# 2016 STUDENT TRAVEL SURVEY REPORT

July 2018

## INTRODUCTION

Since 2005, teachers and staff at Seattle Public Schools (SPS) have asked students how they travel to and from school. This citywide effort has helped our Safe Routes to School (SRTS) program better understand student transportation behavior and see how school travel changes year-over-year. What follows is the 2016 Student Travel Survey Report, annual assessment to publish and distribute the data from the survey to a wider audience.

## METHODOLOGY

The annual student travel survey is administered by teachers in schools across the SPS system. Students surveyed are in kindergarten through fifth grade and attend either an elementary or K-8 school. Teachers ask students to raise their hands to show how they arrived at school that day and how they plan to get home. The survey is administered in June to capture the travel patterns that families have established through the year and to avoid months with special walk or bike to school campaigns.

The answer choices to the question include: walk, bike, school bus, car, carpool, transit, and other. Each student is told to raise his or her hand only once for each question. The teacher records the results of the survey for each classroom and the data is then sent back to SDOT for analysis.

For our mode share findings below, the reported number each way students travel represents the percentage of all trips done that way – not the percentage of students. This means students who travel to and from school using different travel modes for each trip don't have to decide on a single answer. For example, a student who walked to school and is expecting to be picked up after school in a carpool would provide information about each trip instead of having to choose one mode choice to fit both trips. The student would raise his or her hand once for "walk" arrival and once for "carpool" departure.

Additional data collected beyond travel mode includes the number of students who participated in the survey and the grade level of participating students.

Over the past decade, participation in the student travel survey has varied by how many and which schools send us results, as well as the number of students that participated at each school. The Seattle School Traffic Safety Committee and SPS have partnered with us to find ways to increase participation in the survey moving forward.

## PARTICIPATION

In 2016, 19 out of 70 elementary and K-8 schools participated in this effort, collecting data in a two-day span in the June 2-4 period. In all schools, 234 classrooms with about 5,138 students were surveyed, resulting in information on 23,963 trips. Of the 19 participating schools, 12 of them had student participation rates above 70%. This represents about 14% of the total number of kindergarteners through fifth graders across the district.

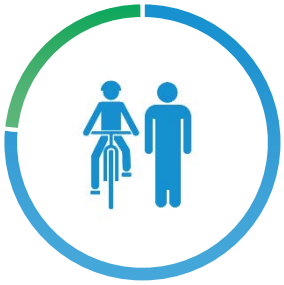
## MODE SHARE

### Overall findings

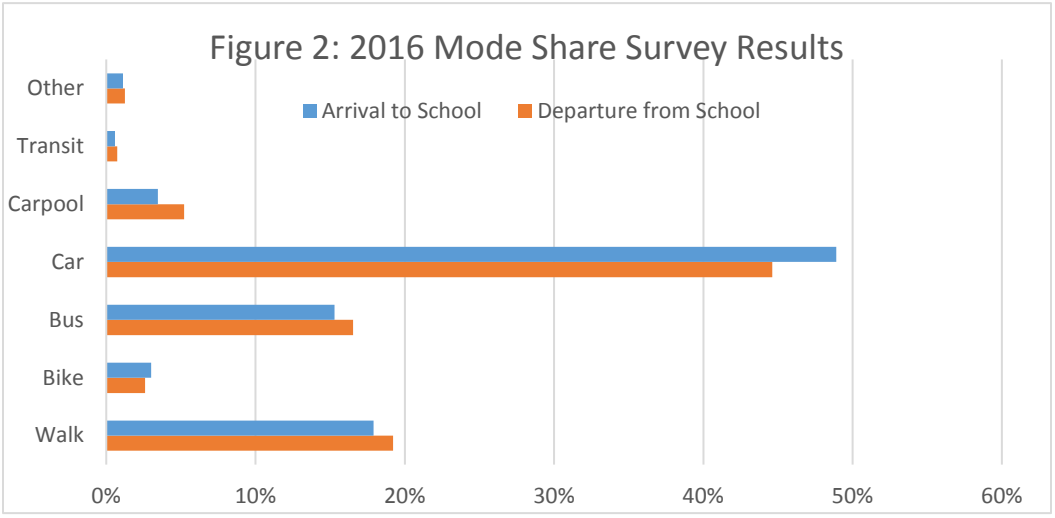
Walk and bike trips, which we consider "active transportation" modes, together accounted for 23% of trips. This represented more than 5,674 active trips.

