition and subtraction fact fluency.

- addition
- subtraction
- efficiency
- flexibility

Guiding Questions

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

Factual:
What does the equal sign mean?
What does the +/- sign mean?

Conceptual:
Show me how to solve _____ using objects, pictures, words, or numbers?
How are addition and subtraction different?
What happens when quantities are joined together?
Does the order of addends change the sum?
How can I use different combinations of numbers to represent the same quantity?
How can models be used to represent addition and subtraction?

Provocative:
Is building number combinations to 5 and 10 helpful? How?
How do you know when your answer makes sense?

Standard(s)

Connecticut Core Standards / Content Standards

CCSS: Mathematics

CCSS: Kindergarten

Counting & Cardinality

K.CC.A. Know number names and the count sequence.

- K.CC.A.1. Count to 100 by ones and by tens.
- K.CC.A.2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1).

Operations & Algebraic Thinking

K.OA.A. Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

- K.OA.A.1. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.
- K.OA.A.2. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.
- K.OA.A.3. Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).
- K.OA.A.4. For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.
- K.OA.A.5. Fluently add and subtract within 5.

Mathematical Practice

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- MP.1. Make sense of problems and persevere in solving them.
- MP.2. Reason abstractly and quantitatively.
- MP.3. Construct viable arguments and critique the reasoning of others.
- MP.4. Model with mathematics.
- MP.5. Use appropriate tools strategically.
- MP.6. Attend to precision.
- MP.7. Look for and make use of structure.

Objective(s)
Bloom/ Anderson Taxonomy / DOK Language

Students will be able to...

- understand the idea of balance
- identify an unknown part in balance situations
- identify two parts that balance a total
- understand the language of equality
- represent situations (take apart and take from)
- write equations (take apart and take from)
- add two groups (put together and add to)
- write equations (put together and add to)
- develop fact fluency
- interpret word problems
- solve word problems by acting out, drawing pictures and writing equations

Critical Content & Skills
What students must KNOW and be able to DO

- Add and subtract using four basic categories:

1. joining problems (start-change-result)
2. separating problems (start-change-result)
3. part-part whole problems (2 parts combined to a total)
4. comparing problems (comparing 2 quantities to find difference).

- Recognize quantities in structured arrangements.
- Combine numbers to represent the same quantity.
- Identify different combinations that make ten.
- Count forward to 100 from any number.
- Skip count forward by 10 to 100.
- Represent addition and subtraction word problems.
- Problem solve in different ways.

Core Learning Activities
Add and subtract using four basic categories:

1. joining problems (start-change-result)
2. separating problems (start-change-result)
3. part-part-whole problems (2 parts combined to a total)
4. comparing problems (comparing 2 quantities to find difference)

Recognize quantities in structured arrangements.

- pan balance games and activities
- match sentences to pictures
- identify "missing parts" activities and games
- make combinations that balance
- write facts and their turnarounds
- activities for "turn-around facts" (eg. dominoes, hanger facts)
- add two groups to generate a total
- match addition expression to total
- pop the balloons: toss counters on balloons to show subtraction
- count back on the track
- take away counters
- write subtraction sentence
- roll to take away

Combine numbers to represent the same quantity.
Identify different combinations that make ten.

- make combinations of 10
- go fish for 10

Count forward to 100 from any number.
Skip count forward by 10 to 100.

- counting on activities

Represent addition and subtraction word problems.
Problem solve in different ways.

- model problems using objects, picture, and words.
- sort addition and subtraction word problems
- act out addition and subtraction problems
- draw pictures to match story problems
- match sentences to word problems

Assessments

- K M5.1.pdf
- K M6.1.pdf
- K M6.2.pdf
- K M8.1.pdf
- K M8.2.pdf
- K M10.1.pdf
- K M11.1.pdf
- WINTER Apples and Bananas Task and Rubric.doc
- SPRING Bo Peep's Dominoes and Rubric.docx

Resources
Professional & Student

Professional Resources

- Stepping Stones pre-test and check-ups are found in the assessment tab of each module.
- Stepping Stones Math Ed videos:

  - (CSP1) *Using Static Problems to Relate Addition and Subtraction, and introduce Equality* (Module 5)
  - (BSPN) *Using Structured Patterns to Develop Addition Concepts* (Module 6)
  - (CIAF) *An Introduction to Teaching Addition Number Facts* (Module 6)
  - (CLSS) *Using Language to Develop Subtraction Concepts* (Module 8)
  - (CAP1) *Using Active Problems to Relate Addition and Subtraction and Introduce Functions* (Module 8)
  - (CSP1) *Using Static Problems to Relate Addition and Subtraction and Introduce Equality* (Module 8)
  - (BSPN) *Using Structured Patterns to Develop Number Combinations* (Module 10)
  - (RSLA) *Using Language Stages to Develop Addition Concepts* (Module 10)
  - (CLSS) *Using Language Stages to Develop Subtraction Concepts* (Module 11)

