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SUPPLEMENTARY INFORMATION

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Reducing student absences at scale by targeting parents' misbeliefs

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Supplementary Materials for

Reducing Student Absences at Scale by Targeting Parents' Misbeliefs

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Supplementary Notes

Data

We obtained all of our student- and household-level data from school district administrative records.

Covariates

First, unless otherwise stated, we used the following demographic control variables:

- Female
- English is the home language
- Free and Reduced Lunch
- Low English Proficiency (LEP)
- Black/African-American

We also controlled for:

- Number of days absent in the 2013-2014 SY
- Number of days absent in the 2014-2015 SY prior to the first mailed treatment

Finally, we included indicator variables for school and grade (i.e., fixed effects) in our standard control variables.

Outcomes

We obtained the following outcome variables from district administrative records.

- **Primary outcome:** Number of days recorded as absent between the day immediately after postcard #1 was sent out and the end of school year
- **Secondary outcomes:**
    - Number of tardies after postcard #1 was sent out through end of school year
    - Grades of core courses averaged across the final three marking periods of the 2014-2015 SY
    - State standardized reading and math test scores for all available grades

Universe Construction

We anticipated that the interventions would differentially affect students based on their number of absences. For instance, students with very good attendance might not be affected at all due to ceiling effects. Extreme absences, on the other hand, may be the results of data errors or represent students with undocumented, singular life circumstances (e.g., sudden hospitalization). Prior to the start of the study, we therefore demarcated a universe of students who would likely be most responsive to our interventions. We selected students who satisfied the following criteria:

- *Worse than typical attendance*: missing at least three more days than the *minmode*[1] of their specific school-grade (i.e., they missed at least three more days in the 2013-2014 SY than the typical student referenced in the RELATIVE ABSENCES treatment [see Main Text of Paper]).

- *Did not have extremely high levels of Absenteeism:* missing more days than two standard deviations above the school-grade mean in the 2013-2014 SY.

Households with students who did not qualify for inclusion into our Main Analysis Universe were assigned to two other experimental universes that are not the focus of this study, but are described in greater detail in our pre-registered Analysis Plan.

Focal Students

As discussed in the main text, we only targeted one student in each household. Therefore, if multiple students at an address were eligible for the study, we randomly selected one student from that address as part of the study universe, with treatment messages focused on this student. We refer to this student as the *focal student* and the other eligible students in the same household as *non-focal students*. To avoid asymmetric attrition, if any student in a multi-student household had missing or partial outcome data, we exclude the *entire* household just for the purposes of sibling analysis. This yielded 28,080 focal students and 6,381 non-focal students in the main absence universe after all post-randomization exclusions (see main text of the paper for full discussion of sample selection).

Randomization

We randomly assigned focal students to one of four treatment conditions, with randomization stratified by school, grade, and prior attendance.

Stratification

We divided each school-grade based on prior year absences. Due to differing sample sizes, we divided school-grades at the high school level into four prior attendance groups (i.e., by quartiles) and divided school-grades at the elementary and middle school level into two prior attendance groups (i.e., below/above the median). If any resulting strata had fewer than four qualifying students, we instead used student-grade as the stratum for all students in that student-grade.

Randomization

We generated a standard uniform variate for each student and then ranked the students within each stratum. We first randomly selected a starting treatment condition for assignment and then assigned students to each treatment arm in the following order:

[1] If there were multiple modes, we selected the minimum mode. We found that more individual students are clustered around the minimum mode as compared to the maximum mode, so we concluded the minmode was a better representation of the "typical" student in a class.

1. CONTROL
2. REMINDER
3. TOTAL ABSENCES
4. RELATIVE ABSENCES

(For a full description of each treatment, please see the main text of the paper.) This sequence repeated until all students in the stratum were assigned to a treatment arm.

Table S1 shows the number of focal students assigned to each condition, which shows that each arm has roughly the same number of students. Note that, due to discreteness, the probability of being assigned to a given condition is not going to be exactly the same as that of every other condition. To see this, consider a stratum with 6 eligible students. Following the above procedure, if the first condition was randomly selected to be CONTROL, 2 would have been assigned to CONTROL, 2 would have been assigned to REMINDER, 1 would have been assigned to TOTAL ABSENCES, and 1 would have been assigned to RELATIVE ABSENCES. Importantly, however, these probabilities were all fixed and known *a priori*. When we used these probabilities for inverse probability weighting, we found similar effects (see Appendix C for details).

Table S1: Distribution of treatment conditions

Condition	N	%
Control	6,994	24.91%
Reminder	7,041	25.07%
Total absences	7,037	25.06%
Relative absences	7,008	24.96%

Balance Checks and Baseline Distributions

As seen in Table S2, the treatment conditions were balanced across major demographic variables (multinomial logistic regression, LR chi2(27) = 26.30, p= 0.50).

Table S2: Balance in demographics across conditions

	Control	Reminder	Total Absences	Relative Absences	f-test p-value
N	6,994	7,041	7,037	7,008	
2013-2014 SY Absences	16.29	16.29	16.32	16.39	0.93
Pre-treatment 2014-2015 SY Absences	1.15	1.19	1.20	1.20	0.28
% Female	52.07%	50.69%	51.81%	52.85%	0.08
% English Home Language	86.30%	86.07%	86.16%	85.69%	0.75
% Free and Reduced Lunch	72.19%	72.72%	72.47%	72.32%	0.91
% Black/AfAm	53.16%	52.14%	53.30%	52.05%	0.30
% White	16.47%	17.61%	16.40%	17.42%	0.11
% Hispanic/Latino	19.72%	20.39%	19.91%	20.42%	0.65
% LEP	6.28%	6.90%	6.47%	6.76%	0.43

The randomization was also balanced among multi-student households (multinomial logistic regression with clustered standard errors, Wald chi2(27) = 22.38, p= 0.72).

Table S3: Balance in demographics across conditions in multi-student households

	Control	Reminder	Total Absences	Relative Absences	f-test p-value
# Households	1,404	1,394	1,413	1,354	
N	3,022	2,997	3,034	2,893	
2013-2014 SY Absences	16.85	17.17	16.77	16.96	0.73
Pre-treatment 2014-2015 SY Absences	1.14	1.24	1.23	1.26	0.31
% Female	51.92%	52.01%	51.38%	53.03%	0.85
% English Home Language	82.91%	83.14%	84.57%	84.12%	0.59
% Free and Reduced Lunch	79.56%	79.20%	77.78%	78.51%	0.67
% Black/AfAm	51.07%	53.01%	52.51%	52.36%	0.76
% White	14.53%	14.85%	16.84%	16.03%	0.30
% Hispanic/Latino	23.01%	23.03%	19.67%	21.49%	0.09
% LEP	7.76%	8.39%	6.58%	6.65%	0.20

Table S4: Sample population (focal students only) vs. SDP population

	Study sample	SDP population
% Female	51.9%	44.6%
% Free and Reduced Lunch	72.4%	89.8%*
% Black/AfAm	52.7%	48.8%
% White	17.0%	11.5%
% Hispanic/Latino	20.1%	15.9%
% LEP	6.6%	5.6%**

**Full district indicator is CEP rate, which is a new measure of socioeconomic status. The measure used in our experiment was free and reduced lunch*

***Full district indicator is ELL status; the measure used in our experiment was "limited English proficiency."*

Table S5: Distribution of baseline absences (AY 2013-2014)

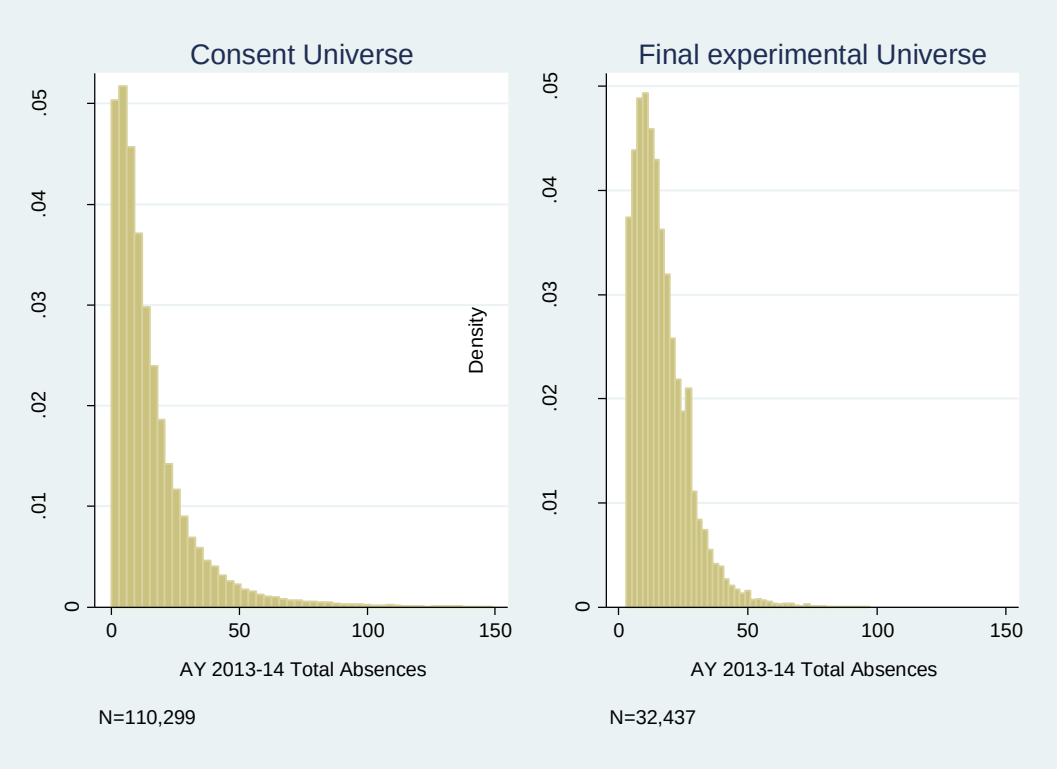
Universe	N	Mean	SD	Min	Max
Consent universe*	110,299	15.3	17.7	0	171
Main experimental universe**	32,437	17.0	11.5	3	100
Final experimental universe***	28,080	16.3	10.4	3	97

**Everyone who consented for whom we have baseline absence data*

***All focal students in main experimental universe*

****All focal students in final experimental universe after post-randomization exclusions*

Figure S1. Distribution of baseline (AY2013-14) absences in consent universe and final experimental universe



Treatment Administration

There were five rounds of mail treatments:

Mailing 1 - sent 10/9/14; in homes 10/11/14
Mailing 2 - sent 12/30/14; in homes 1/2/15
Mailing 3 - sent 3/20/15; in homes 3/23/15
Mailing 4 - sent 4/28/15; in homes 5/1/15
Mailing 5 - sent 5/27/15; in homes 6/1/15

Although households remained in the same experimental group for the duration of the study, not all households received all five treatments for their assigned group. In particular, we sought to create an experimental protocol that maximized our ability to learn about the interventions' effects while minimizing both possible backlash and possible adverse effects. First, guardians of students with excellent attendance could rightly object to official letters from the school district encouraging their students to attend more often. Second, theory and evidence suggest that informing parents that their students have better attendance than their classmates could actually *increase* absences (Schultz et al, 2007). The school district shared these concerns. We therefore implemented the following treatment rules, starting with the second treatment round (the first round only used information from the prior year and so did not have these complications):[2]

[2] For a description of each treatment condition, please see the main text.

- *REMINDER.*
    - *Treatment 2:* Send to all eligible students.
    - *Treatments 3–5:* Only send to students who have 3 or more absences at the time of mailing; otherwise send nothing.

- *TOTAL ABSENCES.*
    - *Treatment 2:* Only send to students who have 2 or more absences at the time of mailing; otherwise send the *REMINDER* treatment.
    - *Treatments 3–5:* Only send to students who have 3 or more absences at the time of mailing; otherwise send nothing.

- *RELATIVE ABSENCES.*
    - *Treatment 2:*
        - If a student has 2 or more absences at the time of mailing and has more absences than her typical classmate, send treatment;
        - If a student has 2 or more absences at the time of mailing but does not have more absences than her typical classmate, send *TOTAL ABSENCES* treatment*;*
        - If a student has fewer than 2 absences at the time of the mailing, send *REMINDER* treatment.
    - *Treatments 3–5:*
        - If a student has 3 or more absences at the time of mailing and has at least 2 more absences than her typical classmate, send mailing;
        - If a student has 3 or more absences at the time of mailing but does not have at least 2 more absences than her typical classmate, send *TOTAL ABSENCES* treatment.
        - Otherwise, send nothing.

As discussed in the main text, this experimental protocol does not affect the validity of the analysis—the analysis relied solely on the randomization itself (Intent-to-Treat analysis) and remains valid regardless of the number and type of mail treatments received. However, this protocol does affect the interpretation of the results. In other words, our results are about the impact of being assigned to one experimental condition or another, rather than the impact of receiving exactly five of a specific type mail treatments.

Treatment messages were written in English, Spanish, or Mandarin according to district records of the language spoken at home. If district records report that a language other than those three were spoken at home, treatments were delivered in English.

Missing Data and Sample Attrition

Since we obtained all of our data via administrative records, our only meaningful source of missing data was that the district is unable to track students who move or otherwise leave.

Table S6: Movers across conditions

	Control	Reminder	Total Absences	Relative Absences	chi-sq p-value
Between 1st and 2nd mailed treatments	1.48%	1.61%	1.55%	1.66%	0.82
Between 2nd and 3rd mailed treatments	2.13%	2.23%	2.11%	1.92%	0.61
Between 3rd and 4th mailed treatments	0.73%	0.68%	0.49%	0.77%	0.15
Between 4th and 5th mailed treatments	0.49%	0.38%	0.36%	0.50%	0.45
Between 1st and 5th mailed treatments	4.34%	4.53%	4.14%	4.35%	0.73
Between 1st mailed treatment and end of year	5.24%	5.44%	5.03%	5.26%	0.75

Table S7: Inverse probability weighted regression results

	Control	Reminder	Total Absences	Relative Absences
Main (unweighted) results				
Mean absences [SE]	17.0 [0.13]	16.4 [0.13]	16.0 [0.13]	15.9 [0.13]
% chronic absences [SE]	36.0% [0.00]	33.0% [0.00]	32.4% [0.00]	31.9% [0.00]
Inverse probability weighted results				
Mean absences [SE]	17.7 [0.14]	17.2 [0.14]	16.7 [0.14]	16.6 [0.14]
% chronic absences [SE]	37.1% [0.00]	34.2% [0.00]	33.8% [0.00]	33.1% [0.00]

Phone Survey

Background

The research team conducted a live phone survey of parents in the experimental universes after Treatment 5 (between 6/20/2015-6/25/2015). The survey had two primary purposes:

(1) *Internal Validity* - Did parents receive, read, and understand the mailings?

(2) *Impact on Parental Beliefs* – How did the mailings impact parental beliefs about the importance of attendance and their role in ensuring their students get to school?

A secondary purpose of the survey was:

(3) *Impact on Parental Behavior* – How did the mailings influence parental behavior?

Exclusions

We excluded:

- all households with invalid or duplicate phone numbers,
- students who were no longer enrolled in a school in our partner district,
- and students who were newly flagged with a Disability Indicator.

Analysis Methods

Unless otherwise specified, all survey question analyses were evaluated by fitting a linear regression model with treatment indicators controlling for our standard battery of covariates.

