

**TO: Westwood School Committee**

**FROM: Emily Parks, Superintendent  
Allison Borchers, Assistant Superintendent**

**DATE: October 6, 2017**

**RE: Review of Class Size Guidelines**

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**Introduction:**

One of the agenda items for the October, 2017 School Committee meeting is a review of the district’s elementary class size guidelines, which were last formally reviewed in 1998. These guidelines are an important factor during the budgeting process as we consider the needs of the district, weigh priorities, and make decisions about the relative impact of how we distribute our resources. As a district, we are, of course, committed to providing an outstanding educational experience for our students while also navigating the fiscal reality that choices will always have to be made.

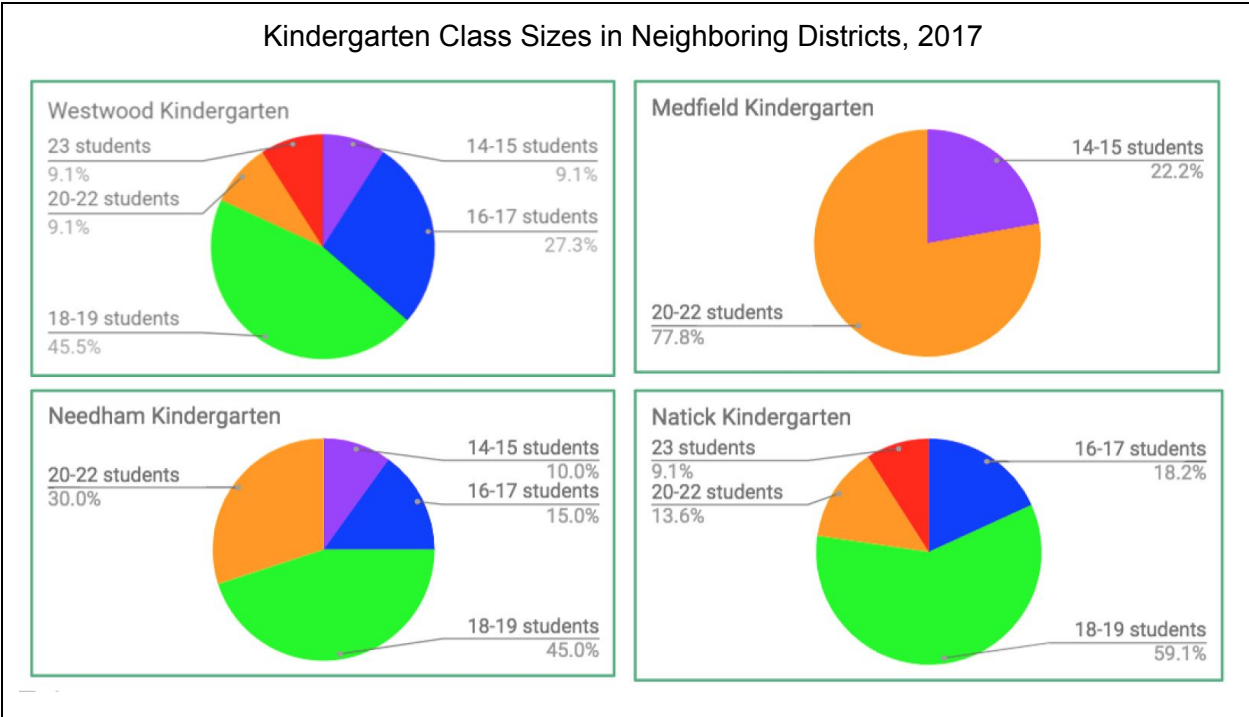
Last spring, the district administrators and the School Committee heard from several parents regarding their concerns around elementary class sizes. These concerns reflect the expectations that parents have for their children’s experience in a high-quality school system and their desire to ensure that their children are able to effectively learn and achieve. We share this goal. It was important for us to hear from parents and provided an impetus for reviewing our class size guidelines by reading research, looking at comparison data, examining budget considerations, and engaging in discussion and reflection about our educational goals and our theory of action for student learning.