Student Resources

- Stepping Stones Student Journal
- Stepping Stones Number Case
- Stepping Stones Big Books: I Spy (Module 5) Just a Few More, Mice Mice Everywhere (Module 6) These and Those, Ten Happy Hens, (Module 8) Scaredy Cats (Module 10)
- materials:

  - various counters
  - plastic straws
  - clothes pins
  - hangers

- district-approved websites and apps as needed

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

Interdisciplinary Connections

Stepping Stones

Module 5

- Read Balancing Act (Language Arts)
- Read Which Way, Ben Bunny (Language Arts)
- Balance Book (Language Arts)
- Obstacle Course (Sports and Recreation)

Module 6

- Our Addition Storybook (Language Arts)
- Fact Balancing (Sports and Recreation)

- Hanging facts (Music and Arts)

Module 8

- Read Hershey's Kiss Subtraction Book (Language Arts)
- Subtraction Bowling (Sports and Recreation)
- Subtraction Art (Music and Arts)

Module 10

- Addition Relay (Sports and Recreation)

Module 11

- Read Ten Friendly Frogs (Language Arts)
- Read Ten Apples Up on Top (Language Arts)
- Word Problems (Sports and Recreation)

Geometry

Collaboration

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens

Please attach your completed Unit Web Template here

Structure and Spatial Relations

Generalizations / Enduring Understandings

Strand 1: Position
Generalizations: Relative position describes objects in the environment.

Concepts:

- position
- direction
- shapes

Strand 2: 2D Shapes/3D Shapes
Generalizations: Language describes the similarities and differences of shapes.

Concepts:

- attributes
- classification
- two-dimensional
- three-dimensional
- composite shapes

Guiding Questions

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

Factual:
How can shapes be sorted?
How are shapes alike and different?
Where can we find shapes in the real world?
How can a shape be described?
What is an attribute?
What are some attributes of a 2D shape?
What are some attributes of a 3D shape?

Conceptual:
How can we describe the location or position of an object or shape?
How can we describe shapes in our everyday lives?
What makes shapes different from each other?
How can we use words that describe location in our everyday lives?
How are quadrilaterals and triangles different?
How do shapes fit together and come apart?

Provocative:
Can the same attributes be applied to all shapes?

Standard(s)

Connecticut Core Standards / Content Standards

CCSS: Mathematics

CCSS: Kindergarten

Geometry

K.G.A. Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).

- K.G.A.1. Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.
- K.G.A.2. Correctly name shapes regardless of their orientations or overall size.
- K.G.A.3. Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").

K.G.B. Analyze, compare, create, and compose shapes.

- K.G.B.4. Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).

- K.G.B.5. Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.
- K.G.B.6. Compose simple shapes to form larger shapes.

Mathematical Practice

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- MP.2. Reason abstractly and quantitatively.
- MP.3. Construct viable arguments and critique the reasoning of others.
- MP.4. Model with mathematics.
- MP.5. Use appropriate tools strategically.
- MP.6. Attend to precision.
- MP.7. Look for and make use of structure.
- MP.8. Look for and express regularity in repeated reasoning.

Objective(s)
Bloom/ Anderson Taxonomy / DOK Language

Students will be able to...

- use spatial language
- identify left and right
- sort 3D objects
- identify and use 3D objects
- identify and use 2D shapes
- analyze attributes of 2D shapes
- draw 2D shapes
- create 2D shapes

Critical Content & Skills
What students must KNOW and be able to DO

- Describe the position of objects using informal language.
- Identify two dimensional and three dimensional shapes.
- Identify circles, triangles, squares, and non-square rectangles.
- Make and Draw 2D and 3D objects.
- Create and extend patterns using geometric shapes.
- Identify properties that determine when shapes are alike or different.
- Compose smaller shapes to make larger shapes, and larger shapes can be decomposed to form smaller shapes.

Core Learning Activities

Describe the position of objects using informal language.

- position objects according to positional language
- left and right hand activities

Identify two dimensional and three dimensional shapes.
Identify circles, triangles, squares, and non-square rectangles.

- identify shapes
- identify shapes all around us
- sort by attributes
- sort 2D and 3D objects by name
- count sides and corners of shapes

Make and Draw 2D and 3D objects.

- construct 2D and 3D shapes
- draw 2D and 3D shapes
- stamp objects and shapes

Create and extend patterns using geometric shapes.

- string shapes

Identify properties that determine when shapes are alike or different.

- sort curved or straight lines

Compose smaller shapes to make larger shapes, and larger shapes can be decomposed to form smaller shapes.

