

INFORMATION ITEM

Date: November 14, 2016
To: Raymond E. Lechner, Ph.D.
Superintendent
From: Mrs. Kelly Jackson, Principal
Subject: Response to Board Questions: Freshman Survey

Background Information

For the past 7 years, students at New Trier High school participated in a survey during the second semester of their freshman year. This survey identifies how well prepared students perceive themselves to for the challenges of high school. Students take the survey during their physical education classes, and report on their perceived preparedness in core academic areas as well as in physical education, related arts, and extra-curricular activities.

There were 981 students who participated in the survey, taken in the spring of 2016, 385 of whom attended Wilmette Junior High School. This report will focus on responding to questions posed by the Board of Education following the initial report given in September on the New Trier High School Freshman Survey. For the purposes of this report we will focus on the perceived preparedness numbers in the area of science, as this content area saw the sharpest decline in the percentage of students reporting preparedness.

Reported Preparedness

Students taking the survey were asked to self-rate their level of preparedness for all subjects on a four-point scale (Well Prepared, Adequately Prepared, Somewhat Prepared, and Not Prepared). For the purpose of this report, we combined the "Well Prepared" and "Adequately Prepared" categories as positive indicators of preparedness and the "Somewhat Prepared" and "Not Prepared" categories as negative indicators.

In the area of science on the 2016 survey, 57% of former WJHS students rated themselves as well prepared or adequately prepared for science at NTHS. 37% of former WJHS students rated themselves as somewhat prepared or not prepared for science at NTHS. The positively prepared number was down from 73%, with 24% saying they were somewhat or not prepared on the 2015 survey.

Some items to note with these percentages are:

- 58% of students reported being prepared with the amount of homework received (down from 68% the previous year)
- 71% of students reported being prepared in the area of study skills (down from 75% the previous year)
- 10% of students taking science took a class other than the recommended course

- 64% of students taking a class other than the recommended course took a higher level than was recommended
- 32% of former WJHS students taking science in their freshman year chose the PCB (physics) strand for their science coursework (up from 24% the previous year)

Science

The drop in the perceived preparedness of students in science is of concern to the instructional staff at Wilmette Junior High, and they have already had several meetings together, as well as with teachers from New Trier to investigate the reasons behind this decline. Through this collaboration we have identified several potential causes for this decrease in numbers:

- **Homework.** Former WJHS students also reported a decrease in feelings of preparedness in homework on the 2016 survey. After discussions with the science department, as well as other academic departments such as English, world languages, and math, it is important to note homework completion is included in the final grade for students in the majority of classes. The percentage of homework toward a final grade can often be as much as 30%, and many times if the homework is more than a day late, students receive a zero. This is in contrast to the philosophy of no zeros in District 39, as well as the practice of separating homework from the “product” grade on the report card, and instead assigning homework completion a “process” grade of Consistently, Sometimes, or Seldom.
- **Instructional Practices.** NTHS science classes utilize a traditional format of instruction. This means that for most science classes there is a 40-minute class utilizing direct instruction, with the engaged students taking notes during the entire class period. Homework often involves reading at home from the text book and being quizzed on that reading the next day in class. Due to their schedule, NTHS students are able to participate in longer lab periods (80 minutes) two days a week. This contrasts to instructional practices across District 39, where teachers utilize a fully-aligned NGSS based curriculum focused on inquiry based learning where students spend the majority of the class period focused on investigating, answering questions, working in groups, and reflecting on their learning and data collection. Writing and reading have been integrated into the classroom at the 7th and 8th grade level, and textbooks are seldom used.
- **Assessment Practices.** NTHS science classes likewise utilize a traditional format for studying and assessing students’ understanding of scientific concepts. Students participate in readings and respond to questions on the reading as part of their homework assignments, and then are often quizzed on the reading the next day in class. Additionally, students are required to make their own study guides based on a given topic, and are expected to review for their exams on their own. In contrast, students at WJHS are given study guides by their teacher at least a week in advance of any assessment, and participate in in-class review sessions, as well as optional before or after school reviews provided by their teachers.
- **Level and Class Placement.** Placement recommendations are made by the science department at NTHS after the English and Math chairs complete their placement recommendations. Level and course placement is based on the results from the placement tests that students take in December of the year prior, along with teacher input, parent input, and student written responses. The recommendation for science is made depending on the course. Biology and Geoscience recommendations are made based on the student’s level of English, as those classes typically involve more writing, reading, vocabulary, and note-taking. Recommendations for Physics-Chemistry-Biology sequence (PCB) involves a consideration of the math placement. A student is only recommended for PCB if that student is taking geometry or Algebra II, and the level of recommendation has to match the