We found that the top three modes of travel for trips to and from school by students were car (52%), walk (20%), and school bus (18%), which together accounted for 90% of all trips (see Figure 2). The next most common modes were carpool (5%), bike (3%), transit (1%), and other (1%).

We also found that there is some variation between the way students travel to and from school. The percentage of trips by car to school in the morning is about four points higher than the percentage of trips by car from school in the afternoon. The trip numbers appear to shift from car to walk, carpool, and school bus in the afternoon.



23% ACTIVE | 77% NON ACTIVE




### Mode Share by Grade

When reviewing the data by grade, we found that mode share shifted as students got older (see Figure 3). The percentage of walk trips increased from a low of 17% in second grade to a high of 25% in fifth grade. The percentage of school bus trips increased from a low of 14% in kindergarten to a high of 20% in third grade. The percentage of school trips by car decreased from a high of 54% in first grade to a low of 45% in fifth grade. Percentages for bike, carpool, transit, and other trips didn't show as much of a directional trend, with shifts in one to two percentage points over the six grade levels surveyed.

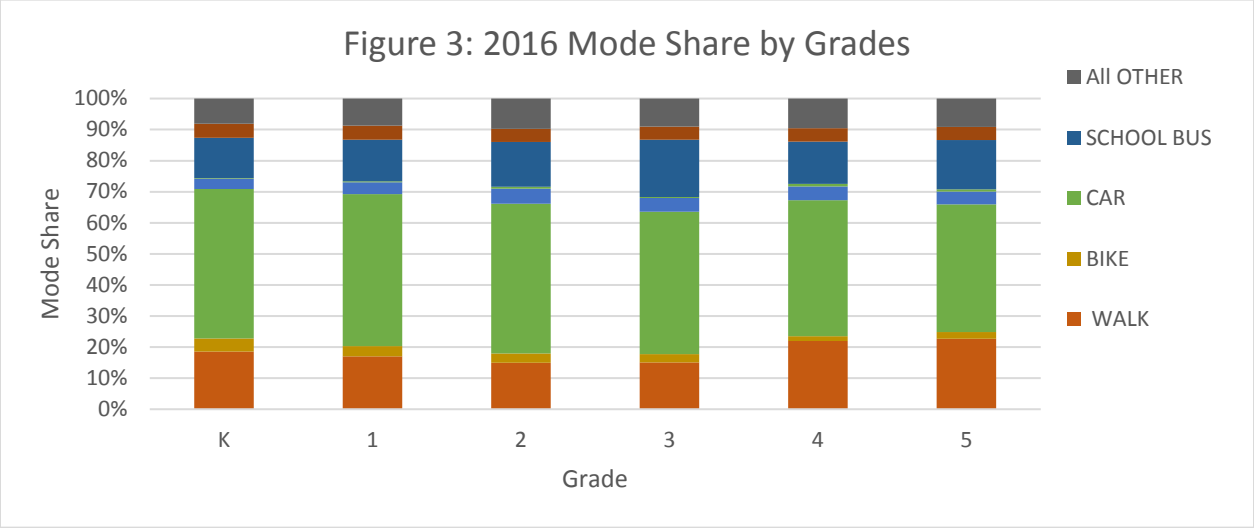



**FIGURE 3: MODE SHARE BY GRADE**

## Mode Share by School

Mode shares are calculated for each individual school participating in the survey. Schools are then ranked by active transportation mode share (see Table 1) to learn where students are logging the most walk and bike trips. West Woodland Elementary (44%), Coe Elementary (43%), Catharine Blaine Elementary (34%), John Stanford International Elementary (34%), and Laurelhurst Elementary (33%) had the highest rates of active transportation in 2016.