Response Rates

The response rate was 23.0% using the AAPOR guidelines for Response Rate 2, where partial interviews count as respondents. AAPOR Response Rate 2 (RR2) includes in the numerator the number of complete interviews and the number of partial interviews. It includes in the denominator the number of interviews (complete plus partial), plus the number of non-interviews (refusal and break-off, plus non-contacts, plus others), plus all cases of unknown eligibility. The response rate was well-balanced across all treatment conditions (Pearson chi2(3) = .07, p=1.00). Survey completion also did not differ across conditions (Pearson chi2(3) = 1.29, p=.73).

Table S8 shows that there is no significant difference in means across key demographic variables between the sample population of respondents and non-respondents, with the exception of English speakers. A slightly higher percentage of those who completed the survey listed English as their home language (p<.10), which is to be expected given that the survey was conducted in English.

Table S8. Balance of key characteristics between phone survey respondents and non-respondents

Factor	Did not complete phone survey	Completed phone survey	p-value	Test
N	25,749	1268		
Pre-treatment absences, median (IQR)	1 (0, 2)	1 (0, 1)	0.13	Wilcoxon rank-sum
2013-2014 SY absences, median (IQR)	14 (9, 21)	13.5 (9, 20)	0.22	Wilcoxon rank-sum
Female	13466 (52.3%)	646 (50.9%)	0.35	Pearson's chi-squared
English as home language	22126 (85.9%)	1112 (87.7%)	0.076	Pearson's chi-squared
Free and reduced lunch	18553 (72.1%)	922 (72.7%)	0.61	Pearson's chi-squared
Black/African-American	13524 (52.5%)	667 (52.6%)	0.96	Pearson's chi-squared
White	4427 (17.2%)	212 (16.7%)	0.66	Pearson's chi-squared
Latino	5164 (20.1%)	236 (18.6%)	0.21	Pearson's chi-squared
Low English Proficiency	1701 (6.6%)	72 (5.7%)	0.19	Pearson's chi-squared

Internal Validity

We included three survey questions that assessed the internal validity of the treatment.

> *Recall:* Since January, have you received letters or cards through the mail about [STUDENT FIRST NAME]'s attendance?

This question assessed whether the treatment interventions were successfully received. As such, we expected REMINDER, TOTAL ABSENCES and RELATIVE ABSENCES to have significantly higher rates of recall as compared to CONTROL. Parents who received the treatments were indeed more likely to recall receiving letters in the mail than parents who did not receive any treatments (B=.30, SE=0.04, $p<0.001$).

Table S9. Phone survey recall results

Recall	Mean	SE
Control	26.02%	0.03
Reminder	46.51%	0.03
Total Absences	60.26%	0.03
Relative Absences	64.02%	0.03

Assessing Misbeliefs about RELATIVE ABSENCES

> *RELATIVE ABSENCES:* This past school year, would you say that [STUDENT FIRST NAME], was absent from school more days than [HIS/HER] classmates in [HIS/HER] grade, about as many days as [HIS/HER] classmates in [HIS/HER] grade, or fewer days than [HIS/HER] classmates in [HIS/HER] grade?

With this question, we explored whether the content of the treatment interventions affected parents' perception of their students' absences. Since we had actual absence data about the focal student and the typical student in their school-grade, we could measure the accuracy of those relative comparison beliefs. Only those assigned to the RELATIVE ABSENCES condition received treatment that compared the parents' students' absences to that of those of the typical student, so we expected only RELATIVE ABSENCES to exhibit a significant difference. We found a significant difference in RELATIVE ABSENCES across all buffer margins used, where buffer margin was the difference between the target students' absences and those of the target students' typical classmates. In other words, with a buffer margin of 1 day, parents of students who missed only one more day than the typical student were not included in the percent correct calculation (since their student was ***not*** absent more than the typical student under this buffer margin).

Table S10. Parent beliefs about relative absences

% correct predicting that their student is absent more than typical	Control/reminder/total absences [SE]	Relative absences [SE]
buffer margin=0	9.18% [0.01]	16.24% [0.02]
buffer margin=1	9.44% [0.01]	16.73% [0.02]
buffer margin=2	9.77% [0.01]	17.44% [0.02]
buffer margin=3	10.23% [0.01]	18.69% [0.02]

Assessing Misbeliefs about Total Absences

> *TOTAL ABSENCES:* There were 180 days of school this year. On how many of those days do you think [STUDENT FIRST NAME] was absent from school, for unexcused or excused reasons?

This question similarly addressed whether parents read and comprehended the information about their students' absences. However, this question looked at the content of the TOTAL ABSENCES component. In this case, accuracy was defined as the difference between actual absences and the number of absences parents estimated or guessed. As before, we expected no differences in accuracy across REMINDER and CONTROL; we expected that parents assigned to the TOTAL ABSENCES and RELATIVE ABSENCES conditions would be more accurate than parents assigned to the REMINDER condition and CONTROL. In the main text, we report results for the difference between reported and actual days. Here, we dichotomize the estimate, reporting the percent of parents who report that their students' absences are at least as high as their actual absences. We did see a significant difference across all margins of error, where margin of error was the difference between the student's actual absences and the guardian's estimate. So if a student missed 10 days and their guardian said they thought their student missed only 9 days, under the margin error of 1 day, this response would be classified as correct.

Table S11. Parent beliefs about total absences

% Correct or overestimate days absent	Control/reminder [SE]	Total absences/relative absences [SE]
buffer margin=0	28.47% [0.02]	36.86% [0.02]
buffer margin=1	36.22% [0.02]	46.62% [0.02]
buffer margin=2	42.93% [0.02]	55.06% [0.02]
buffer margin=3	47.80% [0.02]	60.25% [0.02]

Impact on Parent Beliefs and Attitudes Regarding Attendance

We included a battery of questions assessing parental beliefs about the importance of attendance and their role in getting their students to school.

> *Importance of Attendance:* Thinking back to this past school year, which one behavior from the following list would have most helped [STUDENT FIRST NAME] do better in school?
> (Caller reads options 1-6. List is randomized.)
> 1 Attend school each day
> 2 Do more academic work at home
> 3 Read everyday
> 4 Spend less time on phone, television, or electronics
> 5 Go to bed earlier
> 6 Eat breakfast

We hypothesized that the treatments would increase the likelihood that parents would believe that attending school every day most helps their student do better in school. As such, we hypothesized that parents in the REMINDER, TOTAL ABSENCES, and RELATIVE ABSENCES conditions would choose answer choice 1 at a greater rate than parents in CONTROL. However, we found no differences in responses between the treatment conditions and the untreated CONTROL (p=.71).

> *Parental Beliefs about their Role in Preventing the Students' Absences*: (Multiple questions, please see questions Q12, Q16, Q19, Q20, Q14, Q15, and Q18 in Appendix D.)

We expected that parents assigned to the REMINDER, TOTAL ABSENCES, and RELATIVE ABSENCES conditions would have increased rates of belief that their role is important in preventing student absences as compared to parents assigned to CONTROL. All the aforementioned questions used a scale of 1-4 with 1 denoting strong disagreement and 4 denoting strong agreement. After recoding the one reverse-coded question, we took the average of all questions and used the resulting index as the dependent variable. We found no significant difference in the parental belief index across all conditions (p=.18).

> *Parent/Student Relationship:* [STUDENT FIRST NAME] and I have a warm and loving relationship.

We expected that the treatments would not affect parents' perception of their relationship with their students. As such, we hypothesized that there would be no differences between any of the treatment conditions and CONTROL in terms of responses to this question. There were, in fact, no differences between the pooled treatments and CONTROL (p=0.94).

There were no other noteworthy differences across conditions. For crosstabs of the complete survey, please see Appendix D.

Supplementary Methods

Setup

We begin with the primary analysis of the impact of the intervention on attendance and then turn to various secondary analyses. First, we describe our setup and analytic approach using the potential outcomes framework (Neyman, 1923; Rubin, 1974). Let Y_i^{obs} denote unit i's observed number of absences and let $Z_i \in \{0, \ldots, 3\}$ denote the indicator that unit i is randomly assigned to condition z. We then define four potential outcomes for each unit:

- $Y_i(0)$: Unit i's absences if assigned to the CONTROL
- $Y_i(1)$: Unit i's absences if assigned to the REMINDER condition
- $Y_i(2)$: Unit i's absences if assigned to the TOTAL ABSENCES condition
- $Y_i(3)$: Unit i's absences if assigned to the RELATIVE ABSENCES condition

To use this potential outcomes notation, we assume that randomization was indeed valid and that the Stable Unit Treatment Value Assumption holds (SUTVA; Rubin, 1980).

Fisher Randomization Test

We begin with the Fisher Randomization Test (FRT), which gives an exact, randomization-based p-value for the sharp null hypothesis that randomization has no impact on the outcome (for a review, see Rosenbaum, 2002, or Imbens and Rubin, 2015). In particular, our primary null hypotheses of interest are the pairwise contrasts:

$$\begin{aligned} [H_{01}:] \quad & Y_i(0) = Y_i(1) \text{ for all } i \\ [H_{12}:] \quad & Y_i(1) = Y_i(2) \text{ for all } i \\ [H_{23}:] \quad & Y_i(2) = Y_i(3) \text{ for all } i \end{aligned}$$

and the global null hypothesis of no effect:

$$[H_{0123}:] \quad Y_i(0) = Y_i(1) = Y_i(2) = Y_i(3) \text{ for all } i$$

We illustrate this approach with the pairwise null hypothesis. In general, the FRT needs three main ingredients: (1) a randomized treatment assignment mechanism, (2) a sharp null hypothesis, and (3) a test statistic that is a function of Z and Y. The steps are as follows:

1. Calculate the observed value of the test statistic, t^{obs}. Here we use the Wilcoxon ranksum test statistic, which is a standard choice for non-Normal outcomes (see, for example, Rosenbaum, 2002).
2. Given the observed outcomes and the sharp null hypothesis, impute the missing potential outcomes. In this case, we are testing the sharp null hypothesis of no treatment effect, so the missing potential outcome is the observed outcome.

3. Draw a large number of possible assignment vectors, Z^*; in this case, we simply permute the treatment assignments within each stratum. For each draw from the assignment vector, re-compute the test statistic using Z^* rather than Z, t^*.
4. Calculate the empirical p-value by comparing the observed test statistic, t^{obs}, to the distribution of test statistics, t^*,

$$p = P(t^{obs} \geq t^*)$$

This yields an exact p-value for the sharp null hypothesis of no treatment effect.

Covariate adjustment. Following Rosenbaum (2002) and Imbens and Rubin (2015), we first regression-adjust the raw outcomes prior to testing, by regressing Y_i^{obs} on the vector of control variables defined in Appendix A. Formally, our test statistic of interest is therefore the regression-adjusted version of the Wilcoxon ranksum test statistic.

We estimate the following regression:

$$Y_i^{obs} = \alpha + X'_{igs}\beta + \gamma_s + \delta_g + \varepsilon_{igs}$$

where the subscript is for student i in grade g in school s; X is a vector of student-level controls (demographics, prior absences, etc.); and γ_s and δ_g are school and grade indicators, respectively.

The corresponding residual for each student is denoted r_i^{obs}. For consistency, we use the same residuals for all hypothesis tests and do not re-estimate this regression for comparisons that only use a subset of the data.

Pairwise null hypotheses. We then test the three pairwise null hypotheses of interest against the one-sided alternatives:

$$\begin{aligned} [H_{01}^a:] \quad & Y_i(0) \geq Y_i(1) \text{ for all } i \\ [H_{12}^a:] \quad & Y_i(1) \geq Y_i(2) \text{ for all } i \\ [H_{23}^a:] \quad & Y_i(2) \geq Y_i(3) \text{ for all } i \end{aligned}$$

where there exists at least one individual such that the inequality is sharp. We obtain exact p-values using a Fisher Randomization Test with a one-sided Wilcoxon rank-sum test statistic. As is standard practice in multi-arm trials, we jointly estimate these p-values by using the same draws from the assignment vector to assess each pairwise null hypothesis.

Global null hypothesis. We test the global sharp null hypothesis:

$$[H_{0123}:] \quad Y_i(0) = Y_i(1) = Y_i(2) = Y_i(3) \text{ for all } i$$

against the one-sided alternative

$$[H_{0123}^a:] \quad Y_i(0) \geq Y_i(1) \geq Y_i(2) \geq Y_i(3) \text{ for all } i$$

where at least one inequality is sharp for at least one student. We obtain an exact p-value by taking the minimum of the signed Wilcoxon test statistics from the three pairwise contrasts. Since we jointly estimate these test statistics in the previous step, calculating the test statistic for the global null hypothesis is immediate.

Multiple testing. Testing several pairwise null hypotheses is a classic setting in which multiple hypothesis testing is a major concern. The simplest multiple test correction is to first test the global null hypothesis, and, if this rejects, to then perform each pairwise hypothesis test with a Bonferroni correction, setting a critical threshold of $\alpha/3$. We instead replace the Bonferroni correction with a slightly more powerful Holm procedure, in which we first test the smallest p-value with a critical value of $\alpha/3$. If this rejects, then we test the next-smallest p-value with a critical value of $\alpha/2$. If this rejects, we finally test the largest p-value with a critical value of α. See Shaffer (1995) for a review.

Linear Regression

While the FRT approach gives exact p-values for the treatment contrasts of interest, it is not well-suited for estimating the average treatment effect in this setting, especially because the number of absences has a heavy right tail. We therefore turn to standard Neymanian inference to estimate the Average Treatment Effects of interest.

Below, we report raw group means as well as difference-in-means estimates. In the main text, we report regression-adjusted estimates of the treatment effects of interest, which we estimate via the linear regression:

$$Y_i^{obs} = \alpha + \tau_1 T_{1i} + \tau_2 T_{2i} + \tau_3 T_{3i} + X_i'\beta + \gamma_{s[i]} + \delta_{g[i]} + \varepsilon_i$$

where the subscript is for student i in grade $g[i]$ in school $s[i]$; τ_1, τ_2, and τ_3 are the coefficients of interest on the treatment indicators T_1, T_2, and T_3, which correspond to REMINDER, TOTAL ABSENCES, and RELATIVE ABSENCES treatment condition, respectively. X_i is a vector of control variables we defined above; and $\gamma_{s[i]}$ and $\delta_{g[i]}$ are school and grade fixed effects, respectively. Since the outcome is skewed, we use heteroskedastic-robust standard errors throughout.

Quantile Treatment Effects

We anticipate that the treatment effect is not, in fact, constant for all students. In addition to subgroup analyses, we also estimate quantile treatment effects, that is, the impact of the treatment on the quantiles of the marginal distributions. For example, this measures the difference between the median number of absences in the RELATIVE ABSENCES condition and the median number of absences in the CONTROL condition. Importantly, this is *not* in general equivalent to the median of the treatment effect, which is much more difficult to assess.

Estimating quantile treatment effects is standard for continuous outcomes (see, for example, Angrist and Pischke, 2009). Estimation in our setting is slightly more complicated because the outcome is a count variable—the number of days absent—and is therefore not smooth. To overcome this, we use the "jitter method" of Machado and Santos Silva (2005), which adds

uniform noise to each observation in order to address the discreteness in the data. In addition, we use the case-resampling bootstrap to obtain standard errors.

Finally, in order to improve interpretability, we display the quantile treatment effect estimates on the scale of the unconditional quantiles of the control group, which Bitler et al. (2014) call a "translated" QTE plot.