level for the math recommendation. If a student is not taking geometry, that student is not recommended for physics.

New Trier shares that they have seen an increase in students taking PCB, and other township sender schools have also seen this (although at lower percentages than at WJHS). NTHS teachers report that about 15% of students struggle in the physics class due to its emphasis on math. It is important to note that about 10 years ago New Trier began offering physics at both a 3 and a 4 level, whereas prior to that date it was only offered to 4 level students. New Trier suggests that for many students it is more beneficial to take PCB after a few years of high school math, as they are accustomed to the rigors of math and science at that point. Either sequence, beginning with physics or beginning with biology, benefits students who are interested in pursuing sciences past high school.

Action Steps

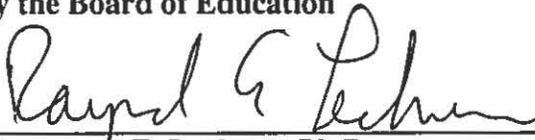
The science department at WJHS has considered all of this input, and has put together the following action steps, some of which were enacted beginning last year, in order to proactively address the students' feelings of unpreparedness as they continue to the high school.

1. Beginning in the 2015-2016 school year an increase in writing was integrated into the science curriculum. Science teachers collaborated with the DST and writing teachers to align their instruction, and use the same requirements with respect to the 6 traits rubric to help students grow as writers in science. Science instruction also follows the claim-evidence-reasoning format for writing.
2. Beginning in the 2015-2016 school year teachers began integrating instruction of note-taking and teaching strategies such as T-Notes for use with non-fiction reading.
3. This year science teachers have started assigning readings for homework and having students complete Schoology quizzes (ungraded) the next day to review the concepts contained in the reading. Closer to the end of the year eighth grade teachers will include some of these quizzes in grades.
4. While teachers have always incorporated non-fiction reading, they have increased reading assignments for students and have also required note-taking for these assignments at an increasing level. By the end of the year, students will be asked to read passages and take related quizzes without the assistance of notes.
5. Teachers are going to involve students more in the creation of their study guides and provide more instruction on how to study effectively for upcoming assessments so students have an increased level of independence with studying.
6. While the curriculum will remain inquiry based, and highly hands-on, teachers plan to integrate more direct instruction periodically throughout each unit, where students are asked to take notes and follow along with instruction to prepare them for the different structures in high school
7. As placements come out as well as at the end of the year, eighth grade teachers plan to have discussions with their students about the format of the different classes at New Trier so students have a better idea of the expectations for each different type of class. Additionally, they will highlight concepts and content that they know is studied in different high school classes throughout the year, so students will be able to recall that information as they go to the high school.

Summary

The staff and administration at Wilmette Junior High will continue to gather information about the homework, instructional, and assessment practices, along with level and class placement at New Trier High School. We will weigh the perspectives of former students with respect to preparedness for all aspects of high school, and will use that information as we adjust our practices at Wilmette Junior High to improve each child's feeling of preparedness moving forward.

**Recommended for approval
by the Board of Education**

A handwritten signature in cursive script, reading "Raymond E. Lechner". The signature is written in black ink and is positioned above a horizontal line.

**Raymond E. Lechner, Ph.D.
Superintendent**