- create pattern block pictures
- solve jigsaw puzzles

Assessments

Resources
Professional & Student

Professional Resources

- Stepping Stones pre-test and check-ups are found in the assessment tab of each module.
- Stepping Stones Math Ed videos:

    - JTG1 *Teaching Geometry: Early 3D and 2D Concepts* (Module 7,9,10, & 11)

Student Resources

- Stepping Stones Student Journal
- Stepping Stones Number Case
- Stepping Stones Big Books: I Spy, (Module 5)
- materials:

    - animal counters
    - collection of real world 3D objects
    - collection of 3D objects with flat surfaces
    - collection of 2D objects
    - straws and pipecleaners
    - hula hoops
    - soccer ball
    - pattern blocks

- district-approved websites and apps as needed

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

Interdisciplinary Connections

Stepping Stones

Module 5

- Obstacle Course (Sports and Recreation)
- Stick Puppets (Music and Arts)

Module 7

- Read Cubes, Cones, Cylinders and Spheres (Language Arts)
- 3D Art (Music and Art)

Module 10

- Shape Name Letters (Language Arts)
- Shape Puppets (Music and Art)

Module 11

- 2D Shape Art (Music and Art)

Grade 1 Math

District Elementary > Grade 1 > Mathematics > Math Grade 1

Collaboration

Unit:		Sep				Oct				Nov				Dec				Jan				Feb				Mar				Apr				May				Jun	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
Understanding Place Value	⊙																																							
Addition	⊙																																							
Subtraction	⊙																																							
Measurement	⊙																																							
Geometry	⊙																																							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38

Understanding Place Value

Collaboration

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens
Please attach your completed Unit Web Template here

System and Structure

Generalizations / Enduring Understandings

Strand 1: Numbers to Twenty
Generalizations: The position of numerals represents quantity.

Concepts:

- quantity
- representation
- position

Strand 2: Two- and Three-Digit Numbers
Generalizations:
Two- and Three-Digit numbers can be compared using place value.
Digits correspond to different values depending on their place in a number.

Concepts:

- comparison
- number names
- base ten system

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

Factual:
What is the largest digit we can use when representing amounts in each place value?
How can we represent a collection of objects with tens and ones?

Conceptual:
How can tens and ones be traded and regrouped?
How does the position of a digit in a number affect its value?
In what ways can numbers be composed and decomposed?
How are place value patterns repeated in numbers?

Provocative:
Does using place value make it easier to understand the value of a number? How?
What is the most efficient way to represent a number in a given situation? Explain.

Standard(s)
Connecticut Core Standards / Content Standards

CCSS: Mathematics

CCSS: Grade 1

Number & Operations in Base Ten

1.NBT.A. Extend the counting sequence.

- 1.NBT.A.1. Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

1.NBT.B. Understand place value.

- 1.NBT.B.2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:
- 1.NBT.B.2a. 10 can be thought of as a bundle of ten ones — called a "ten."
- 1.NBT.B.2b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
- 1.NBT.B.2c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).
- 1.NBT.B.3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.

1.NBT.C. Use place value understanding and properties of operations to add and subtract.

- 1.NBT.C.5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.

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- MP.4. Model with mathematics.
- MP.5. Use appropriate tools strategically.
- MP.6. Attend to precision.
- MP.7. Look for and make use of structure.
- MP.8. Look for and express regularity in repeated reasoning.

Objective(s)
Bloom/ Anderson Taxonomy / DOK Language

Students will be able to:

- identify a teen number as having a group of tens and ones
- represent two-digit numbers up to 99
- identify a two-digit number as having a quantity of tens and a quantity of ones
- represent multiples of ten
- compare two-digit numbers using place value
- use the < and > symbols to compare two-digit numbers
- represent three-digit numbers up to 100
- count forward up to 120
- skip count backwards by 10 within 100
- subtract multiples of 10 from other multiples of 10

Critical Content & Skills
What students must KNOW and be able to DO

- Quantities may be compared, counted, and represented in multiple ways including grouping, pictures, words, number line locations, and symbols.
- Knowing and using number benchmarks can help with estimating and simplifying computations.
- Concrete models, drawings, and place value strategies can be used to add and subtract within 100.

Core Learning Activities

Quantities may be compared, counted, and represented in multiple ways including grouping, pictures, words, number line locations, and symbols.

- use base ten blocks or cubes to represent numbers
- use fingers, ten frames, cubes and counters to represent numbers
- use dimes and pennies
- use two-digit and three-digit numeral expander
- use hundred chart
- use number track to 20
- use place value cards
- solve number puzzles(riddles)

Knowing and using number benchmarks can help with estimating and simplifying computations.

- use base ten blocks or cubes
- use dimes and pennies
- use hundred chart
- use number track to 20

Concrete models, drawings, and place value strategies can be used to add and subtract within 100.