Though conversations about class size are in no way new (in fact, over the years it has been a frequent topic during public participation), some of the expectations around what constitutes a reasonable class size felt different last spring, with some parents expressing concern around classes of 22 students -- a number that historically has been quite typical. The range of class sizes in Westwood has remained the same over the last 10 years. In fact, average class size has declined over the same time period due to a higher frequency of very small classes:

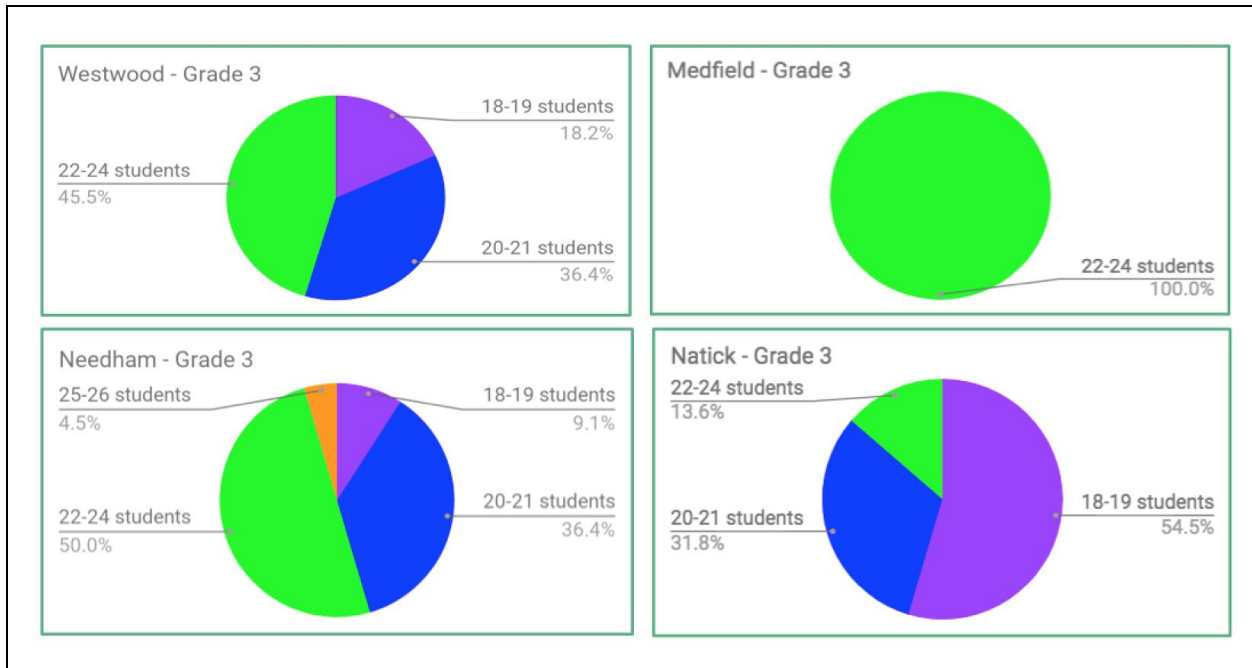
	10-Year Trend			Current
	2006	2011	2016	2017
<b>Elementary Enrollment</b>	1449	1487	1326	1283
<b>K-1 Range</b>	15-23	16-22	15-23	14-23

<b>K-1 Average</b>	19.64	18.75	18.38	17.7
<b>2-5 Range</b>	16-25	16-25	15-26	15-26
<b>2-5 Average</b>	21.7	20.3	19.58	18.9

The range of elementary class sizes in Westwood is in alignment with class sizes in neighboring communities:



### Grade 3 Class Sizes in Neighboring Districts, 2017



As we reflected as a leadership team on what we have heard from parents during School Committee meetings, at PTO meetings, via e-mail communication, and during individual meetings with parents, we noted two themes:

1) First, parent concerns about class size appear to stem in part from a sense of disparity between different schools or different grades within the same school, leading to a feeling that one's child may not be getting an equitable experience. This feeling has been exacerbated by our current situation in which more than 50% of our elementary classes are, in fact, *below* the School Committee's stated guideline. This high frequency of very low class sizes ( i.e. 14-16) is unusual for Westwood, perhaps partly born out of our declining elementary enrollment, combined with small schools that don't allow for small adjustments to class size across multiple sections.

2) The body of research on class size examines impact as measured by quantitative outcomes like test scores. However, when parents speak about class size, just as often as they talk about academic outcomes, they talk about the *qualitative* experience that they want their children to have in school (e.g. having the teacher know one's child well, making sure that their child doesn't get "lost in the shuffle"). This qualitative experience is important to consider -- both within the context of class size and other issues of school culture and climate -- and no doubt is related to academic achievement. We, too, value students' having a good experience in school and believe that there is a connection between these qualitative experiences and learning, though we could not identify any research evidence about this issue as it pertains to class size.

**Class Size Research Summary:**

At the September, 2017 School Committee meeting, Assistant Superintendent Allison Borchers provided a presentation about the educational research on the impact of class size on students' academic achievement to serve as a foundation for the School Committee's deliberation. A "broad strokes" summary of last month's in-depth presentation and discussion is below<sup>1</sup>:

- Class size research presents some limitations given the number of variables that impact student learning and the difficulty in finding research conducted in a similar context to Westwood. Like all educational research, research on class size should be interpreted with caution.
- Research on class size typically looks at a correlation between class size and test scores.
- Most positive data on class size are from the STAR Program (Tennessee) conducted in 1986. Key findings from that data include:
  - *Significant* reductions in class size (i.e. a 30% decrease in number of students) correlate with improved test scores
  - The effect size of class size reduction was greater with low-income and black students
- The effect of class size reduction is relatively small (.22) compared with the effect size of other educational initiatives, such as formative evaluation of teachers (.90) and intervention strategies for students (1.07).
- STAR data only looked at class size reduction (CSR) in early grades (K-3). There are some less rigorous studies showing some impact of CSR in grades 4 & 5 (effect size range 0.08 - 0.11)
- Qualitative data gathered in studies shows that teachers do not change approach when class size is reduced. (I.e., a teacher does not personalize or differentiate more when there are fewer students.)

In summary, while class size reductions do potentially impact student learning in early grades, they do not have the impact of some other initiatives.

**Additional information requested by the School Committee:**

During the September School Committee meeting, members posed several important questions, which we have answered below:

*What are the class size guidelines in other districts? In particular, how does our guideline compare to districts with very successful student outcomes?*

The following chart represents the elementary class size guidelines in selected local districts. Some districts have articulated a range, as Westwood does. As you'll see, Westwood's current guideline is comparable (and in some cases lower than) other districts' guidelines.

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<sup>1</sup> Ms. Borchers's September presentation includes more detail, including research citations.

	Westwood	Lexington	Needham	Wayland	Weston
K	18-22	18 (max 20)	18-22	20*	17-21 (target 19)
1	18-22	22 (max 24)	18-22	20	17-21 (target 19)
2	18-22	24 (max 26)	18-22	23	18-22 (target 20)
3	18-24	24 (max 26)	18-22	23	18-22 (target 20)
4	18-24	24 (max 26)	20-24	25	20-24 (target 22)
5	18-24	24 (max 26)	20-24	25	20-24 (target 22)
Notes		<p>"...will make every effort to maintain...teacher/pupil ratios..."</p> <p>"If any class exceeds the maxima by 20% or more, the class will be split."</p>	<p>"Recommended class sizes..with the understanding that these are guidelines rather than absolute limits requiring strict, literal adherence."</p>	<p>"The SC sees no merit in strictly prescribing arbitrary class size limits...should guide for budgeting purposes..."</p>	<p>"The Committee reinforce its long-term vision of supporting quality while also recognizing the financial constraints facing the Committee and the Town."</p>
Kindergarten Assistants?	Yes	Yes	No	Yes	Yes