Supplementary Tables

Raw means

Table S12. Absences by condition, post-treatment

	Absences	SD	N
Control (N=6,994)	16.94	15.19	6,994
Reminder (N=7,041)	16.37	15.27	7,041
Total absences (N=7,037)	16.04	15.15	7,037
Relative absences (N=7,008)	16.03	15.39	7,008

Regression-adjusted means

Table S13. Regression-adjusted means and treatment effects

	Regression-adjusted means [SE]	Effect [SE]	N
Control (N=6,994)	17.04 [0.13]	--	6,994
Reminder (N=7,041)	16.42 [0.13]	-0.62 [0.19]	7,041
Total absences (N=7,037)	15.98 [0.13]	-1.1 [0.19]	7,037
Relative absences (N=7,008)	15.93 [0.13]	-1.1 [0.19]	7,008

Total household absences

Our primary analysis focuses solely on the focal students who were the subject of the treatment mailings, and who were randomized to a treatment condition. However, we can also aggregate absences at the household level by summing absences for all qualifying students per household (i.e., all students—focal + non-focal—per household who met the initial criteria for inclusion in the main experimental universe). By doing so, we find an average treatment effect of about 1.5 days' reduction per household (see Table S15).

Table S14. Raw means, total household absences among qualifying siblings

	Total HH absences	SD	N
Control (N=6,866)	20.73	19.99	6,866
Reminder (N=6,905)	20.18	20.34	6,905
Total absences (N=6,914)	19.59	19.56	6,914
Relative absences (N=6,858)	19.56	19.72	6,858

Table S15. Regression-adjusted means and treatment effects, total household absences among qualifying siblings

	Regression-adjusted means [SE]	Effect [SE]	N
Control (N=6,866)	20.88 [0.20]	--	6,866
Reminder (N=6,905)	20.24 [0.20]	-0.63 [0.28]	6,905
Total absences (N=6,914)	19.54 [0.19]	-1.34 [0.27]	6,914
Relative absences (N=6,858)	19.40 [0.19]	-1.47 [0.28]	6,858

Impact over time

Table S16. Regression-adjusted treatment effects by mailing: round 1 vs. rounds 2 to 5, compared to control

Treatment effects (compared to control)					
	Round 1 (until second round is mailed) [SE]	Total treatment effect (all rounds) [SE]	Average # of rounds	Total treatment effect Round 2 onward [SE]	Average treatment effect for each round from Round 2 onward
Reminder (N=6,994)	-0.17 [0.06]	-0.62 [0.19]	4.24	-0.45 [0.18]	-0.14
Total absences (N=7,041)	-0.20 [0.06]	-1.1 [0.19]	4.21	-0.90 [0.18]	-0.28
Relative absences (N=7,008)	-0.22 [0.06]	-1.1 [0.19]	4.18	-0.88 [0.18]	-0.28

Table S17. Average effect by week after each mailing, compared to control

	Week 1 [SE]	Week 2 [SE]	Week 3 [SE]	Week 2 & 3 average [SE]	Diff. week 1 vs. weeks 2 & 3, *p*-value
Reminder (N=6,994)	-0.18 [0.07]	-0.12 [0.08]	-0.07 [0.07]	-0.09 [0.07]	0.05
Total absences (N=7,041)	-0.25 [0.07]	-0.16 [0.08]	-0.16 [0.07]	-0.16 [0.07]	0.04
Relative absences (N=7,008)	-0.24 [0.07]	-0.2 [0.07]	-0.16 [0.07]	-0.18 [0.06]	0.12

Inverse-propensity score-weighted results

When we weighted by the probability of treatment assignment, we saw no meaningful differences in any reported treatment effects. The difference between REMINDER and CONTROL was 0.6 days (p<.01) both with the reported covariate-adjusted regression and the same regression with inverse-propensity score weights. The difference between TOTAL ABSENCES and CONTROL was 1.1 days in our reported results and 1.0 days with the weights (p<.001). The difference between RELATIVE ABSENCES and CONTROL was 1.1 in both the reported results and with weights (p<.001).

Table S18. Inverse-propensity score-weighted results

	CONTROL	REMINDER	TOTAL ABSENCES	RELATIVE ABSENCES
Regression adjusted means [SE]	17.04 [0.1]	16.42 [0.1]	15.98 [0.1]	15.93 [0.1]
Inverse-propensity score-weighted	16.97 [0.1]	16.40 [0.1]	15.92 [0.1]	15.86 [0.1]

Sensitivity analysis

A practical concern was that the outcome distribution was likely to have a long right tail. We conducted two main sensitivity checks to assess this. First, we repeated the above analyses defining the outcome at $\log(Absence + 1)$ rather than simply the raw number of days absent. Second, we excluded all students with absences that were more than two standard deviations from their school-grade mean. Note that this latter estimate is merely a sensitivity check, since this conditions on the observed outcome.

With log-absences, we found that the REMINDER condition reduced absences by ~4.8%[3] (p<.001) as compared to CONTROL. The TOTAL ABSENCES condition reduced absences by ~8.0% (p<.001) as compared to CONTROL. And the RELATIVE ABSENCES condition reduced absences by ~8.6% (p<.001) as compared to CONTROL.

Table S19. Sensitivity Checks: Regression Adjusted Means

	CONTROL	REMINDER	TOTAL ABSENCES	RELATIVE ABSENCES
Log Absences [SE]	2.60 [0.01]	2.55 [0.01]	2.52 [0.01]	2.51 [0.01]
Excluding Outliers [SE]	15.08 [0.1]	14.57 [0.1]	14.18 [0.1]	14.11 [0.1]

[3] The impact of treatment on log-transformed absences is approximately the percent change in absences caused by the treatment.

Excused vs. Unexcused Absences

Assignment to the REMINDER treatment condition reduced *excused* absences by .25 days (p=.01) as compared to CONTROL. Assignment to the TOTAL ABSENCES and RELATIVE ABSENCES treatment conditions reduced excused absences by .44 and .46 days, respectively, (both p-values<.001) as compared to CONTROL. The REMINDER treatment condition reduced *unexcused* absences by .36 days (p<.05), while the TOTAL ABSENCES and RELATIVE ABSENCES treatment condition reduced absences by .62 and .65 days respectively (both p-values<.01). However, since there were twice as many unexcused absences as excused absences in the CONTROL, the relative impact on excused absences was greater than that of unexcused absences (see Table S20).

Table S20. Excused vs. unexcused absences

	CONTROL	REMINDER	TOTAL ABSENCES	RELATIVE ABSENCES
Excused Absences [SE]	5.57 [0.1]	5.32 [0.1]	5.13 [0.1]	5.11 [0.1]
Unexcused Absences [SE]	11.47 [0.1]	11.10 [0.1]	10.85 [0.1]	10.82 [0.1]

Tardies

We saw no differences in tardy rates across conditions (F(3, 26806)=.55, p=.65), which indicates that while the treatments increased attendance, they did not decrease the rate at which students were late to class.

Table S21. Tardies.

	CONTROL	REMINDER	TOTAL ABSENCES	RELATIVE ABSENCES
Mean Tardies [SE]	15.06 [0.2]	15.12 [0.2]	14.94 [0.2]	14.79 [0.2]

Grades and Test Scores

We analyzed whether the impact on absences, in turn, translated to impacts on grades or test scores. We saw no indication that the treatments impacted either test scores (both math and English [p>.23]) or mean core grades (p=0.91). Both test scores and grades were standardized around 0 by grade for the entire population of SDP students, not just those in the sample.

Table S22. Effect on standardized test scores

	CONTROL	REMINDER	TOTAL ABSENCES	RELATIVE ABSENCES
Standardized Mean Core Course Grades [SE]	0.00 [0.01]	-0.02 [0.01]	0.02 [0.01]	0.01 [0.01]
Standardized Math Scores [SE]	0.03 [0.01]	0.02 [0.01]	0.03 [0.01]	0.04 [0.01]
Standardized English Scores [SE]	0.16 [0.01]	0.14 [0.01]	0.15 [0.01]	0.15 [0.01]

The treatments' impact on absences did not significantly interact with pre-treatment English and Math scores ($p>.4$).

We also analyzed whether absences prior to a standardized test are correlated with lower test scores. As seen in Table S23 and S24, we found that missing school in the week before a standardized test was associated with significantly lower test scores.

Table S23. Effect on absences before PSSA math test days

Math Score	Coefficient	SE
Absent on Math PSSA Test Day	-0.18	0.01
Absent 1 Day(s) before Test Day	Weekend	Weekend
Absent 2 Day(s) before Test Day	Weekend	Weekend
Absent 3 Day(s) before Test Day	-0.08	0.02
Absent 4 Day(s) before Test Day	-0.05	0.03
Absent 5 Day(s) before Test Day	-0.05	0.03
Absent 6 Day(s) before Test Day	-0.06	0.03
Absent 7 Day(s) before Test Day	-0.06	0.02
Total Days Absent (from beginning of SY to 7 days before test date)	-0.03	0.00

Table S24. Effect on absences before PSSA English test days

English Score	Coefficient	SE
Absent on English PSSA Test Day	-0.14	0.02
Absent 1 Day(s) before Test Day	Weekend	Weekend
Absent 2 Day(s) before Test Day	Weekend	Weekend
Absent 3 Day(s) before Test Day	-0.04	0.02
Absent 4 Day(s) before Test Day	-0.01	0.02
Absent 5 Day(s) before Test Day	-0.05	0.02
Absent 6 Day(s) before Test Day	-0.03	0.02
Absent 7 Day(s) before Test Day	-0.03	0.01
Total Days Absent (from beginning of SY to 7 days before test date)	-0.02	0.00

Subgroup Analyses: Grade, Previous Year Absences, Race, Gender, and Cell Phone

There were no significant interactions between the pooled treatment conditions and any of the available demographic characteristics (p-values >.17).

Figure S2

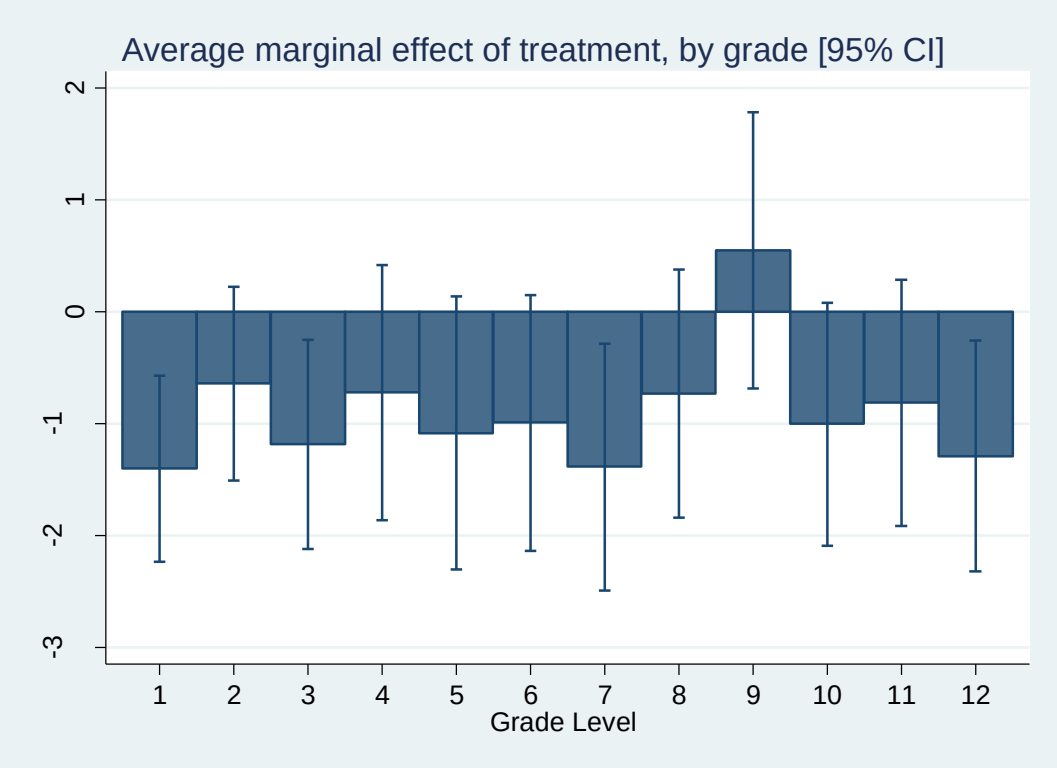


Table S25. Absences by grade level and treatment condition

Grade	N	Baseline # absences	Control Coef.	Control SE	Treat Coef.	Treat SE
1	3,677	17.42	16.06	0.44	14.79	0.33
2	3,402	17.01	15.09	0.46	14.57	0.33
3	2,893	15.82	15.29	0.48	14.24	0.34
4	1,966	14.35	15.01	0.56	14.42	0.38
5	1,755	14.32	14.74	0.60	13.78	0.39
6	1,955	13.71	16.28	0.56	15.42	0.37
7	2,097	14.14	16.48	0.54	15.23	0.36
8	2,017	14.35	15.49	0.54	14.89	0.37
9	1,663	14.85	20.08	0.60	20.76	0.40
10	2,178	18.97	19.25	0.89	18.38	0.80
11	2,102	19.84	19.68	0.89	19.00	0.80
12	2,375	18.61	21.76	0.88	20.61	0.79