- use base ten blocks or cubes
- use fingers, ten frames, cubes and counters
- use dimes and pennies
- use hundred chart
- use number track to 20

Assessments

Resources
Professional & Student

Student Resources:

- Stepping Stones Student Journal
- Stepping Stones Number Case

- materials:
  - number track to 100
  - number expanders
  - Flare (interactive tools)
  - hundred chart
  - transparent counters
  - Stepping Stones: Fundamentals Games - Make A Number, Name That Number, Over Fifty, Split to Add, What's That Number?
  - Front Row
  - Stepping Stones Big Books - I See, You See (1.4)

Professional Resources:

- Stepping Stones pre-test, check-ups and performance tasks are found in the assessment tab of each module.

district-approved websites and apps, as appropriate

Stepping Stones Math Ed Videos:

- BHO2 Using a Hands-On Approach to Represent Tens and Ones
- RPV1 Teaching Place Value: 20 to 99
- RPV2 Teaching Place Value: Teen Numbers

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

Interdisciplinary Connections

Stepping Stones

- Number Hunt (Language Arts and Literature) (Module 12)
- Human place-value chart (Sports and recreation) (Module 12)
- One Hundred Hungry Ants (Language Arts and Literature) (Module 7)

Calendar Time (days in school)

Addition

Collaboration

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens

Please attach your completed Unit Web Template here

Patterns and Equality

Generalizations / Enduring Understandings

Strand 1: Fluency Strategies for Addition
Generalization: Strategies assist in the recall of addition facts.

Concepts:

- strategies
- addition facts
- commutative property
- associative property

Strand 2: Place Value Strategies for Addition
Generalization: Two-digit numbers can be added using place value.

Concepts:

- place value
- two-digit numbers
- addition

Guiding Questions

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

Factual:
What is the symbol for addition?
Is the sum of the parts always the total?
What are addition words you know?

Conceptual:
What happens when we change the order of numbers when we add?
How can we use different combinations of numbers to represent the same quantity?
How is addition related to counting on?
What happens when we join two quantities?
Why is it important to know and use multiple strategies for solving addition problems?
How do we know if an addition answer is correct?

Provocative:
Is there one addition strategy that is most efficient? Explain.
Can patterns or relationships between numbers help us predict totals? How?

Standard(s)

Connecticut Core Standards / Content Standards

CCSS: Mathematics

CCSS: Grade 1

Operations & Algebraic Thinking

1.OA.A. Represent and solve problems involving addition and subtraction.

- 1.OA.A.1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.
- 1.OA.A.2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

1.OA.B. Understand and apply properties of operations and the relationship between addition and subtraction.

- 1.OA.B.3. Apply properties of operations as strategies to add and subtract.

1.OA.C. Add and subtract within 20.

- 1.OA.C.5. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).

- 1.OA.C.6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 – 4 = 13 – 3 – 1 = 10 – 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13).

1.OA.D. Work with addition and subtraction equations.

- 1.OA.D.7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.
- 1.OA.D.8. Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers.

Number & Operations in Base Ten

1.NBT.A. Extend the counting sequence.

- 1.NBT.A.1. Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

1.NBT.C. Use place value understanding and properties of operations to add and subtract.

- 1.NBT.C.4. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.
- 1.NBT.C.5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.

Mathematical Practice

MP.The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students.

- MP.1. Make sense of problems and persevere in solving them.
- MP.2. Reason abstractly and quantitatively.
- MP.3. Construct viable arguments and critique the reasoning of others.
- MP.4. Model with mathematics.
- MP.5. Use appropriate tools strategically.
- MP.6. Attend to precision.
- MP.7. Look for and make use of structure.
- MP.8. Look for and express regularity in repeated reasoning.

Objective(s)
Bloom/ Anderson Taxonomy / DOK Language

Students will be able to:

- solve addition word problems
- use the commutative property of addition
- use a strategy (count on) and (doubles) to add one-digit and two-digit numbers
- fluently recall addition facts within 20
- calculate the unknown amount in addition equations
- add two or three one-digit numbers to make 10
- use the associative property of addition
- identify related addition and subtraction facts
- relate skip counting to addition
- add one- and two-digit numbers (without composing)

Critical Content & Skills
What students must KNOW and be able to DO

- Connect counting and addition (i.e. adding two is the same as counting on two).
- Use properties of addition to add whole numbers and to use increasingly sophisticated strategies based on these properties to solve addition problems.
- Use a variety of models to add-to, put-together, take-apart, and compare situations.
- Develop strategies for adding whole numbers.

Core Learning Activities

Connect counting and addition (i.e. adding two is the same as counting on two).

- cubes for count-on games
- domino dot cards
- pennies and dimes for counting on
- count on to a given number
- identify 1 more and 10 more on a hundreds chart

Use properties of addition to add whole numbers and to use increasingly sophisticated strategies based on these properties to solve addition problems.