*How many other professionals and paraprofessionals support the education of students in an elementary classroom?*

Within their regular classroom, in a given day, many professionals other than the classroom teacher are involved in students' education. Professionals such as literacy specialists, math specialists, instructional technology coaches, and special educators join the classroom teacher either to co-teach or to work with groups of students through differentiated learning experiences. (These individuals all hold professional licenses and are highly-qualified teachers.) In addition to work within the classroom, some students may work with specialists in small groups or individually in a "pull out" context in order to provide additional supports, interventions, or extensions. Similarly, some students may receive services (either within the classroom setting or outside of the classroom) from psychologists, speech and language pathologists, occupational therapists, physical therapists, or ESL teachers. All of these professionals work within Westwood's model -- the efficacy of which is supported by research -- of ensuring that

students learn from highly-qualified, skilled professionals within a general education setting that provides tiers of support and intervention. It would not be uncommon, therefore, to see multiple adults working with a class during core academic instruction.

Additionally, in Westwood students interact with a number of support personnel including special education instructional assistants, general education instructional assistants, literacy paraprofessionals, ELL tutors, and ABA tutors. These personnel often support students in the general classroom setting.

Student needs vary from classroom to classroom. Principals make careful decisions about how to allocate personnel to support those needs. There is, therefore, no “typical” staffing formula that we can point to. However, we have provided below a “snapshot” of 3 classrooms and the staff associated with each one as a frame of reference:

<p>Example 1: Grade 5 Classroom</p>	<p>1 - 3 students with IEPs or 504 plans who receive reading or math support in-class or in small groups outside of class</p> <p>Two sessions per week of literacy support for students in small groups</p> <p>One session per week of literacy coaching for teacher</p> <p>One session per week of math support for students in small groups on a targeted skill (ex. fractions)</p> <p>Two sessions per week of math coaching for teacher for five weeks during second half of year</p> <p>Librarian in class to provide engineering support (STEAM/maker space)</p> <p>Psychologist available to all students; can lead whole class lessons on social skills</p> <p>One session each per week of Art, PE, and Library</p> <p>Two sessions per week of Music</p>
<p>Example 2: Grade 4 Classroom</p>	<p>3 - 5 students with IEPs and 1 - 2 students with 504 plans who receive Learning Center or Resource Room support three sessions per week of 45 to 60 minutes in-class or in small groups outside of class</p> <p>Four 60 - 90 minute sessions per week of literacy support for students and teachers</p>

	<p>One sixty minute session per week of math coaching or intervention for students either in-class or in small groups outside of class</p> <p>One session per week, in 5-8 week cycles, of math coaching for teachers; the goal for math coach to be in-class three times per week co-teaching or breaking class into small groups</p> <p>One thirty minute session each week, for six weeks, Psychologist leads whole class lessons on social skills</p> <p>One session each per week of Art, PE, Library</p> <p>Two sessions per week of Music</p>
<p>Example 3: Grade 1 Classroom</p>	<p>5-8 students with IEPs have learning center or resource room support</p> <p>In-class or small group ELL services of one to two hours</p> <p>1 - 2 PEER program students with Instructional Assistant, ABA tutor, or SPED teacher daily in general education classroom multiple times</p> <p>Occupational Therapist in class</p> <p>Speech Language Pathologist in class</p> <p>Four sessions per week of literacy support for up to an hour in small groups</p> <p>Two 45-minute sessions per week of in-class literacy support</p> <p>One session per week or every other week of literacy coaching for teacher</p> <p>Three 30-minute sessions per week of math support for students in small groups</p> <p>Two 45-minute sessions per week of in-class math support for students</p> <p>Two sessions per week in the fall and spring of math coaching for the teacher</p> <p>Weekly consultations with providers</p> <p>Weekly sessions with Psychologist for social groups and lunch bunch</p> <p>One session each per week of PE, Music, Library</p> <p>Two sessions per week of Art</p>