Each SPS high school is made up of a cluster of elementary, K-8, and middle schools with enrollment areas that fall within the high school's enrollment area. To learn more about how the active transportation mode share by school compares across the district, we grouped the participating elementary and K-8 schools according to which high school they feed. We then ordered the schools within the high school clusters from the highest active transportation mode share to the lowest (see Figure 3). The dotted yellow line in Figure 5 represents the average active transportation rate across all schools (23%).

**TABLE 1: TOP 5 AND BOTTOM 5 SCHOOLS RANKED BY ACTIVE TRANSPORTATION MODE SHARE**

| Rank | School | Active Rate |
|---|---|---|
| 1 | West Woodland Elementary | 44% |
| 2 | Coe Elementary | 43% |
| 3 | Catharine Blaine Elementary | 34% |
| 4 | John Stanford International School | 34% |
| 5 | Laurelhurst Elementary | 33% |
| … | | |
| 13 | Queen Anne Elementary | 11% |
| 14 | North Beach Elementary | 10% |
| 15 | Rainier View Elementary | 9% |
| 16 | Thurgood Marshall Elementary | 6% |
| 17 | TOPS K-8 | 3% |

The Ballard, Roosevelt, Center, and West Seattle high school clusters had the highest percentage of schools with active transportation rates above or at the district-wide average. In the Ballard cluster, two schools that completed travel surveys were above average and in the Roosevelt cluster four of five were above average. The Rainier Beach, Chief Sealth, Ingram, and Franklin high school clusters did not have any schools with above-average rates of active transportation. The Garfield and Center high school clusters had mixed results, with at least one school above average with West Seattle schools meeting the average.