Figure S3

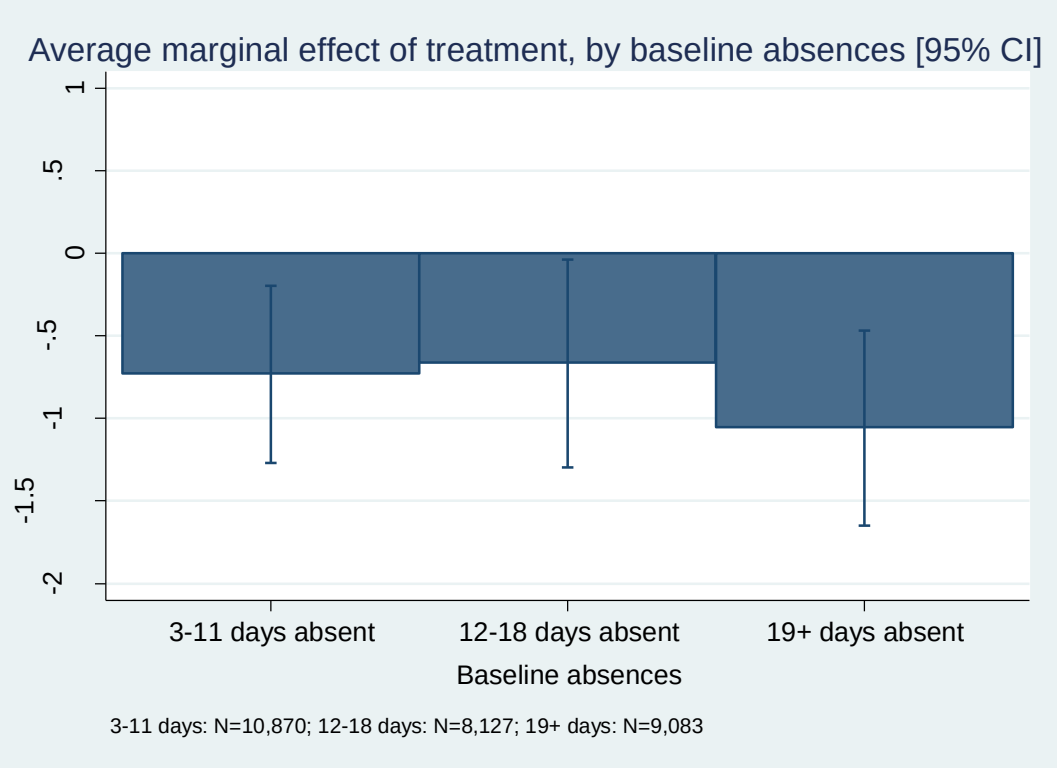


Figure S4

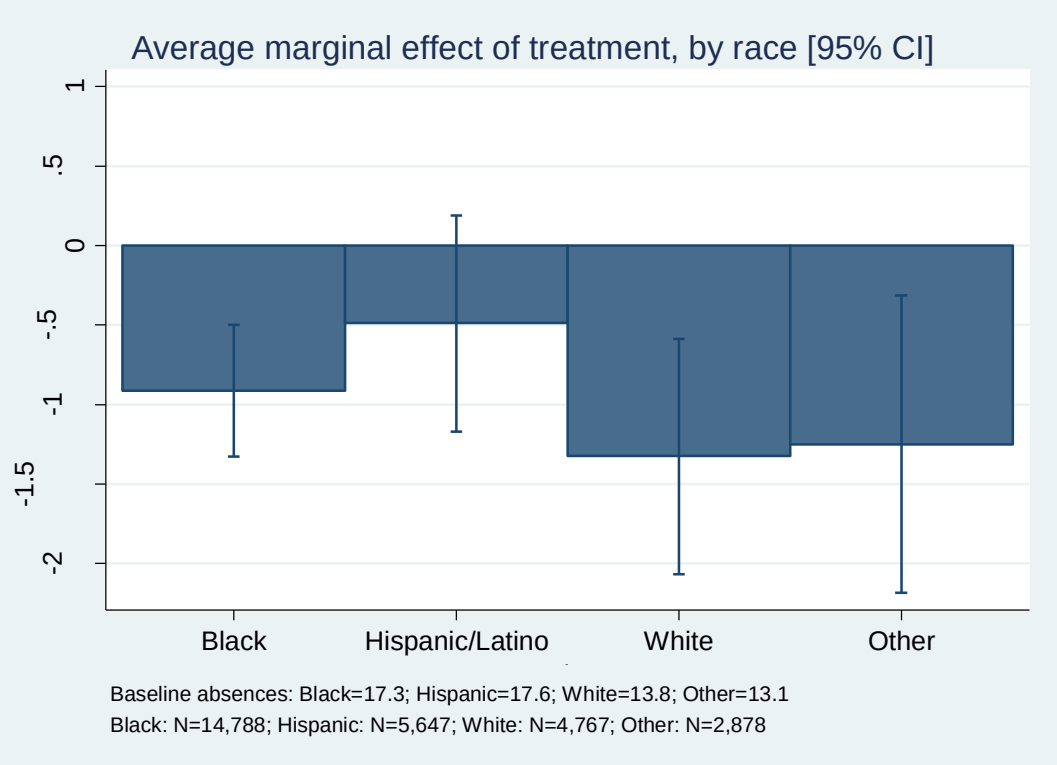


Figure S5

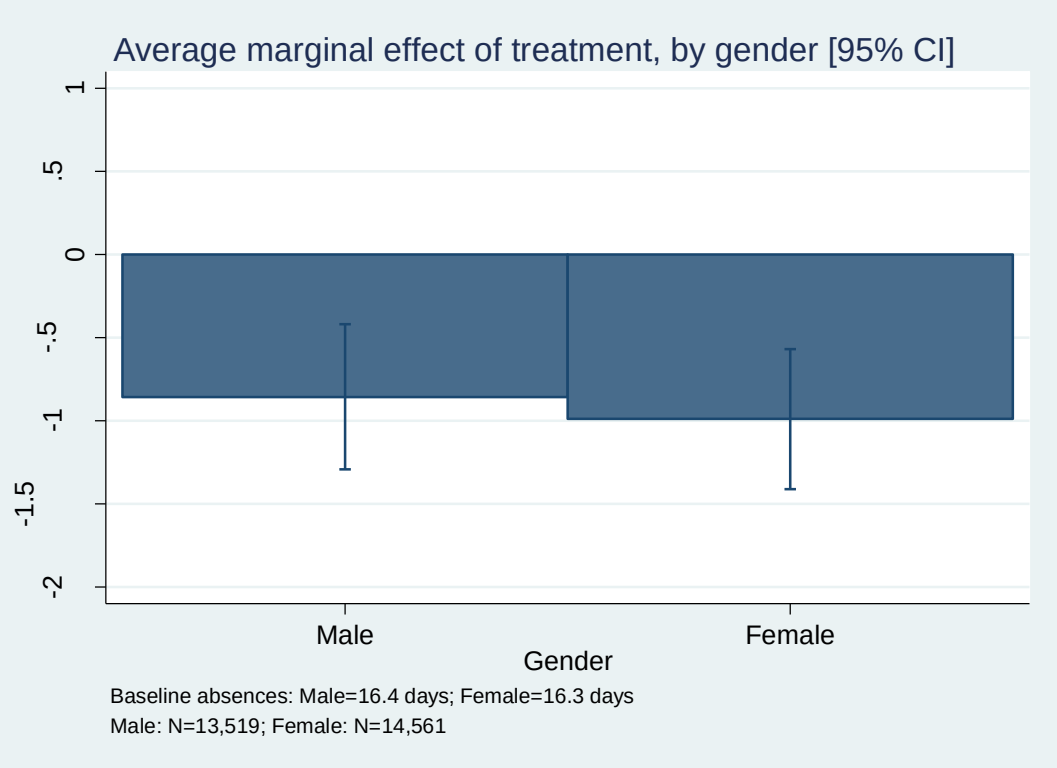


Table S26. Absences and treatment effect by cell phone and treatment condition

	no cell (N=9,729)	cell (N=18,351)
Control	16.4	17.4
Reminder	15.5	16.9
Total Absences	15.6	16.2
Relative Absences	15.3	16.3

	no cell (N=9,729)	cell (N=18,351)
Reminder Treatment Effect	-0.9	-0.5
Total Absences Treatment Effect	-0.8	-1.2
Relative Absences Treatment Effect	-1.1	-1.1

Distribution of Student Absences to Typical Absences

*Table S27. Focal student and typical student absences in **relative absences condition***

Round	N	**Ratio** of focal student's to typical student's absences			**Focal student** in relative absences condition				**Typical student** in relative absences condition‡			
		Mean	Min†	Max	Mean	SD	Min	Max	Mean	SD	Min	Max
Mailing 1*	8,110	4.8:1	2:1	48:1	17.0	11.5	3	91	4.5	4.2	0	31
Mailing 2	4,539	5.4:1	2:1	53:1	5.8	5.4	2	58	0.1	0.5	0	6
Mailing 3	4,425	5.8:1	2:1	78:1	9.6	8.0	3	89	1.2	1.7	0	15
Mailing 4	4,727	5.6:1	2:1	85:1	13.4	11.0	3	126	2.4	2.8	0	19
Mailing 5	4,687	5.8:1	2:1	89:1	14.9	12.6	3	144	2.9	3.2	0	28

**Mailing 1 used data from previous school year*

†When ratio was 2:1 or above, students were told that they missed X times as many school days as typical student; when ratio was below 2:1, students were told that they missed X number of days more than typical student.

‡Typical student reflects minimum modal absences by school-grade

Additional Sibling Analysis

We found that the sibling results (please see main text of paper for details) are consistent after log-transforming the absences. The results are illustrated in Table S28. These estimates are relative to CONTROL; standard errors are clustered by household.

Table S28. Sibling analysis

	RELATIVE ABSENCES Focal Effect	RELATIVE ABSENCES Non-focal Effect	TOTAL ABSENCES Focal Effect	TOTAL ABSENCES Non-focal Effect	REMINDER Focal Effect	REMINDER Non-focal Effect
2-7 student HHs treatment effects (N=11,207)	-1.59***	-1.01 *	-1.01 **	-.97**	-.74 ^	-0.03
2-7 student HHS log-transformed treatment effects (N=11,207)	-.10***	-.07**	-.08 **	-.07 **	-.06*	-0.01

*** p< .001, ** p<.01, * p<.05, ^ p<.1

Additionally, we analyzed whether older focal students were associated with larger treatment effects. We found no meaningful difference (p=.64).

Quantile Treatment Effects

To demonstrate quantile treatment effects, we compared the outcome distribution of students whose parents were assigned to a treatment condition that communicated how many total absences a student had (the pooled TOTAL ABSENCES and RELATIVE ABSENCES condition) to those individuals in the CONTROL. Figure S6 shows the results, using the method described in the analysis section. In particular, we observed a quantile treatment effect of around 1 day at the median of each group (around three weeks absent for students in CONTROL) compared to a quantile treatment effects of around 0.5 days at the 10th percentile by absences of each group (around one week absent for students in CONTROL). Since the distribution of absences had a heavy tail, quantile treatment effect estimates are imprecise among the highest-absence students. Note that the effects have been "translated" so that they align with the marginal outcome distribution among individuals in CONTROL.

Figure S7 replicates this approach using log-days absent. Clearly the heterogeneity observed in Figure S6 is not simply a constant effect on the log-scale.

Figure S6

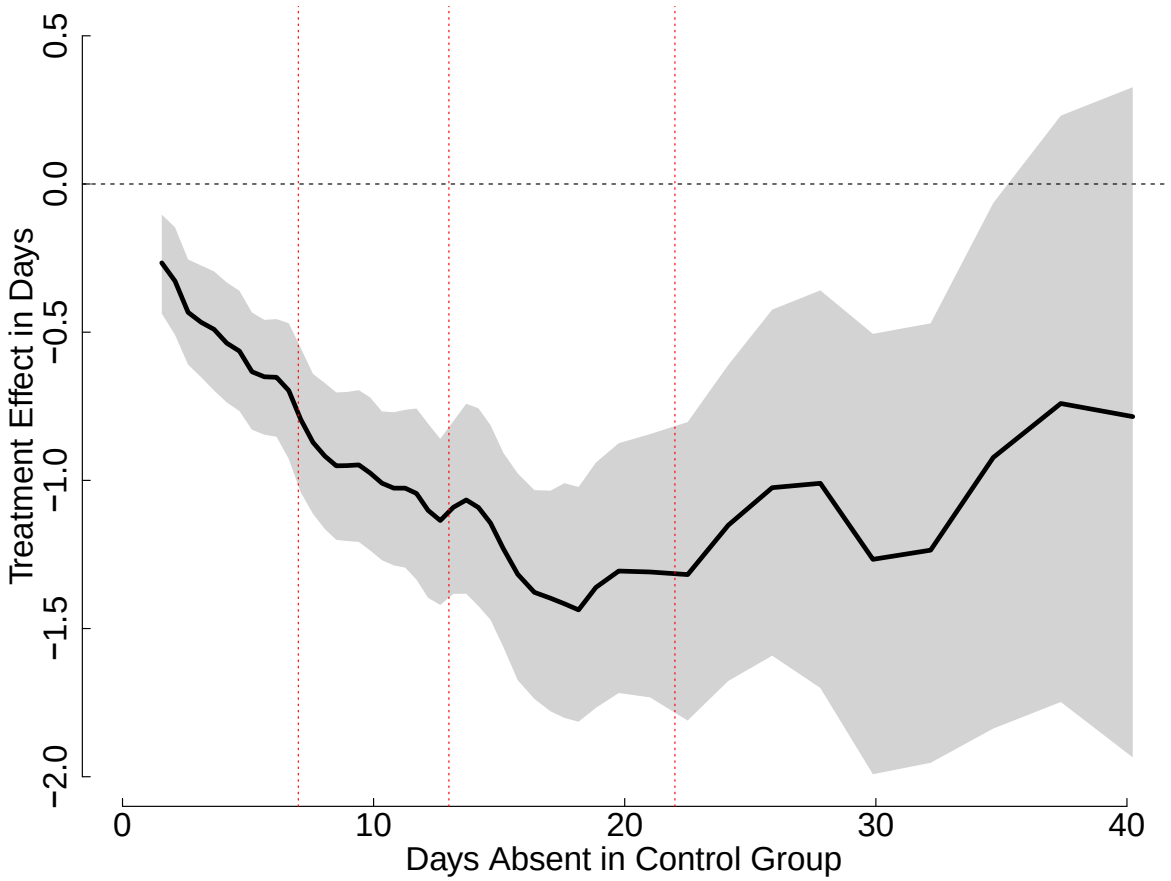
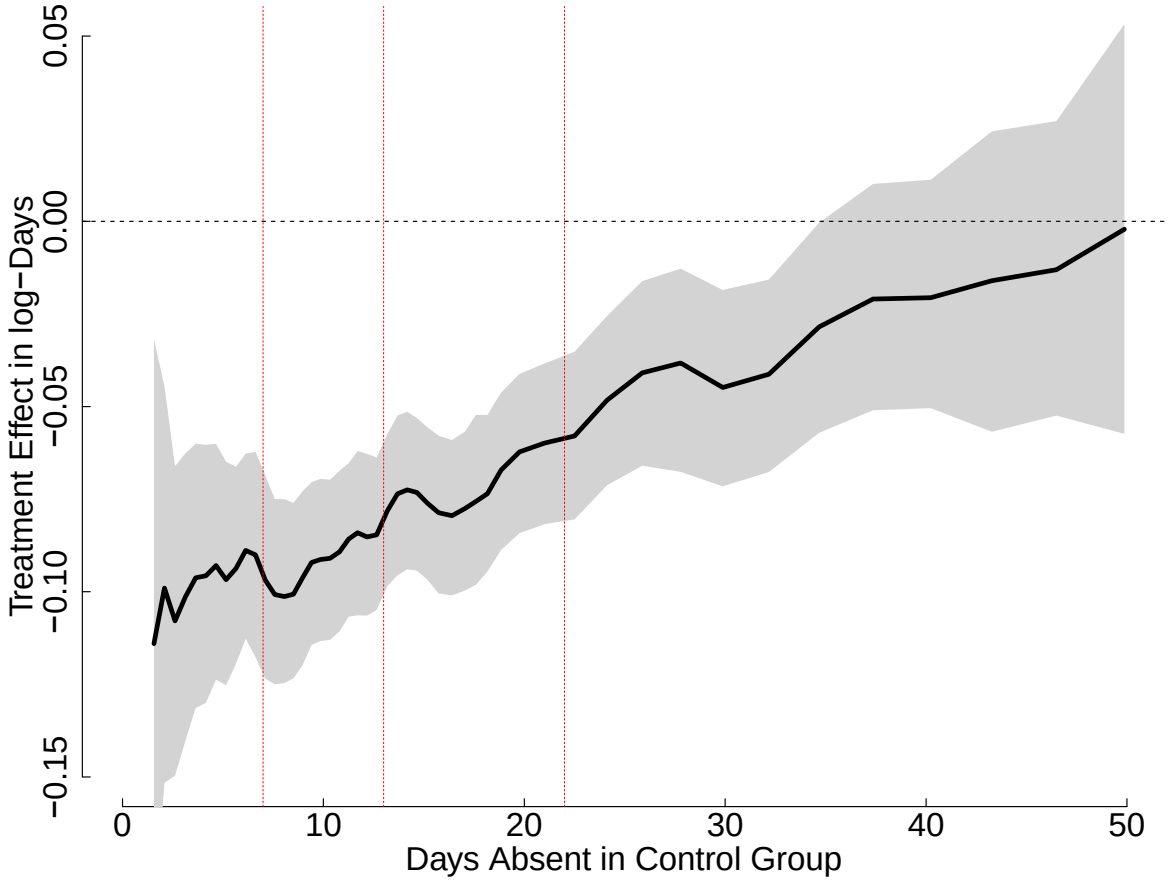