*Is it possible to determine how much it would cost to create elementary class sizes that don't exceed 18 students? 20 students? 22 students?*

Using our current class size distribution as a starting point, and assuming no change to our current configuration or to our elementary districts, we determined how much it would cost to lower class sizes to various “thresholds:”

To achieve maximum class size of:	# of additional classroom teachers	# of additional specialists (art, music, PE, library)	# of additional K assistants	Cost *See note below
18	13 FTE	2.5 FTE	2 FTE	\$980,000
20	10 FTE	2 FTE	1 FTE	\$745,000
22	5 FTE	1 FTE	1 FTE	\$385,000

Please note: These figures do not include costs associated with additional furniture, curriculum materials, supplies, or various personnel costs such as increased time with interventionists. For this exercise, we have assumed \$60K per teacher (Masters, step 5) and \$25K per instructional assistant. **The above figures also ignore the fact that we do not currently have classroom space to accommodate additional classroom teachers.** For example, even to achieve a maximum class size of 22, we would need to reclaim 5 classrooms that are currently being used by specialists, for example, by teaching “art on a cart.” Even if we reclaimed all dedicated art and music space (which are programs that we value as part of students’ educational experience), we could not achieve the standard of no more than 20 students per class within our current buildings.

**Recommendations:**

The district leadership team and elementary principals have carefully considered the research evidence around class size, reviewed guidelines from other districts and actual class sizes in other communities, analyzed financial impact of lowering the guidelines, and examined staffing considerations related to our current intervention model and arts programming. Based on that process, we recommend the following revised class size guideline for your consideration:

*The Westwood School Committee is committed to favorable class sizes at all grade levels as one important element of the learning experience for students. To the extent possible, the School Committee will maintain reasonable class sizes in all classrooms throughout the system. Recommended class sizes are listed below, with the understanding that these are guidelines rather than absolute limits requiring strict, literal*



*adherence, and should serve as a guide for budgeting purposes and in response to the enrollment of new students into classes that are near or at the numbers listed below:*

<u>Grade Level</u>	<u>Class Size</u>
K-3	18-22
4-5	18-24
6-12	Reasonable class sizes (18-24), ideally not higher than 28, with the exception of traditionally large group classes (e.g. band)

*In the event that a class in grades K-3 reaches 23 students or a class in grades 4-5 reaches 25 students, or if a principal believes that a particular class is not functioning properly, the superintendent in consultation with the building principal may recommend one of the following actions:*

- 1. Reallocate or increase literacy or math specialist support*
- 2. Reallocate or increase literacy paraprofessional support*
- 3. Assign an instructional assistant to the class for part or all of the day*
- 4. Provide an additional teacher in a co-teaching model*
- 5. Open an additional class section at that grade*
- 6. Use other practical solutions as may be deemed appropriate*

*If, in the judgment of the superintendent, it is necessary to take action that would affect the budget, such as increasing professional staffing, a recommendation will be brought to the School Committee for approval.*

The above recommendation maintains a reasonable class size that is financially sustainable, is similar to surrounding districts, and has proven historically to produce excellent academic outcomes. Notably, however, we are recommending a change in the guideline for grade 3 that would put classes into the same range as grades K-2. This reflects our beliefs about the developmental needs of third graders, their level of independence, and the fact that grade 3 is a pivotal moment educationally as students transition from “learning to read” to “reading to learn.” Finally, this recommendation identifies the “trigger” for when we consider adding supports and articulates what those supports may be.