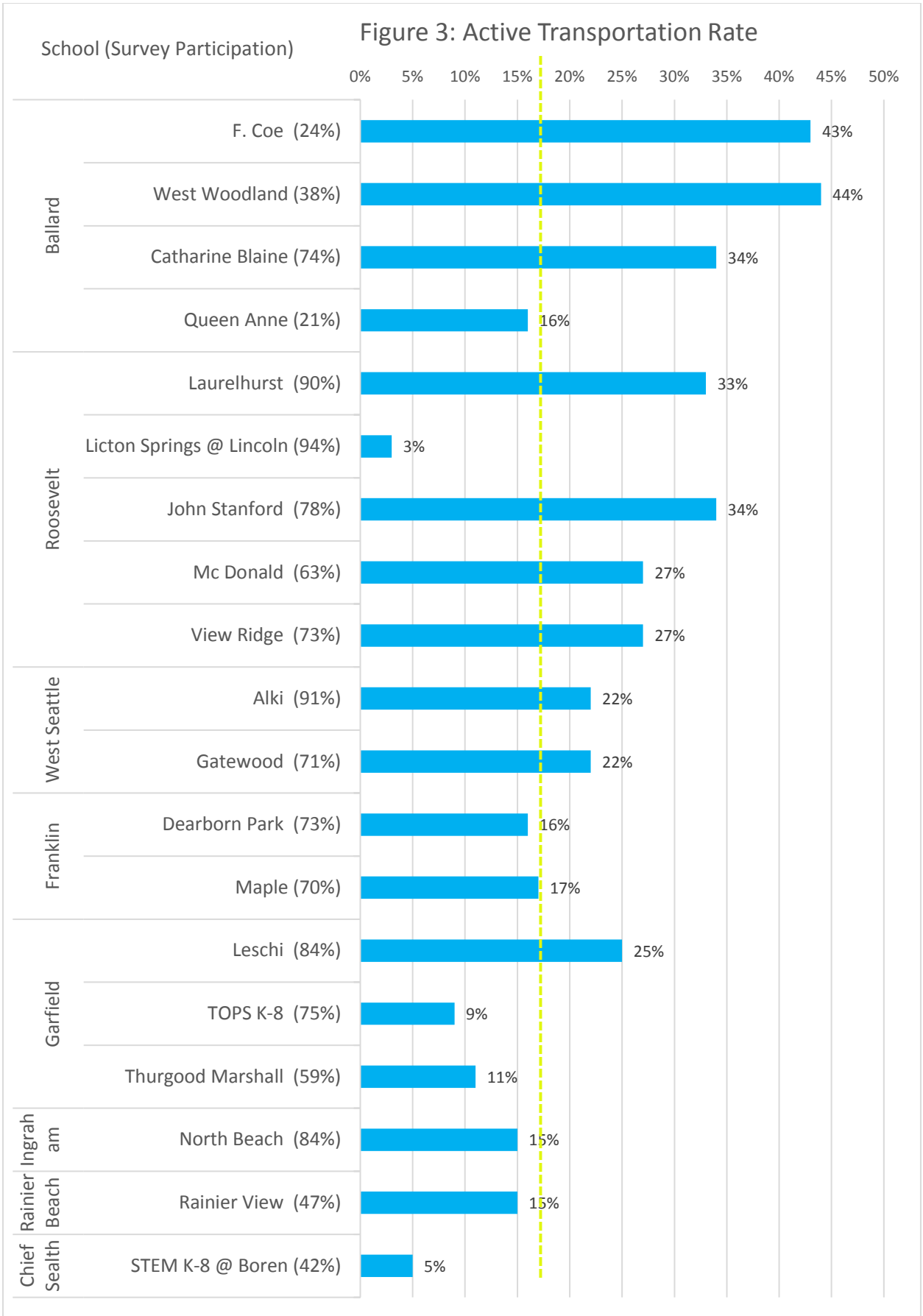


Figure 3: Active Transportation Rate
School (Survey Participation)
0%
5%
10%
15%
20%
25%
30%
35%
40%
45%
50%
Ballard
F. Coe (24%)
43%
West Woodland (38%)
44%
Catharine Blaine (74%)
34%
Queen Anne (21%)
16%
Roosevelt
Laurelhurst (90%)
33%
Licton Springs @ Lincoln (94%)
3%
John Stanford (78%)
34%
Mc Donald (63%)
27%
View Ridge (73%)
27%
West Seattle
Alki (91%)
22%
Gatewood (71%)
22%
Franklin
Dearborn Park (73%)
16%
Maple (70%)
17%
Garfield
Leschi (84%)
25%
TOPS K-8 (75%)
9%
Thurgood Marshall (59%)
11%
Ingraham
North Beach (84%)
15%
Rainier Beach
Rainier View (47%)
15%
Chief Sealth
STEM K-8 @ Boren (42%)
5%

## 2016 CONCLUSIONS

- 19 out of 70 elementary and K-8 schools participated in this effort, including 234 classrooms with about 5,138 students
- Mode share was car (52%), walk (20%), school bus (18%), carpool (5%), bike (3%), transit (1%), and other (1%)
- Active transportation accounted for 23% of trips
- There is a slight variation in mode share by time of day, with more car trips in the morning than afternoon and more walk and school bus trips in the afternoon than morning
- Mode share changes as students get older; the rate of walk and school bus trips increases with age and the rate of car trips decreases with age
- The Ballard and Roosevelt school clusters had the highest number of above-average active transportation schools, and Franklin, Ingraham, Rainier Beach, and Chief Sealth school clusters did not have any schools with above-average active transportation rates

We use these findings to help guide our program investments in walking and biking infrastructure and programs to encourage families to choose walking and biking to school. Schools surrounded by more fully developed walking infrastructure can benefit from programs to encourage walking and biking, whereas schools located in areas lacking pedestrian infrastructure can benefit from both infrastructure investments and encouragement programs.