- domino dot cards
- roll cubes to write an addition fact
- pan balance to model addition facts
- connecting cubes on part-part total charts
- addition war with playing cards

Use a variety of models to add-to, put-together, take-apart, and compare situations.

- pan balance to model addition facts

- connecting cubes on part-part total charts
- domino dot cards
- pennies and dimes for counting on
- identify 1 more and 10 more on a hundreds chart

Develop strategies for adding whole numbers.

- roll cubes to write an addition fact
- connecting cubes on part-part total charts
- addition war with playing cards
- domino dot cards
- pennies and dimes for counting on
- identify 1 more and 10 more on a hundreds chart
- addition war with playing cards

Assessments

- 1 M2.1.pdf
- 1 M2.2.pdf
- 1 M2.PT.pdf
- 1.M2.PT Rubric.pdf
- 1 M5.1.pdf
- 1 M5.PT.pdf
- 1.M5.PT Rubric.pdf
- 1 M6.PT.pdf
- 1.M6.PT Rubric.pdf
- 1 M8.1.pdf
- 1 M8.2.pdf
- 1 M8.PT.pdf
- 1.M8.PT Rubric.pdf
- 1 M9.1.pdf
- 1 M9.2.pdf
- 1 M9.PT.pdf
- 1.M9.PT Rubric.pdf
- 1 M10.PT.pdf
- 1.M10.PT Rubric.pdf

Resources
Professional & Student

Student Resources:

- Stepping Stones Student Journal
- Number Case
- Stepping Stones: Big Books - Addtron (2.8), How Many Legs? (8.1)
- materials:
    - various counters (cubes, coins, teddy bears, small toys, buttons
    - clothespins
    - tagboard
    - ten frames
    - dominoes
    - transparent counters
    - connecting cubes
    - number track up to 20
    - pan balance
    - hundred chart
    - playing cards
    - Stepping Stones: Fundamentals - Add Em Up, Add On, Add To It, Adding to 100, Count On, Dot Numbers, Dots and More, Double Fun, Double Trouble, Double UP, Fill Five, Fill Up Five, Make 20, Match A Total, On Track, On The Edge, Over 50, Roll and Count, Slides and Ladders, Split To Add, Three Sum, Total Ten, Total 20

Professional Resources:

Stepping Stones pre-test, check-ups and performance tasks are found in the assessment tab of each module.

district-approved websites and apps as needed

Stepping Stones Math Ed Videos:

- BAMS Using Mental Strategies to Add
- BHO3 Using a Hands-on Approach to Develop Mental Strategies for Addition
- BMSA Comparing Mental Strategies: Addition
- CAS1 Teaching the Count-On Strategy for Addition Number Facts
- CAS2 Teaching the Doubles Strategy for Addition Number Facts
- CAS3 Teaching the Bridge to Ten Strategy For Addition Number Facts
- CIAF Introduction to Teaching Addition Number Facts

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

Interdisciplinary Connections

Stepping Stones

- Doubles Song (Music and The Arts) (Module 2)
- Double The Ducks (Language Arts and Literature) (Module 2/5)
- Make-Ten Relay (Sports and Rec) (Module 8)
- Make-Ten Chains (Music and The Arts) (Module 8)
- Writing Word Problems (Language Arts and Literature) (Module 9)
- Count-On Game (Sports and Recreation) (Module 9)

- Greater and Less Trails (Technology) (Module 9)

Subtraction

Collaboration

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens
Please attach your completed Unit Web Template here

Patterns and Equality

Generalizations / Enduring Understandings

Strand 1: Fluency Strategies for Subtraction
Generalizations:
Subtraction relates to addition.
Strategies assist in the recall of subtraction facts.

Concepts:

- strategies
- part-part-total
- subtraction facts

Strand 2: Relating Subtraction to Addition
Generalization: Fact families relate addition and subtraction.

Concepts:

- fact families
- addition
- subtraction
- comparison

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

Factual:
What is the symbol for subtraction?
How can you use the count back strategy to solve __-__=__?
What are subtraction words you know?

Conceptual:
How can we use addition to solve subtraction?
How can you find what is left when we take one quantity from another?
Why is important to know and use multiple strategies for solving subtraction?
How do we know if a subtraction answer is correct?

Provocative:
How do you know if a problem is about addition or subtraction?

Standard(s)
Connecticut Core Standards / Content Standards

CCSS: Mathematics

CCSS: Grade 1

Operations & Algebraic Thinking

1.OA.A. Represent and solve problems involving addition and subtraction.

- 1.OA.A.1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.
- 1.OA.A.2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

1.OA.B. Understand and apply properties of operations and the relationship between addition and subtraction.

- 1.OA.B.3. Apply properties of operations as strategies to add and subtract.
- 1.OA.B.4. Understand subtraction as an unknown-addend problem.