Figure S7


Treatment Effect in log−Days
0.05
0.00
−0.05
−0.10
−0.15
0
10
20
30
40
50
Days Absent in Control Group

Cost of Treatment

Table 29. Cost of treatment per household

	Cost
Mail production costs	$1.00/mailing
Average # mailings per household	4.1
Mail production costs per household	$4.10
Labor costs per household	$2.50
Total cost per household	**$6.60**

Phone Survey

Table 30. Phone survey crosstabs

On how many of those days do you think [STUDENT] was absent from school?	Control	Reminder	Total Absences	Relative Absences	Total
Provided number (captured in Q1a)	196	197	204	217	814
	40.50%	41.04%	41.98%	46.07%	42.37%
Don't know - (guess in Q1b)	288	283	282	254	1107
	59.50%	58.96%	58.02%	53.93%	57.63%
Total	484	480	486	471	1921
Student attendance comparison	Control	Reminder	Total Absences	Relative Absences	Total
Fewer	175	174	166	145	660
	39.68%	39.28%	37.90%	33.26%	37.54%
About as many	94	115	101	96	406
	21.32%	25.96%	23.06%	22.02%	23.09%
More days absent	49	39	47	83	218
	11.11%	8.80%	10.73%	19.04%	12.40%
DK	123	115	124	112	474
	27.89%	25.96%	28.31%	25.69%	26.96%
Total	441	443	438	436	1758
MANY more days or JUST A COUPLE more days than classmates	Control	Reminder	Total Absences	Relative Absences	Total
Just a couple more	23	22	21	39	105
	47.92%	56.41%	44.68%	47.56%	48.61%
Many more days	22	13	22	37	94
	45.83%	33.33%	46.81%	45.12%	43.52%
DK	3	4	4	6	17
	6.25%	10.26%	8.51%	7.32%	7.87%
Total	48	39	47	82	216
MANY fewer days or JUST A COUPLE fewer days than classmates	Control	Reminder	Total Absences	Relative Absences	Total

Just a couple fewer	108	103	116	90	417
	63.16%	59.88%	71.17%	62.50%	64.15%
Many fewer	57	60	45	47	209
	33.33%	34.88%	27.61%	32.64%	32.15%
DK	6	9	2	7	24
	3.51%	5.23%	1.23%	4.86%	3.69%
Total	171	172	163	144	650
Have you spoken with other guardians about how often their students are absent?	Control	Reminder	Total Absences	Relative Absences	Total
No	371	377	373	367	1488
	87.71%	87.27%	86.34%	87.17%	87.12%
Yes	47	46	50	47	190
	11.11%	10.65%	11.57%	11.16%	11.12%
DK	5	9	9	7	30
	1.18%	2.08%	2.08%	1.66%	1.76%
Total	423	432	432	421	1708
Would you contact the school to enroll in the program?	Control	Reminder	Total Absences	Relative Absences	Total
No	174	170	164	157	665
	43.18%	41.36%	40%	39.55%	41.02%
Yes	229	241	246	240	956
	56.82%	58.64%	60%	60.45%	58.98%
Total	403	411	410	397	1621
Have you received letters through the mail about [STUDENT] attendance?	Control	Reminder	Total Absences	Relative Absences	Total
No	295	211	154	155	815
	73.75%	51.46%	37.75%	37.99%	50.12%
Yes	102	196	246	247	791
	25.50%	47.80%	60.29%	60.54%	48.65%
DK	3	3	8	6	20
	0.75%	0.73%	1.96%	1.47%	1.23%
Total	400	410	408	408	1626
Did you show these letters to [STUDENT]?	Control	Reminder	Total Absences	Relative Absences	Total
No	32	73	103	110	318
	32.32%	37.63%	42.21%	45.27%	40.77%
Yes	67	120	141	133	461
	67.68%	61.86%	57.79%	54.73%	59.10%
DK	0	1	0	0	1
	0%	0.52%	0%	0%	0.13%
Total	99	194	244	243	780

Did you show these letters to other adults in your household?	Control	Reminder	Total Absences	Relative Absences	Total
No	65	131	157	161	514
	65.66%	67.18%	64.34%	66.53%	65.90%
Yes	31	63	84	77	255
	31.31%	32.31%	34.43%	31.82%	32.69%
DK	3	1	3	4	11
	3.03%	0.51%	1.23%	1.65%	1.41%
Total	99	195	244	242	780
Did you throw these letters away or did you save them somewhere?	Control	Reminder	Total Absences	Relative Absences	Total
Threw letters out	34	83	103	93	313
	35.42%	43.23%	42.74%	39.57%	40.97%
Saved them	58	100	132	131	421
	60.42%	52.08%	54.77%	55.74%	55.10%
DK	4	9	6	11	30
	4.17%	4.69%	2.49%	4.68%	3.93%
Total	96	192	241	235	764
Would you have rather received this information through the mail or through SMS?	Control	Reminder	Total Absences	Relative Absences	Total
Mail	60	124	167	158	509
	63.83%	65.61%	71.67%	69.91%	68.60%
Text	28	52	49	45	174
	29.79%	27.51%	21.03%	19.91%	23.45%
DK	6	13	17	23	59
	6.38%	6.88%	7.30%	10.18%	7.95%
Total	94	189	233	226	742
Making sure [STUDENT] attends school every day is my responsibility	Control	Reminder	Total Absences	Relative Absences	Total
Strongly disagree	2	2	1	1	6
	0.58%	0.55%	0.29%	0.28%	0.43%
Disagree	8	9	8	1	26
	2.31%	2.49%	2.29%	0.28%	1.84%
Agree	94	98	85	99	376
	27.09%	27.07%	24.29%	28.21%	26.67%
Strongly agree	239	248	255	247	989
	68.88%	68.51%	72.86%	70.37%	70.14%
DK	4	5	1	3	13
	1.15%	1.38%	0.29%	0.85%	0.92%
Total	347	362	350	351	1410

It is [STUDENT]'s job to make sure [he/she] attends school every day	Control	Reminder	Total Absences	Relative Absences	Total
Strongly disagree	39	43	39	40	161
	11.11%	11.78%	10.92%	11.17%	11.25%
Disagree	110	108	113	105	436
	31.34%	29.59%	31.65%	29.33%	30.47%
Agree	102	119	107	107	435
	29.06%	32.60%	29.97%	29.89%	30.40%
Strongly agree	97	87	95	102	381
	27.64%	23.84%	26.61%	28.49%	26.62%
DK	3	8	3	4	18
	0.85%	2.19%	0.84%	1.12%	1.26%
Total	351	365	357	358	1431
Missing a few days of school each month has a huge effect on success in school	Control	Reminder	Total Absences	Relative Absences	Total
Strongly disagree	8	1	5	6	20
	2.31%	0.28%	1.44%	1.69%	1.42%
Disagree	28	39	31	28	126
	8.07%	10.80%	8.91%	7.89%	8.93%
Agree	145	154	136	151	586
	41.79%	42.66%	39.08%	42.54%	41.53%
Strongly agree	154	158	172	163	647
	44.38%	43.77%	49.43%	45.92%	45.85%
DK	12	9	4	7	32
	3.46%	2.49%	1.15%	1.97%	2.27%
Total	347	361	348	355	1411
Absences are fine if I provide the school with an excuse or an explanation	Control	Reminder	Total Absences	Relative Absences	Total
Strongly disagree	5	9	10	9	33
	1.43%	2.49%	2.87%	2.54%	2.33%
Disagree	24	45	36	43	148
	6.88%	12.43%	10.32%	12.11%	10.46%
Agree	218	210	195	187	810
	62.46%	58.01%	55.87%	52.68%	57.24%
Strongly agree	90	89	89	105	373
	25.79%	24.59%	25.50%	29.58%	26.36%
DK	12	9	19	11	51
	3.44%	2.49%	5.44%	3.10%	3.60%
Total	349	362	349	355	1415
Others think it is my job to make sure [STUDENT] attends school every day	Control	Reminder	Total Absences	Relative Absences	Total
Strongly disagree	0	1	3	6	10

	0%	0.28%	0.86%	1.72%	0.72%
Disagree	14	15	20	18	67
	4.12%	4.23%	5.75%	5.17%	4.82%
Agree	168	170	153	150	641
	49.41%	47.89%	43.97%	43.10%	46.08%
Strongly agree	138	143	156	158	595
	40.59%	40.28%	44.83%	45.40%	42.77%
DK	20	26	16	16	78
	5.88%	7.32%	4.60%	4.60%	5.61%
Total	340	355	348	348	1391
[STUDENT] and I have a warm and loving relationship	Control	Reminder	Total Absences	Relative Absences	Total
Strongly disagree	0	2	0	0	2
	0%	0.56%	0%	0%	0.14%
Disagree	3	3	1	2	9
	0.86%	0.84%	0.28%	0.56%	0.64%
Agree	78	82	65	66	291
	22.41%	22.91%	18.41%	18.54%	20.57%
Strongly agree	264	265	285	287	1101
	75.86%	74.02%	80.74%	80.62%	77.81%
DK	3	6	2	1	12
	0.86%	1.68%	0.57%	0.28%	0.85%
Total	348	358	353	356	1415
Attending school each day is important for [STUDENT] to succeed in school	Control	Reminder	Total Absences	Relative Absences	Total
Strongly disagree	0	2	0	1	3
	0%	0.56%	0%	0.28%	0.21%
Disagree	3	5	7	4	19
	0.86%	1.40%	1.98%	1.12%	1.34%
Agree	87	102	98	108	395
	24.93%	28.49%	27.76%	30.17%	27.86%
Strongly agree	257	247	246	243	993
	73.64%	68.99%	69.69%	67.88%	70.03%
DK	2	2	2	2	8
	0.57%	0.56%	0.57%	0.56%	0.56%
Total	349	358	353	358	1418
I have influence over how many days of school [STUDENT] misses	Control	Reminder	Total Absences	Relative Absences	Total
Strongly disagree	8	8	8	10	34
	2.31%	2.25%	2.33%	2.82%	2.43%
Disagree	43	31	50	34	158
	12.43%	8.71%	14.53%	9.58%	11.28%
Agree	140	166	142	153	601

	40.46%	46.63%	41.28%	43.10%	42.90%
Strongly agree	134	134	130	136	534
	38.73%	37.64%	37.79%	38.31%	38.12%
DK	21	17	14	22	74
	6.07%	4.78%	4.07%	6.20%	5.28%
Total	346	356	344	355	1401
SDP and [STUDENT]'s school want me to be involved in improving her attendance	Control	Reminder	Total Absences	Relative Absences	Total
Strongly disagree	8	13	9	10	40
	2.31%	3.68%	2.59%	2.82%	2.86%
Disagree	37	30	27	20	114
	10.69%	8.50%	7.78%	5.65%	8.14%
Agree	160	159	165	180	664
	46.24%	45.04%	47.55%	50.85%	47.43%
Strongly agree	97	104	98	105	404
	28.03%	29.46%	28.24%	29.66%	28.86%
DK	44	47	48	39	178
	12.72%	13.31%	13.83%	11.02%	12.71%
Total	346	353	347	354	1400
How much time did [STUDENT] spend doing school-related work at home on a typical	Control	Reminder	Total Absences	Relative Absences	Total
Less than 1 hour	30	36	31	32	129
	18.18%	20.11%	19.87%	23.53%	20.28%
1-2 hours	60	72	61	52	245
	36.36%	40.22%	39.10%	38.24%	38.52%
2-3 hours	47	56	41	34	178
	28.48%	31.28%	26.28%	25%	27.99%
3-4 hours	16	8	15	11	50
	9.70%	4.47%	9.62%	8.09%	7.86%
More than 4 hours	12	7	8	7	34
	7.27%	3.91%	5.13%	5.15%	5.35%
Total	165	179	156	136	636
How much time students with top grades spent doing school-related work at home?	Control	Reminder	Total Absences	Relative Absences	Total
Less than 1 hour	11	12	12	13	48
	7.75%	8.22%	9.38%	11.40%	9.06%
1-2 hours	56	50	45	34	185
	39.44%	34.25%	35.16%	29.82%	34.91%
2-3 hours	52	62	46	44	204
	36.62%	42.47%	35.94%	38.60%	38.49%
3-4 hours	12	11	15	13	51

	8.45%	7.53%	11.72%	11.40%	9.62%
More than 4 hours	11	11	10	10	42
	7.75%	7.53%	7.81%	8.77%	7.92%
Total	142	146	128	114	530
Would you say that students spent most of their time learning important skills or playing	Control	Reminder	Total Absences	Relative Absences	Total
Playing	122	127	147	145	541
	77.22%	76.05%	82.12%	74.74%	77.51%
Learn important skills daily	16	26	17	26	85
	10.13%	15.57%	9.50%	13.40%	12.18%
DK	20	14	15	23	72
	12.66%	8.38%	8.38%	11.86%	10.32%
Total	158	167	179	194	698
Do you know the name and phone of a parent of another student in [GRADE/SCHOOL]?	Control	Reminder	Total Absences	Relative Absences	Total
No	182	200	193	209	784
	56.00%	58.65%	58.48%	63.53%	59.17%
Yes	143	141	137	120	541
	44%	41.35%	41.52%	36.47%	40.83%
Total	325	341	330	329	1325
Do you know the name and phone of a parent of another student in ANY grade?	Control	Reminder	Total Absences	Relative Absences	Total
No	184	209	190	202	785
	56.79%	61.47%	57.58%	61.96%	59.47%
Yes	140	131	140	124	535
	43.21%	38.53%	42.42%	38.04%	40.53%
Total	324	340	330	326	1320
Have you ever asked another parent of [SCHOOL] for help taking your child to school?	Control	Reminder	Total Absences	Relative Absences	Total
No	273	284	275	270	1102
	84.78%	83.53%	84.62%	84.11%	84.25%
Yes	49	56	50	51	206
	15.22%	16.47%	15.38%	15.89%	15.75%
Total	322	340	325	321	1308
Which behavior from would have most helped [STUDENT] do better in school?	Control	Reminder	Total Absences	Relative Absences	Total
Attend school every day	56	44	55	61	216
	18.42%	13.37%	17.46%	19.61%	17.16%

Do more academic work at home	24	36	33	31	124
	7.89%	10.94%	10.48%	9.97%	9.85%
Read every day	51	61	67	50	229
	16.78%	18.54%	21.27%	16.08%	18.19%
Spend less time on phone	65	68	58	59	250
	21.38%	20.67%	18.41%	18.97%	19.86%
Go to bed earlier	40	58	46	53	197
	13.16%	17.63%	14.60%	17.04%	15.65%
Eat breakfast	22	22	13	25	82
	7.24%	6.69%	4.13%	8.04%	6.51%
VOL: Other	46	40	43	32	161
	15.13%	12.16%	13.65%	10.29%	12.79%
Total	304	329	315	311	1259
Did you attend a parent teacher conference about [STUDENT] this spring?	Control	Reminder	Total Absences	Relative Absences	Total
No	103	122	121	105	451
	32.70%	36.20%	37.00%	33.02%	34.77%
Yes	212	215	206	213	846
	67.30%	63.80%	63.00%	66.98%	65.23%
Total	315	337	327	318	1297
Which of the following best explains why [STUDENT] missed school the last time?	Control	Reminder	Total Absences	Relative Absences	Total
Asthma	22	29	27	20	98
	7.03%	8.66%	8.52%	6.41%	7.67%
Allergies	15	21	11	19	66
	4.79%	6.27%	3.47%	6.09%	5.17%
Illness other	144	151	133	127	555
	46.01%	45.07%	41.96%	40.71%	43.46%
Transportation problems	11	13	8	6	38
	3.51%	3.88%	2.52%	1.92%	2.98%
Family emergency/event	47	56	66	55	224
	15.02%	16.72%	20.82%	17.63%	17.54%
Suspension	9	7	7	8	31
	2.88%	2.09%	2.21%	2.56%	2.43%
S/he woke up late	2	3	3	6	14
	0.64%	0.90%	0.95%	1.92%	1.10%
S/he didn't want to go to school	8	5	10	7	30
	2.56%	1.49%	3.15%	2.24%	2.35%
P/G didn't know about absence	2	3	2	5	12
	0.64%	0.90%	0.63%	1.60%	0.94%
Other	49	44	44	54	191
	15.65%	13.13%	13.88%	17.31%	14.96%
DK	4	3	6	5	18

	1.28%	0.90%	1.89%	1.60%	1.41%
Total	313	335	317	312	1277
How much money do you think the SDP spent per student this past academic year?	Control	Reminder	Total Absences	Relative Absences	Total
Less than $3000 per student this year	38	33	27	35	133
	39.18%	34.02%	26.73%	34.31%	33.50%
$3k	5	17	15	11	48
	5.15%	17.53%	14.85%	10.78%	12.09%
$6k	13	8	10	9	40
	13.40%	8.25%	9.90%	8.82%	10.08%
$9k	1	3	2	3	9
	1.03%	3.09%	1.98%	2.94%	2.27%
$12k	2	2	4	0	8
	2.06%	2.06%	3.96%	0%	2.02%
$15k	1	1	0	2	4
	1.03%	1.03%	0%	1.96%	1.01%
$18k	1	2	2	2	7
	1.03%	2.06%	1.98%	1.96%	1.76%
DK	36	31	41	40	148
	37.11%	31.96%	40.59%	39.22%	37.28%
Total	97	97	101	102	397
SDP spent $12K per student. Is this more same or less than you had thought?	Control	Reminder	Total Absences	Relative Absences	Total
Less than what I thought	37	29	36	34	136
	33.04%	25.44%	35.64%	33.33%	31.70%
About what I thought	16	21	15	18	70
	14.29%	18.42%	14.85%	17.65%	16.32%
More than I thought	39	54	30	41	164
	34.82%	47.37%	29.70%	40.20%	38.23%
DK	20	10	20	9	59
	17.86%	8.77%	19.80%	8.82%	13.75%
Total	112	114	101	102	429
SDP spent $67 per student per day. Is this more same or less than you had though	Control	Reminder	Total Absences	Relative Absences	Total
Less than what I thought	38	55	49	42	184
	37.25%	44.35%	42.24%	40.38%	41.26%
About what I thought	20	17	15	20	72
	19.61%	13.71%	12.93%	19.23%	16.14%
More than I thought	33	39	33	30	135
	32.35%	31.45%	28.45%	28.85%	30.27%
DK	11	13	19	12	55

	10.78%	10.48%	16.38%	11.54%	12.33%
Total	102	124	116	104	446
Have you had a meeting with the school or district about [STUDENT]'s attendance?	Control	Reminder	Total Absences	Relative Absences	Total
No	246	276	242	234	998
	79.10%	82.39%	76.58%	75.73%	78.52%
Yes	62	58	72	72	264
	19.94%	17.31%	22.78%	23.30%	20.77%
DK	3	1	2	3	9
	0.96%	0.30%	0.63%	0.97%	0.71%
Total	311	335	316	309	1271
Does [STUDENT] suffer from asthma?	Control	Reminder	Total Absences	Relative Absences	Total
No	228	240	222	205	895
	73.31%	71.43%	70.25%	66.78%	70.47%
Yes	83	94	93	101	371
	26.69%	27.98%	29.43%	32.90%	29.21%
DK	0	2	1	1	4
	0%	0.60%	0.32%	0.33%	0.31%
Total	311	336	316	307	1270
Does [STUDENT] suffer from allergies?	Control	Reminder	Total Absences	Relative Absences	Total
No	168	174	183	157	682
	54.02%	51.94%	57.91%	51.31%	53.79%
Yes	139	158	130	148	575
	44.69%	47.16%	41.14%	48.37%	45.35%
DK	4	3	3	1	11
	1.29%	0.90%	0.95%	0.33%	0.87%
Total	311	335	316	306	1268
What is your relationship to [STUDENT]?	Control	Reminder	Total Absences	Relative Absences	Total
Parent	281	321	286	276	1164
	90.35%	95.82%	90.79%	89.90%	91.80%
Grandparent	20	11	23	22	76
	6.43%	3.28%	7.30%	7.17%	5.99%
Aunt/Uncle	3	1	2	3	9
	0.96%	0.30%	0.63%	0.98%	0.71%
Step parent	4	0	3	1	8
	1.29%	0%	0.95%	0.33%	0.63%
Sibling	2	1	1	4	8
	0.64%	0.30%	0.32%	1.30%	0.63%
Foster parent	1	1	0	0	2

	0.32%	0.30%	0%	0%	0.16%
Other	0	0	0	1	1
	0%	0%	0%	0.33%	0.08%
Total	311	335	315	307	1268
What is the primary language spoken in your household?	Control	Reminder	Total Absences	Relative Absences	Total
English	270	287	282	276	1115
	86.82%	85.93%	89.81%	89.90%	88.07%
Spanish	19	24	14	10	67
	6.11%	7.19%	4.46%	3.26%	5.29%
Portuguese	0	0	0	1	1
	0%	0%	0%	0.33%	0.08%
Chinese/Mandarin	4	1	0	3	8
	1.29%	0.30%	0%	0.98%	0.63%
Creole (Haitian)	2	2	1	0	5
	0.64%	0.60%	0.32%	0%	0.39%
Arabic	6	9	7	6	28
	1.93%	2.69%	2.23%	1.95%	2.21%
French	1	0	1	1	3
	0.32%	0%	0.32%	0.33%	0.24%
Other	7	10	9	10	36
	2.25%	2.99%	2.87%	3.26%	2.84%
DK	2	1	0	0	3
	0.64%	0.30%	0%	0%	0.24%
Total	311	334	314	307	1266
What is the highest level of school you have completed?	Control	Reminder	Total Absences	Relative Absences	Total
None or Gr 1-8	7	3	10	4	24
	2.28%	0.92%	3.21%	1.37%	1.94%
HS incomplete (Gr 9-11)	37	50	33	39	159
	12.05%	15.34%	10.58%	13.31%	12.84%
HS grad (Gr 12 or GED)	104	107	125	98	434
	33.88%	32.82%	40.06%	33.45%	35.06%
Tech trade or vocational after HS	26	17	14	22	79
	8.47%	5.21%	4.49%	7.51%	6.38%
Some college assoc degree no 4-yr degree	77	78	79	71	305
	25.08%	23.93%	25.32%	24.23%	24.64%
College grad	40	51	41	41	173
	13.03%	15.64%	13.14%	13.99%	13.97%
Some post-grad	3	6	2	6	17
	0.98%	1.84%	0.64%	2.05%	1.37%
Post-grad degree	10	11	6	12	39
	3.26%	3.37%	1.92%	4.10%	3.15%
DK	3	3	2	0	8

	0.98%	0.92%	0.64%	0%	0.65%
Total	307	326	312	293	1238

Supplementary Discussion

Guryan, et al. (2017) Sample Population

The population studied in the Guryan, et al. (2017) study had the following characteristics, compared to the current study:

- Their control group for participating students had an average of 13.4 absences during focal experiment year (compared to our experiment universe having an average of 17 absences during focal experiment year).
- Their recruited population attended schools with 71% to 100% free and reduced lunch (compared to 72% of students in our experiment universe qualifying for free and reduced lunch).
- Their recruited population was 54% black and 42% Hispanic (compared to our experiment universe being 53% black/African American and 20% Hispanic).
- Their experiment population was 53% male (compared to our experiment universe being 48% male).

Study S1: Beliefs of Student Learning Production Function Experiment

This supplemental study examines whether the reason correcting parents beliefs about how many total absences their students have accumulated affects subsequent absences is because parents believe that there are increasing marginal learning costs for each additional absence. That is, the marginal learning cost of the 7^{th} absence is lower than the marginal learning cost of the 13^{th} absence.

Methodology

Participants. Participants were recruited on Amazon Mechanical Turk and self-reported being parents of elementary school, middle school, or high school children. During recruitment, we explicitly asked workers to only accept the assignment only if they were parents of students in elementary school, middle school, or high school. In an unrelated earlier study, participants answered a variety of questions related to student schooling and report cards. This experiment was placed at the end of that survey. Total sample size was 255 parents (M_{age} = 36 years old, 58% Female, <1% "other" gender). The median participant's income was between $50,001 and $60,000. The median participant's level of education was college graduation. Forty-seven percent of participants reported that their children attended urban schools, while 53% reported that their children attended non-urban schools.

Design. Parents were randomly assigned to one of two conditions. Those assigned to the Few Absences condition were asked: *"Imagine that out of 86 school days so far this year, your child has been absent from school 6 days (and attended school 80 days). How much would being absent from school tomorrow affect your child's success in school this school year?"* Those assigned to the Many Absences condition were asked: *"Imagine that out of 86 school days so far this year, your child has been absent from school 12 days (and attended school 74 days). How much would being absent from school tomorrow affect your child's success in school this school year?"* The response scales for both questions ranged from 1 "Not at all" to 7 "A lot". Participants then answered demographic questions before completing the survey.

Results

Those assigned to Few Absences thought that one additional absence would be less detrimental to their child's success in school (M=3.73, SD=.18) than did those assigned to Many Absences (M=4.77, SD=.16), t(253) = -4.3294, p=.002.

Discussion

Parents believed that the detrimental impact of the 13th absence is greater than the detrimental impact of the 7th absence. This suggests that parents believe that their children's education production functions reflect increasing marginal costs to additional absences.

Study S2: Pilot Experiment

Findings Summary

This pilot study sought to determine if sending mailings to parents regarding their students' total absences decreases absenteeism. The experiment also tested whether including the absences of the typical student (relative comparison) induces even greater decreases in absences. There were three experiment conditions: Total Absences, Relative Absences, and Control. Those assigned to Total Absences and Relative Absences received two rounds of mail treatments in spring 2014. Total sample size was 3,007 households in the School District of Philadelphia. A survey was conducted of valid eligible landline phone numbers after the pilot experiment (N=316). Both treatments reduced the number of absences by about 0.7 days (6% relative to control). And though both treatment conditions were significantly different from control, there were no differences between the two conditions, indicating that adding the relative comparison information did not increase the impact of the mail treatments.

Research Questions

1. Does informing parents of the number of days their children have been absent from school reduce student absences? (Primary)

2. Does the impact of this information increase when it also informs parents of how often the students' typical classmate has been absent? (Primary)

3. Which parents and students show the greatest responsiveness to this treatment? (Exploratory)

Design

This study took place in ten schools in the School District of Philadelphia. Individual students were randomly assigned to three conditions. In the two active conditions, students' parents[4] received two rounds of mail treatments, sent roughly a month apart. The three experimental conditions were as follows:

1. Untreated Control: *No mail treatment*
   - No mailings were sent to the parents of participants in this condition.

2. Total Absences: *Your student has missed X days.*
   - Mail Treatment 1: "<STUDENT FIRST NAME> has missed <ATTENDANCE> school days through January 31st of this school year. Missing school – whether for excused or unexcused reasons – disrupts your student's education. Please do all that you can to ensure <STUDENT FIRST NAME> attends school."

   - Mail Treatment 2: "<STUDENT FIRST NAME> has missed <ATTENDANCE> school days through March 31st of this school year (not including snow days). We are sending this mailing in case you missed the first one. Missing school – whether for excused or unexcused reasons –

[4] We refer to students' legal guardians as "parents" throughout this document, though we recognize that there are many different household structures.

disrupts your student's education. Please do all that you can to ensure <STUDENT FIRST NAME> attends school.

3. Relative Absences: *Your student has missed X days, and typical classmate has missed Y days.*
   - Mail treatment 1: "<STUDENT FIRST NAME> has missed <ATTENDANCE> school days through January 31st of this school year. Missing school – whether for excused or unexcused reasons – disrupts your student's education. Please do all that you can to ensure <STUDENT FIRST NAME> attends school."
     - Includes a bar graph with (1) number of absences of typical student in the student's school and grade and (2) student's number of absences
   - Mail treatment 2: "<STUDENT FIRST NAME> has missed <ATTENDANCE> school days through March 31st of this school year (not including snow days). We are sending this mailing in case you missed the first one. Missing school – whether for excused or unexcused reasons – disrupts your student's education. Please do all that you can to ensure <STUDENT FIRST NAME> attends school.
     - Includes a bar graph with (1) number of absences of typical student in the student's school and grade and (2) student's number of absences

The experiment also included a phone survey of parents before and after the treatment intervention to measure the mailings' impact on parental attitudes. Both phone surveys can be found in the Appendix at the end of this document.

Sampling and Universe Construction

Inclusion/Exclusion criteria:

- We excluded students who:
  - opted-out of the study
  - had mailing addresses with data integrity issues
  - were outliers in regards to attendance:
    - We excluded students who had 40 or more cumulative absences through Jan 31, 2014. 40 was chosen as a cut-off because it was roughly half of the number of schools days in the 1st semester of the 2013-14 SY.
  - if multiple students from the same household qualified to be in the sample universe, one student was randomly chosen

Study Universe

The study universe consisted of 3,007 unique student-family combinations among students in the School District of Philadelphia. All students were enrolled in one of the 10 participating public schools as of the end of November 2013. Students were included in the sample universe if their cumulative absences from the beginning of the 2013-14 SY through January 31, 2014 were at least 3 days more than the mode for their school-grade.

Covariates and Baseline Student Characteristics

For each student, we obtained the following baseline characteristics from administrative records:

- School and grade

- Gender
- Race (Black; Hispanic; White; Asian; Other)
- Free and Reduced Lunch Status
- ELL Status
- Special Education Status
- Number of days absent in the school year prior to intervention

For each family, we obtained the following baseline characteristics from administrative records. There was only 1 address for each student.

- Number of children enrolled in another participating public school
- Number of parents or guardians listed on the address
- Home language (English; Spanish; Mandarin; Other)

Outcomes

We obtained the following outcomes directly from administrative records:

- Number of days recorded as absent after mail treatment #1 was sent out through end of school year

Results

Main Effects. We found that the two treatments pooled caused a significant reduction in absences as compared to Control ($p<0.05$). The Total Absences treatment decreased absences by .81 days as compared to Control. The Relative Absences treatment reduces absences by .61 as compared to Control.

Table S31. Overall absences by condition

	Control	Total Absences	Relative Absences	Both Treatments Pooled
Mean Absences	12.5	11.7	11.9	11.8
SE	.23	.24	.23	.17
N	1,010	995	1,002	1997

Effect on Misbeliefs from Post-Experiment Survey. We found that parents in the Relative Absences treatment group were 12.1pp more likely than those in other conditions to say their student was absent more than the typical student ($p<0.01$), indicating that this treatment significantly impacted parent belief. This effect was robust to the addition of controls and under different regression models (e.g. multinomial logistic regressions).