1.OA.C. Add and subtract within 20.

- 1.OA.C.5. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).
- 1.OA.C.6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 – 4 = 13 – 3 – 1 = 10 – 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13).

1.OA.D. Work with addition and subtraction equations.

- 1.OA.D.8. Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers.

Number & Operations in Base Ten

1.NBT.C. Use place value understanding and properties of operations to add and subtract.

- 1.NBT.C.5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.

Mathematical Practice

MP.The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students.

- MP.1. Make sense of problems and persevere in solving them.
- MP.2. Reason abstractly and quantitatively.
- MP.3. Construct viable arguments and critique the reasoning of others.
- MP.4. Model with mathematics.
- MP.5. Use appropriate tools strategically.
- MP.6. Attend to precision.
- MP.7. Look for and make use of structure.
- MP.8. Look for and express regularity in repeated reasoning.

Objective(s)
Bloom/ Anderson Taxonomy / DOK Language

Students will be able to:

- solve subtraction word problems
- calculate unknown amounts in subtraction equations
- relate subtraction to unknown addend problems
- use a strategy (think addition) to subtraction one-digit numbers (make ten facts, count-on and use -double facts)
- recall fluently count-on subtraction facts within 20
- recall fluently use-doubles subtraction facts within 20
- identify related addition and subtraction facts
- represent subtraction situations (comparison model)
- bridge 10 to subtract one-digit numbers
- relate skip counting to subtraction

Critical Content & Skills
What students must KNOW and be able to DO

- Connect counting and subtraction (i.e. Subtracting two is the same as counting back two).
- Use properties of subtraction to subtract whole numbers and to use increasingly sophisticated strategies based on these properties to solve subtraction problems.
- Use a variety of models to take-from, take-apart, and compare situations.
- Develop strategies for subtracting whole numbers.
- Relate addition and subtraction.

Core Learning Activities

Connect counting and subtraction (i.e. Subtracting two is the same as counting back two).

- cubes for counting back
- pennies and dimes for counting back ones and tens
- manipulatives to count back on a number track

Use properties of subtraction to subtract whole numbers and to use increasingly sophisticated strategies based on these properties to solve subtraction problems.

- domino dot cards to find difference
- coat hanger and clothespins to find missing addend

Use a variety of models to take-from, take-apart, and compare situations.

- cubes for counting back
- pennies and dimes for counting back ones and tens
- domino dot cards to find difference
- coat hanger and clothespins to find missing addend
- manipulatives to count back on a number track

Develop strategies for subtracting whole numbers.

- cubes for counting back
- pennies and dimes for counting back ones and tens
- domino dot cards to find difference
- coat hanger and clothespins to find missing addend
- roll dice and make a subtraction equation

- manipulatives to count back on a number track
- games to practice recall of basic facts

Relate addition and subtraction.

- domino dot cards to find difference
- coat hanger and clothespins to find missing addend
- games to practice recall of basic facts

Assessments

- 📎 1 M4.1.pdf
- 📎 1 M4.PT.pdf
- 📎 1.M4.PT Rubric.pdf
- 📎 1 M6.1.pdf
- 📎 1 M6.PT.pdf
- 📎 1.M6.PT Rubric.pdf
- 📎 1.M7.1.pdf
- 📎 1 M10.1.pdf
- 📎 1 M10.2.pdf
- 📎 1 M10.PT.pdf
- 📎 1.M10.PT Rubric.pdf
- 📎 1 M11.1.pdf

Resources
Professional & Student

Student Resources:

- Stepping Stones Student Journal
- Stepping Stones Number Case
- Stepping Stones: Big Books - Cupcake Capers (4.1, 4.3), Joe's Carrots (6.4), Bear and Badger (10.6), Shoes in Twos (11.5), Stella's Store 11.6
- materials:

    - various counters (teddy bears, small toys, buttons, coins, cubes)
    - ball
    - blindfold
    - dominoes
    - large number track (1-10)
    - ten frames
    - hangers, clothespins and collars (support 53)
    - base ten blocks
    - hundred chart
    - Stepping Stones: Fundamentals Games - On Track, Take That, Take It Away, Take or Tally, What's The Difference, Double Up, Double Trouble, Add 'Em Up

Professional Resources:

Stepping Stones pre-test, check-ups and performance tasks are found in the assessment tab of each module.

district-approved websites and apps as needed

Stepping Stones Math Ed Videos:

- BHO4 Using a Hands-On Approach to Develop Mental Strategies for Subtraction
- CAP1 Using Active Problems to Relate Addition and Subtraction and Introduce Functions
- CLSS Using Language Stages to Develop Subtraction Concepts
- CSFS Teaching the Think Addition Strategy for Subtraction Number Facts

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

Interdisciplinary Connections

Stepping Stones:

- Elevator Magic written by Stuart Murphy (Language Arts and Literature) (Module 4)
- Subtraction Match Game (Sports and Recreation) (Module 4)
- Think-Addition Race (Sports and Recreation) (Module 6)
- Subtraction Tag Team (Sports and Recreation) (Module 10)
- Nature Patterns (Music and Art) (Module 11)

Measurement

Collaboration

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens
Please attach your completed Unit Web Template here

Process and Communication

Generalizations / Enduring Understandings

Strand 1: Non-Standard Measurement
Generalization: Comparisons are made using non-standard units of measure.
Concepts:

- units of measure
- length

Strand 2: Time
Generalization: Clocks identify time.
Concepts:

- time
- clocks
- sequence

Strand 3: Data
Generalization: Charts and graphs represent data.
Concepts:

- data
- charts/Graphs

Strand 4: Money
Generalization: The relationship between pennies, dimes and dollars utilizes the base ten system.
Concepts:

- currency
- base ten
- value
- trade

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

Factual:
What are the names of these 4 coins? How much are they worth?
What does the hour/minute hand on a clock tell us?
What is the width/length/height of _____?

Conceptual:
How can tally marks help organize our counting?
How do tables and charts help us organize our thinking?
What can we use to measure objects?
How can we use time in our daily life?
How do measurements help compare objects?
What different ways can data be displayed?
How can place value help you count coins?
How can we collect data?

Provocative:
Is it important to collect data? Why or Why not?
Is it important to measure time? Explain.

Standard(s)
Connecticut Core Standards / Content Standards

CCSS: Mathematics

Number & Operations in Base Ten

1.NBT.C. Use place value understanding and properties of operations to add and subtract.

- 1.NBT.C.4. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.

Measurement & Data

1.MD.A. Measure lengths indirectly and by iterating length units.

- 1.MD.A.1. Order three objects by length; compare the lengths of two objects indirectly by using a third object.
- 1.MD.A.2. Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.

1.MD.B. Tell and write time.

- 1.MD.B.3. Tell and write time in hours and half-hours using analog and digital clocks.

1.MD.C. Represent and interpret data.

- 1.MD.C.4. Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

Mathematical Practice

MP.The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students.

- MP.1. Make sense of problems and persevere in solving them.
- MP.2. Reason abstractly and quantitatively.
- MP.3. Construct viable arguments and critique the reasoning of others.
- MP.4. Model with mathematics.
- MP.5. Use appropriate tools strategically.
- MP.6. Attend to precision.
- MP.7. Look for and make use of structure.
- MP.8. Look for and express regularity in repeated reasoning.

Objective(s)
Bloom/ Anderson Taxonomy / DOK Language

Students will be able to:

- use indirect comparison to compare and order length
- use non-standard uniform units to measure length/capacity/mass
- identify times to the hour and half hour (analog and digital)
- create, describe and interpret tally charts
- relate coins to each other
- identify combinations of coins that match totals up to one dollar

Critical Content & Skills
What students must KNOW and be able to DO

- Tell time to the hour and half hour using analog and digital clocks.
- Compare and order objects according to length, mass, and capacity units.
- Create and use tools to measure length, mass, and capacity units.
- Organize, represent and analyze data collected from measurement.
- Identify the name and value of coins (penny, nickel, dime, quarter).
- Relate coins and determine the value of a collection.

Core Learning Activities

Tell time to the hour and half hour using analog and digital clocks.

- match analog and digital times

Compare and order objects according to length, mass, and capacity units.
Create and use tools to measure length, mass, and capacity units.

- measure cubit and compare
- measure capacity with rice\beans in a variety of containers
- compare lighter than and heavier than with pan or equal arm balance
- compare the mass, capacity, and length of objects of various sizes

Organize, represent and analyze data collected from measurement.

- make a graph using a tally chart
- make a vertical and horizontal bar chart

Identify the name and value of coins (penny, nickel, dime, quarter).
Relate coins and determine the value of a collection.

- use coins to match different values
- trade coins
- sort coins
- play store with coins

- trade coins for a dollar

Assessments

Resources
Professional & Student

Student Resources:

- Stepping Stones Student Journal
- Stepping Stones Number Case
- Stepping Stones: Big Books - The Best Bug (Mod 3.12), The Cat Nap (Mod 2.11) (Mod 7.10)
- materials:

    - Various counters (links, cubes)
    - Ball
    - String
    - Vases (see lesson Mod 12.9)
    - Resealable bags
    - 5 plastic bottles in different shapes and sizes
    - Collection of clear plastic containers in different sizes and shapes
    - Small non-standard capacity measures
    - Uncooked rice or dry beans
    - Tennis ball
    - Pan balance
    - Classroom objects
    - Judy clocks
    - Chart paper
    - Coins

Professional Resources:

Stepping Stones pre-test, check-ups and performance tasks are found in the assessment tab of each module.

district-approved websites and apps as needed

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

Interdisciplinary Connections

- How Big is A Foot? Rolf Myller (LA) (Module 3)
- Uniform Lengths game (Sports and Rec) (Module 3)
- Set of Three (Music and Arts) (Module 3)
- Working with Capacity (Science) (Module 12)
- It's About Time (LA) (Module 2)Stuart Murphy
- Time Match Game (Sports and Rec) Module 2
- Tally O'Malley written by Stuart Murphy (LA) (Module 8)
- Going Shopping (Social Studies) (Module 11)

Geometry

Collaboration

Concept-Based Unit Development Graphic Organizer (Download)

Unit Web Template (Optional)

Concepts / Conceptual Lens
Please attach your completed Unit Web Template here

Structure and Spatial Relations

Generalizations / Enduring Understandings

Strand 1: 2D Shapes/3D Shapes
Generalizations:
Attributes define 2D and 3D shapes.
Combinations of shapes create composite shapes.

Concepts:

- attributes
- classification
- two-dimensional
- three-dimensional
- composite shapes

Strand 2: Fractions
Generalization: Equal parts represent fractions.

Concepts:

- equal parts
- fraction

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

Factual:
How many sides/corners does a _____ have?
What is a 2-D/3-D shape?
Where can we find shapes in our world?
Where can we find fractions in our world?

Conceptual:
How can shapes be sorted?
How are shapes alike and different?
How can I put shapes together and take them apart to form other shapes?
How do we know when parts are equal?
How can we divide shapes into equal parts?

Provocative:
What attributes of a shape make it useful in our world?
Why are fractions necessary? Explain.

Standard(s)
Connecticut Core Standards / Content Standards

CCSS: Mathematics

CCSS: Grade 1

Geometry

1.G.A. Reason with shapes and their attributes.

- 1.G.A.1. Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size) ; build and draw shapes to possess defining attributes.
- 1.G.A.2. Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.
- 1.G.A.3. Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates

smaller shares.

Mathematical Practice

MP.The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students.

- MP.1. Make sense of problems and persevere in solving them.
- MP.2. Reason abstractly and quantitatively.
- MP.3. Construct viable arguments and critique the reasoning of others.
- MP.4. Model with mathematics.
- MP.5. Use appropriate tools strategically.
- MP.6. Attend to precision.
- MP.7. Look for and make use of structure.
- MP.8. Look for and express regularity in repeated reasoning.

Objective(s)
Bloom/ Anderson Taxonomy / DOK Language

Students will be able to:

- identify and describe attributes of 2-D shapes
- identify and draw circles, triangles, squares, non-square rectangles, and hexagons
- join and split 2-D shapes to make new shapes
- represent one-half and one-fourth (length and area models)
- identify how creating more equal shares results in smaller shares
- identify and describe the attributes of spheres, cones, cylinders, and prisms (including cubes)
- make 3-D objects

Critical Content & Skills
What students must KNOW and be able to DO

- Compare shapes using properties.
- Describe, represent and make sense of our environment using geometry.
- Count the sides, angles, and faces of a shape.
- Divide shapes into equal parts.

Core Learning Activities

Compare shapes using properties.

- match shape cards with a partner
- sort shapes by attributes

Describe, represent and make sense of our environment using geometry.

- find various 3D shapes around the room
- match real world 3D shapes (ball) to formal 3D shapes (sphere)

Count the sides, angles, and faces of a shape.

- make shapes on geoboards
- create a new shape with 2 to 4 shapes
- create shapes with straws and pipe cleaners

Divide shapes into equal parts.

- cut shapes in halves and fourths

Assessments

🔖 1 M4.2.pdf

🔖 1 M6.2.pdf

🔖 1 M10.2.pdf

Resources
Professional & Student

Students Resources:

- Stepping Stones Student Journal
- Stepping Stones Number Case
- Stepping Stones: Big Books - A Piece of Pie (6.9)
- materials:

  - various counters (links, cubes, buttons)
  - various sizes of plastic bags
  - assorted magazines
  - geoboards
  - rubber bands
  - pattern blocks
  - 3D shapes
  - everyday 3D objects
  - pipe cleaners
  - straws

Student Learning Expectation & 21st Century Skills

Information Literacy
Critical Thinking
Spoken Communication
Written Performance

Interdisciplinary Connections

Stepping Stones:

- Decorate 3-D objects (Music and The Arts) (Module 10)
- Book: I See Shapes by Marcia Fries (Language Arts and Literature) (Module 4)
- 2-D shape posters (Music and The Arts) (Module 4)
- Book: Give Me Half! by Stuart J. Murphy (Language Arts and Literature) (Module 6)
- Show one-half with fraction flowers and trains (Music and The Arts) (Module 6)