Table S32. Effect on misbeliefs

	Control	Total Absences	Relative Absences
% of parents who believed their student was absent more than the typical student	17.6%	21.3%	29.7%

However, parents' abilities to estimate the number of absences of their own student and the typical student were not significantly affected. There were also no statistically significant impacts on parental beliefs or attitudes.

Finally, we attempted a basic manipulation check—namely, did parents in our treatment conditions actually recall getting the treatment mail pieces? We successfully identified recall effects for both treatments ($p<.01$), as seen in the below table.

Table S33. Recall by treatment group

	Control	Total Absences	Relative Absences
% Recall Receiving Mail from District	33.0%	60.0%	62.2%

Post-Survey Script

SURVEY LOGIC VIEW A

Section	Implementation Notes
Introductory Script	All households
Part I: Preliminary questions	All households
Part II: English class grade	**Not** for households with students in Kindergarten
Part III: Additional Survey Questions	All households
Part IV: Siblings	Only for households with siblings - Q16 and Q17 iterated for each sibling - Households will be clearly identified in the data
Part V: Households with 2 parents	Only for 2-parent households - Households will be clearly identified in the data
Part VI: Sibling Dynamics	Only for a random sample of half of all households - Households will be clearly identified in the data
Part VII: Last Section	All households

SURVEY LOGIC VIEW B

Section	Households Grade K	Households Grade 1-12	Households Siblings*	Households Two Parents*	Households Random Half Sample*
Introductory Script	✓	✓	✓	✓	✓
Part I: Preliminary questions	✓	✓	✓	✓	✓
Part II: English class grade		✓	✓	✓	✓
Part III: Additional Survey Questions	✓	✓	✓	✓	✓
Part IV: Siblings			✓		
Part V: Households with 2 parents				✓	
Part VI: Sibling Dynamics					✓
Part VII: Last Section	✓	✓	✓	✓	✓

*Households to be asked these specific questions will be identified in the data.

Specific Notes:
Ensure phone bank understands survey logic (Q1, Q16 and Q17 iteration, Treatments, etc.)

<u>IMPORTANT NOTE FOR THE PHONE CALLERS</u>:

During the phone call, phone callers should NOT answer questions.

Contact Information for Questions.
If the parent/guardian has any questions about *the research study or phone survey*, respond with:

> "Thank you for asking – for the questions you are raising, please reach out to xyz to speak with Professor XYZ, who is working on the study."

If the parent/guardian has any questions about their *student's attendance data*,

> "Thank you for asking – for the questions you are raising, please reach out to 215-400-6536 to speak with a staff member at the School District of Philadelphia."

If respondent asks who are you, or why are you calling, respond with rest of the script, but **<u>do confirm</u>** that you are speaking with the listed person before hanging up.

Languages.
If respondent prefers Spanish, caller should be bilingual and instead speak in Spanish.
If respondent prefers Chinese/Mandarin, caller should be bilingual and instead speak in Chinese/Mandarin.

PHONE SURVEY SCRIPT
ENGLISH
ALL HOUSEHOLDS
Introductory Script

Q00. Hello. May I please speak with [PARENT/GUARDIAN 1 FIRST AND LAST NAME], the guardian of [STUDENT FIRST NAME, STUDENT LAST NAME]?

01 YES [IF *IT IS* THE PARENT/GUARDIAN WHO WAS ASKED FOR]

Q01. I am calling as part of a research study in the School District of Philadelphia. This study is a collaboration with researchers at Harvard. I have a few short questions. You are under no obligation to participate, and you may stop at any time. This is different than a call you may have received in the last few months. May we continue?

00 [IF NO] Thank you for your time. Have a good day. Goodbye.
01 [IF YES] Go to Q1.

00 NO [IF *NOT* THE PARENT/GUARDIAN WHO WAS ASKED FOR]

Q02. Are you the parent or guardian for [STUDENT FULL NAME]?
00 No → Thank you for your time. Have a good day. Goodbye.
12 Terminated

01 Yes → I am calling as part of a research study in the School District of Philadelphia. This study is a collaboration with researchers at Harvard. I have a few short questions. You are under no obligation to participate, and you may stop at any time. This is different than a call you may have received in the last few months.

Q03. May we continue?

00 [IF NO] Thank you for your time. Have a good day. Goodbye.
01 [IF YES] Go to Q2.

[NOTE, IF RESPONDENT DOES NOT SPEAK ENGLISH, CALLER SHOULD BE BILINGUAL AND INSTEAD SPEAK IN SPANISH OR MANDARIN]

ALL HOUSEHOLDS
Part I – Preliminary questions
Confirm parent/guardian

[correct_guardian]
Q1. Just to confirm that I am speaking with the correct person: are you the parent or guardian of [STUDENT FIRST NAME, STUDENT LAST NAME]?

0 No → Thank you for your time. Have a good day. Goodbye.
1 Yes → Go to Q2
10 Don't Know → Thank you for your time. Have a good day. Goodbye.
11 Refused → Thank you for your time. Have a good day. Goodbye.
12 Terminated at this question

Student attendance comparison to peers

[student_attendance_compared_to_peers}
Q2. Thank you. The first question is about school absences. From the beginning of the school year through March 31st, would you say that your student, [STUDENT FIRST NAME], was absent from school more days than [HIS/HER] classmates in [HIS/HER]grade, about as many days, or fewer days?

1 Fewer days absent
2 About as many days absent
3 More days absent
10 Don't Know
11 Refused
12 Terminated at this question

Student attendance and typical student attendance

[student_attendance_number]
Q3. From the beginning of this school year through March 31st, there were 123 school days (not including snow days). On how many of those days do you think [STUDENT FIRST NAME] was absent from school?

[IF DON'T KNOW, ASK "IF YOU HAD TO GUESS, HOW MANY DAYS WAS YOUR STUDENT ABSENT?"]

1 Provided a number; Number is recorded (Q3a)
10 Don't Know → If gave a guess, number is recorded (Q3b)
11 Refused
12 Terminated at this question

[typical_student_attendance_number]
Q4. During that same 123 day period from the beginning of this school year through March 31st, on how many of those days do you think the typical student in [STUDENT FIRST NAME]'s school and grade was absent from school?

[IF DON'T KNOW, ASK "IF YOU HAD TO GUESS, HOW MANY DAYS WAS THE TYPICAL STUDENT ABSENT?"]

1 Provided a number; Number is recorded (Q4a)
10 Don't Know → If gave a guess, number is recorded (Q4b)
11 Refused
12 Terminated at this question

Manipulation check
[received_mailing]
Q5. In the past couple months, some mailings were sent home to School District of Philadelphia families with information about their students' attendance. Have you received these mailings?

0 No
1 Yes
2 Yes and provided comments about the mailings (Capture response in Q5a)
10 Don't Know
11 Refused
12 Terminated at this question

Contamination question
[contamination]
Q6. In the last two months, have you talked with any other guardians of students at your student's school about how many days of school the typical student has missed this year?

0 No
1 Yes
10 Don't Know
11 Refused
12 Terminated at this question

Report cards
[received report card]
Q7. Now we want to learn about how your student has performed this academic year. Since the school year began, have you received a report card containing your student's grades?

0 No
1 Yes
10 Don't Know
11 Refused
12 Terminated at this question

ONLY FOR STUDENTS IN GRADE 1-12
Part II: English class grade

STUDENTS IN KINDERGARTEN:
If student enrolled in Kindergarten, skip Q's 8-11 and go to Q12.

STUDENTS IN GRADES 1-8:
If student is enrolled in Grades 1-8:

[English class grade]
Q8. What grade did your student earn in [HIS/HER] English Language Arts Class in the most recent quarter, Quarter 3, of this academic year?

[IF ASKED WHAT ENGLISH CLASS, SAY "ENGLISH/ READING" CLASS].

0 Didn't receive a report card
1 F
2 D
3 C-
4 C
5 C+
6 B-
7 B
8 B+
9 A-
13 A
14 A+
15 If a number is provided for the grade, number is recorded (Q8a)
10 Don't Know
11 Refused
12 Terminated at this question

Q9. Compared to [HIS/HER] classmates in [HIS/HER] English Language Arts Class, do you think [STUDENT NAME] did better than, about the same as, or worse than the average classmate in [HIS/HER] class?

[IF ASKED WHAT ENGLISH CLASS, SAY "ENGLISH/ READING" CLASS].

1 Worse
2 The same
3 Better
10 Don't Know
11 Refused
12 Terminated at this question

STUDENTS IN GRADES 9-12:

If student is enrolled in Grades 9-12:

[English class grade]

Q10. What grade did your student earn in [HIS/HER] English class during the most recent quarter, Quarter 3, of this academic year?

0 Didn't receive a report card
1 F
2 D
3 C-
4 C
5 C+
6 B-
7 B
8 B+
9 A-
13 A
14 A+
15 If a number is provided for the grade, number is recorded (Q10a)
10 Don't Know
11 Refused
12 Terminated at this question

Q11. Compared to [HIS/HER] classmates in [HIS/HER] English class, you think [STUDENT NAME] did better than, about the same as, or worse than the average classmate in [HIS/HER] class?

1 Worse
2 The same
3 Better
10 Don't Know
11 Refused
12 Terminated at this question

ALL HOUSEHOLDS

Part III: Additional Survey Questions

Parental perception of student attendance

[attendance_as_an_issue]

Q12. On a scale of 1 to 5, with 1 being not at all important and 5 being extremely important, how important would you say it is that you reduce the number of days [STUDENT FIRST NAME] is absent from school for the rest of the school year?

1 One, not at all important 2 Two

3 Three
4 Four
5 Five, extremely important
10 Don’t Know
11 Refused
12 Terminated at this question.

District communication
[district communication]
Q13. Great thank you. Now, we would like to learn how schools and districts communicate to their students and families. During this school year, have you:

Q13a. Received letters about [STUDENT FIRST NAME]'s attendance from [STUDENT FIRST NAME]'s school or the school district?

Q13b. Had a meeting with the school or district about [STUDENT FIRST NAME]'s attendance?

Q13c. Received a phone call from the school or district about [STUDENT FIRST NAME]'s attendance?

Answer choices for Q13a – Q13c.

0	No
1	Yes
10	Don't Know
11	Refused
12	Terminated at this question

Q13d. Received other communication from the school or district about [STUDENT FIRST NAME]'s attendance?

0	No → Go to Q14
1	Yes → Go to Q13e
10	Don't Know
11	Refused
12	Terminated at this question

Q13e. What communication have you received?

1	Capture response (Q13f)
10	Don't Know
11	Refused
12	Terminated at this question

Parent Role
[parent_role_importance]
Q14. As [STUDENT FIRST NAME]'s guardian, to what degree do you think it is your job to increase [STUDENT FIRST NAME]'s attendance? Would you say it is absolutely your job, it is only to some extent your job, or it is not your job?

1	It is not my job
2	It is only to some extent my job
3	It is absolutely my job
10	Don't Know
11	Refused

12 Terminated at this question

Residence changes
[moved]
Q15. Has your mailing address changed at any point since the school year began?

0 No
1 Yes
10 Don't Know
11 Refused
12 Terminated at this question

ONLY FOR HOUSEHOLDS DESIGNATED AS A "Y" IN THE DATA UNDER "PART IV: SIBLINGS"

Part IV: Siblings (Only for a subset of households)

These questions are only for a subset of student-parent dyads for which we have data stating there are two or more students enrolled in a participating SDP school in the home. The data will indicate if parents should be asked these questions. In the column "Part IV: Siblings" in the data, a "Y" indicates the parent/guardian should be asked this subset of questions. A "N" indicates the parent/guardian should not be asked these questions.

Q16 and Q17 should be asked for each sibling. Answers should be captured such that Q16a and Q17a pertain to Sibling 1, Q16b and Q17b pertain to Sibling 2, etc.

Q16. Our records show that there are other children in your household who also attend schools in the School District of Philadelphia. Is [SIBLING FIRST AND LAST NAME] also in your household?

0 No → Skip Q17 and Go to Q16 for Sibling 2. If done with Sibling list, skip Q17 and go to next appropriate section.
1 Yes → Go to Q17
10 Don't Know
11 Refused
12 Terminated at this question

Q17. From the beginning of the 2013-14 school year through March 31st, 2014, would you say that [SIBLING FIRST NAME], was absent from school more days than [HIS/HER] classmates in [HIS/HER] grade, about as many days as [HIS/HER] classmates in [HIS/HER] grade, or fewer days than [HIS/HER] classmates in [HIS/HER] grade?

1 Fewer days absent
2 About as many days absent
3 More days absent
10 Don't Know
11 Refused
12 Terminated at this question

After Q17, go to next appropriate section.

ONLY FOR HOUSEHOLDS DESIGNATED AS A "Y" IN THE DATA UNDER "PART V: HOUSEHOLDS WITH 2 PARENTS"

Part V: Households with 2 parents (Only for a subset of households)

These questions are only for a subset of student-parent dyads for which we have data stating there are two parent/guardians in the home. The data will indicate if parents should be asked these questions. In the column "Part V: Households with 2 parents" in the data, a "Y" indicates the parent/guardian should be asked this subset of questions. A "N" indicates the parent/guardian should not be asked these questions.

[guardian_ name_accurate]
Q18. We are interested in the quality of guardian contact information that the School District of Philadelphia has for its families. The name of the other guardian who resides in the household that we have on file for you is [PARENT/GUARDIAN NAME 2]. Is this name correct?

0 No, the name is incorrect → Go to Q19
1 No, there is no other guardian → Skip Q19 and go to next appropriate section
2 No, this is incorrect – Volunteered new parent/guardian name (Captured in Q18a) → Skip Q19 and go to next appropriate section
3 Yes, this is correct → Skip Q19 and go to next appropriate section
4 Already speaking with the guardian listed above guardian → Skip Q19 and go to next appropriate section
5 Already speaking with the guardian listed above (Volunteered new parent/guardian name) (Captured in Q18a) → Skip Q19 and go to next appropriate section
6 Already talking with guardian listed above and other guardian information is correct → Skip Q19 and go to next appropriate section
10 Don't Know → Skip Q19 and go to next appropriate section
11 Refused → Skip Q19 and go to next appropriate section
12 Terminated at this question

[another_guardian]
Q19. Is there another guardian in the home?

0 No
1 Yes
2 Yes, and volunteered parent/guardian name (Captured in Q19a)
10 Don't Know
11 Refused
12 Terminated at this question

After Q19, go to next appropriate section.

ONLY FOR HOUSEHOLDS DESIGNATED AS A "Y" IN THE DATA UNDER "PART VI: SIBLING DYNAMICS"

Part VI: Sibling Dynamics (Only for a subset of households)

These questions will be asked to a random sample of half of all households. The data will indicate if parents should be asked these questions. In the column "Part VI: Sibling Dynamics" in the data, a "Y" indicates the parent/guardian should be asked this subset of questions. A "N" indicates the parent/guardian should not be asked these questions.

[sibling_in_home]
Q20. Does [STUDENT FIRST NAME] have school-age siblings?

0 No → Go to Q23
1 Yes
10 Don't Know
11 Refused
12 Terminated at this question

[sibling_responsible]
Q21. In your home, is [STUDENT NAME] responsible for the transportation of another sibling to or from school?

0 No
1 Yes → Skip Q22 and Go to Q23
10 Don't Know
11 Refused
12 Terminated at this question

[sibling_dependent]
Q22. In your home, does [STUDENT NAME] depend on another sibling for transportation to or from school?

0 No
1 Yes
10 Don't Know
11 Refused
12 Terminated at this question

ALL HOUSEHOLDS
Part VII: Last Section (All households)

Q23. Thank you. One last question, what is the highest level of school you have completed?[5] (Do NOT read options)

1 None, or grade 1-8
2 High school incomplete (Grades 9-11)
3 High school graduate (Grade 12 or GED certificate)
4 Technical, trade, or vocational school AFTER high school
5 Some college, associate degree, no 4-year degree
6 College graduate (B.S., B.A., or other 4-year degree)

[5] PEW Research Center (2013). *Appendix D: Topline Questionnaire – October 2013 Higher Education and Gender Survey.* Retrieved from: http://www.pewsocialtrends.org/files/2014/02/higher-ed_topline.pdf.

7 Some post-graduate or professional schooling, no degree (e.g. some graduate school)
8 Post-graduate or professional degree after college
(e.g., Master's Degree or Ph.D.; law or medical school)
10 Don't know
11 Refused
12 Terminated at this question

Thank you for your time!

Phone Survey Main Study

Survey Logistics:
All surveys will be conducted in English.

Important Notes for the Phone Callers:

If questions arise during the phone survey, callers may reference the FAQ listed on pages 2 and 3 to respond to guardian questions. The callers may respond to questions with the answers as listed.

If the question is **not** listed on the FAQ's, callers should respond with:

> "Thank you for asking. Sorry, I am unable to answer that question. I would suggest calling a member of the research team at the School District of Philadelphia at 215-400-6536. They will be able to answer your question."

If the parent/guardian has any questions about *the research study or phone survey*, respond with:

> "Thank you for asking – for the questions you are raising, please call 617-496-1257 to speak with a member of the research team."

If the parent/guardian has any questions about their *student's attendance data* respond with:

> "Thank you for asking – for the questions you are raising, please call the School District of Philadelphia Attendance Office at 215-400-4220. They are open 8:30 am to 4:30 pm Monday through Friday. "

Survey Logic:

Question(s)	Notes
Q0	Parent/guardian verification
Q1-7	All households
Q8-11	If yes to Q7
Q12-20	Randomize order of questions

Q21-22	Gr 6-12 only
Q23	Gr K-5 only
Q24-29	All households Randomize list of options in Q27
Q30-32	Randomly ask 1 of these questions
Q33-38	All households

FAQ for the callers

Q: Who are you? Why are you calling?
A: My name is [CALLER NAME] and I am calling as part of the School of District of Philadelphia Attendance Project. The School District of Philadelphia is partnering with researchers at Harvard University for this project to study student attendance, parent beliefs, and academic performance. I am not a representative of the School District of Philadelphia. This is survey is for research purposes only.

Q: I already did this. Why are you calling me again?
A: OK. You may have participated in a similar call in January. This is a different call to collect some more information.

Q: Who is collecting/using the data from this phone survey?
A: The data will be used for the School of District of Philadelphia Attendance Project and is for research purposes only. The School District of Philadelphia is partnering with researchers at Harvard University for this project to study student attendance, parent beliefs, and academic performance.

Q: Are you a representative of the School District of Philadelphia or the student's school?
A: No, I am calling as part of the School District of Philadelphia Attendance Project. The School District of Philadelphia is partnering with researchers at Harvard University for this project to study student attendance, parent beliefs, and academic performance. The survey is conducted for research purposes only.

Q: Is my student in trouble?
A: No, this survey is for research purposes only. If you have questions or concerns about your student's attendance, please contact the district or your student's school directly.

Q: What is the purpose of this survey?
A: The purpose of this survey is to understand parent and guardian beliefs and behaviors related to student attendance.

Q: What does it mean for a parent/guardian to participate in this survey?
A: Participating parents and guardians answer the questions in this survey.

Q: Who is paying for this survey?
A: The Harvard research team is paying for this survey.

Q: If I take part in this survey, will the information you collect be kept confidential? How will our privacy be protected?
A: It is very important to us that any individually identifiable data is confidential. The data will be confidential and only used for this project. Only members of the research team and collaborators assisting with completion and analysis of the survey will have access to this data. The data will be publicly reported as group data – individual students or parents/guardians will

not be identified. Only summary results will be shared publicly or with the School District of Philadelphia.

Q: What are the benefits and risks of this survey?
A: We see no likely risks or discomforts for you or your student. We cannot promise any benefits to you or your student from taking part in this survey.

Q: What is the purpose of this project?
A: The purpose of this project is to better understand student attendance, parent beliefs, and academic performance.

Q: Who is paying for this project?
A: The Harvard research team is paying for this project.

Q: Who is a part of this project? The parent/guardian or the student?
A: Both students and their respective parent and guardians are part of the project.

Q: What does it mean for my student to participate in this project?
A: Your student's participation in this project means student data regularly collected by the School District of Philadelphia will be shared with the research team, collaborators, and vendors (for example, a company that does mailings) helping with this project.

Q: What information about my student will be shared and collected?
A: The data includes attendance data, academic performance, demographics, and contact information.

PHONE SURVEY SCRIPT

Q0. Hello. My name is [CALLER NAME] and I am calling as part of the School District of Philadelphia Attendance Project. May I please speak with the parent or guardian of [STUDENT FULL NAME]?

00 No, is not the parent/guardian
Thank you. This call is focused on [STUDENT FULL NAME]. Thank you for your time. Have a good [day/evening/night]. Goodbye. → *Terminate survey*
01 Yes, is the parent guardian → Go to Q1
90 Don't Know
92 Terminated

[student_attendance_number]
Q1. Thank you. The purpose of the project is to understand factors that influence student attendance. I am calling you today to ask you a few questions. You do not have to participate, and you may stop at any time.

First, I have a few questions about [STUDENT FIRST NAME]'s attendance in school. There were 180 days of school this year. On how many of those days do you think [STUDENT FIRST NAME] was absent from school, for unexcused or excused reasons?

[IF DON'T KNOW, ASK "IF YOU HAD TO GUESS, HOW MANY DAYS WAS YOUR STUDENT ABSENT?"]

1 Provided a number; Number is recorded (Q1a)
90 Don't Know → If gave a guess, number is recorded (Q1b)
91 Refused
92 Terminated at this question

[student_attendance_comparison]
Q2. Thank you. This past school year, would you say that [STUDENT FIRST NAME], was absent from school more days than [HIS/HER] classmates in [HIS/HER] grade, about as many days as [HIS/HER] classmates in [HIS/HER] grade, or fewer days than [HIS/HER] classmates in [HIS/HER] grade?

3 More days absent → Go to Q3
2 About as many days absent → Go to Q5
1 Fewer days absent → Go to Q4
90 Don't Know → Go to Q5
91 Refused → Go to Q5
92 Terminated at this question

[more_days]

Q3. Would you say that [HE/SHE] was absent MANY more days than [HIS/HER] classmates in [HIS/HER] grade, or JUST A COUPLE more days than [HIS/HER] classmates in [HIS/HER] grade?

2 Many more days → Go to Q5
1 Just a couple more → Go to Q5
90 Don't Know → Go to Q5
91 Refused → Go to Q5
92 Terminated at this question

[fewer_days]

Q4. Okay, thank you. Would you say that [HE/SHE] was absent MANY fewer days than [HIS/HER] classmates in [HIS/HER] grade, or JUST A COUPLE fewer days than [HIS/HER] classmates in [HIS/HER] grade?

2 Many fewer days
1 Just a couple fewer
90 Don't Know
91 Refused
92 Terminated at this question

[communication_other_adults]

Q5. Over this past school year, have you spoken with the parent or guardian of any of [STUDENT FIRST NAME]'s classmates about how often their students are absent from school?

0 No
1 Yes
90 Don't Know
91 Refused
92 Terminated at this question

[future_program_desire]

Q6. Please imagine that next school year you could receive mailings showing how many days of school [STUDENT FIRST NAME] had been absent, and also how many days [STUDENT FIRST NAME]'s typical classmate had been absent. Would you contact [STUDENT FIRST NAME]'s school to enroll so you could receive that information?

0 No
1 Yes
91 Refused
92 Terminated at this question

[received_letter]

Q7. Since January, have you received letters or cards through the mail about [STUDENT FIRST NAME]'s attendance?

0 No → Go to Q12
1 Yes → Go to Q8
90 Don't Know
91 Refused

92 Terminated at this question

[letter_student]

Q8. Did you show these letters or cards to [STUDENT FIRST NAME]?

0 No
1 Yes
90 Don't Know
91 Refused
92 Terminated at this question

[letter_other_adults]

Q9. Okay, thank you. Did you show these letters or cards to other adults in your household?

0 No
1 Yes
90 Don't Know
91 Refused
92 Terminated at this question

[throw_or_save]

Q10. Did you throw these letters or cards away as soon as you read them, or did you save them somewhere like on the counter or on the refrigerator?

1 Threw out the letters
2 Saved the letters
90 Don't Know
91 Refused
92 Terminated at this question

[mail_or_text]

Q11. Would you have rather received this information through the mail or through text message?

1 Mail
2 Text message
90 Don't Know
91 Refused
92 Terminated at this question

[parent_beliefs]

Thank you. Now I will read a series of statements. Please respond to the question "How strongly do you agree with each of the following statements?" Please use the following options: strongly agree, somewhat agree, somewhat disagree, strongly disagree. *[ORDER of Q12-Q20 (inclusive) IS RANDOMIZED]*

[role_construction1]

Q12. Making sure [STUDENT FIRST NAME] attends school every day is my responsibility.

4 Strongly Agree
3 Agree
2 Disagree
1 Strongly Disagree
90 Don't Know
91 Refused
92 Terminated at this question

[divergent_validity2]

Q13. It is [STUDENT FIRST NAME]'s job to make sure [he/she] attends school every day.

4 Strongly Agree
3 Agree
2 Disagree
1 Strongly Disagree
90 Don't Know
91 Refused
92 Terminated at this question

[Mechanisms_3]

Q14. Missing a few days of school each month has a huge effect on success in school.

4 Strongly Agree
3 Agree
2 Disagree
1 Strongly Disagree
90 Don't Know
91 Refused
92 Terminated at this question

[mechanisms_4]

Q15. Absences are fine if I provide the school with an excuse or an explanation.

4 Strongly Agree
3 Agree
2 Disagree
1 Strongly Disagree
90 Don't Know
91 Refused
92 Terminated at this question

[mechanisms_5]

Q16. Others think it is my job to make sure [STUDENT FIRST NAME] attends school every day.

4 Strongly Agree
3 Agree
2 Disagree

1 Strongly Disagree
90 Don't Know
91 Refused
92 Terminated at this question

[Relationship2]
Q17. [STUDENT FIRST NAME] and I have a warm and loving relationship.
4 Strongly Agree
3 Agree
2 Disagree
1 Strongly Disagree
90 Don't Know
91 Refused
92 Terminated at this question

[utility1]
Q18. Attending school each day is important for [STUDENT FIRST NAME] to succeed in school.
4 Strongly Agree
3 Agree
2 Disagree
1 Strongly Disagree
90 Don't Know
91 Refused
92 Terminated at this question

[efficacy2]
Q19. I have influence over how many days of school [STUDENT FIRST NAME] misses.
4 Strongly Agree
3 Agree
2 Disagree
1 Strongly Disagree
90 Don't Know
91 Refused
92 Terminated at this question

[invitations2]
Q20. The School District of Philadelphia and [STUDENT FIRST NAME]'s school want me to be involved in improving [his/her] attendance.
4 Strongly Agree
3 Agree
2 Disagree
1 Strongly Disagree
90 Don't Know
91 Refused
92 Terminated at this question

GRADES 6-12 ONLY

[6-12_schoolwork_time]

Q21. This past school year, how much time did [STUDENT FIRST NAME] spend doing school-related work at home on a typical night?

1 Less than 1 hour
2 1-2 hours
3 2-3 hours
4 3-4 hours
5 More than 4 hours
91 Refused
92 Terminated at this question

[6-12_best_students_schoolwork_time]

Q22. Okay, thank you. How much time do you think the students who get the very best grades in [STUDENT FIRST NAME]'s class spent doing school-related work at home on a typical night?

1 Less than 1 hour
2 1-2 hours
3 2-3 hours
4 3-4 hours
5 More than 4 hours
91 Refused
92 Terminated at this question

GRADES K-5 ONLY

[k-5_learning]

Q23. If you had to choose one, would you say that students in [GRADE] at [SCHOOL] this past year spent most of their time learning important skills or spent most of their time playing?

1 Learning important skills
2 Playing
90 Don't Know
91 Refused
92 Terminated at this question

ALL

[other_parent_contact_info_class]
Q24. Now we're interested in how much parents talk with each other. Do you know the name and phone number of a parent of another student in [GRADE] at [SCHOOL]?

0 No
1 Yes
91 Refused
92 Terminated at this question

[other_parent_contact_info_school]
Q25. Now, do you know the name and phone number of a parent of another student in ANY grade at [SCHOOL]?

0 No
1 Yes
91 Refused
92 Terminated at this question

[other_parent_school_transport_support]
Q26. Have you ever asked another parent of a student in ANY grade at [SCHOOL] for help taking your child to school?

0 No
1 Yes
91 Refused
92 Terminated at this question

[beneficial_student_actions]
Q27. Thinking back to this past school year, which one behavior from the following list would have most helped [STUDENT FIRST NAME] do better in school?
(Caller reads options 1-6. List is randomized.)

1 Attend school each day
2 Do more academic work at home
3 Read everyday
4 Spend less time on phone, television, or electronics
5 Go to bed earlier
6 Eat breakfast
7 Volunteered (Other)
91 Refused
92 Terminated at this question

[parent_teacher_conference]
Q28. Did you attend a parent teacher conference about [STUDENT FIRST NAME] this spring?

0 No
1 Yes
91 Refused

92 Terminated at this question

[absenceday1_reason]
Q29. Please think about the last time [STUDENT FIRST NAME] was absent from school. Which of the following best explains why [he/she] missed school that day?
(Caller reads options)

1 Asthma
2 Allergies
3 Illness of some other sort
4 Transportation Problems
5 Family emergency or event
6 Suspension
7 [He/she] woke up late
8 [He/she] did not want to go to school
9 You did not know that [he/she] missed school that day
10 Other reason
90 Don't Know
91 Refused
92 Terminated at this question

RANDOMLY ASSIGN TO Q30, Q31, OR Q32

[per_pupil_expenditure1]
Q30. How much money do you think the School District of Philadelphia spent per student this past academic year? Would you say the School District of Philadelphia spent:
(Caller reads options 1-7)

1 Less than $3,000 for each student this year
2 $3,000 for each student this year
3 $6,000 for each student this year
4 $9,000 for each student this year
5 $12,000 for each student this year
6 $15,000 for each student this year
7 $18,000 for each student this year
90 Don't Know
91 Refused
92 Terminated at this question

[per_pupil_expenditure2]
Q31. This past school year, the School District of Philadelphia spent around $12,000 per student. Would you say that this is: more than you had thought, about what you had thought, or less than you had thought?

3 More than I thought
2 About what I thought
1 Less than I thought
90 Don't Know
91 Refused

92 Terminated at this question

[per_pupil_expenditure3]
Q32. This past school year, the School District of Philadelphia spent around $67 per student per school day. Would you say that this is: more than you had thought, about what you had thought, or less than you had thought?

3 More than I thought
2 About what I thought
1 Less than I thought
90 Don't Know
91 Refused
92 Terminated at this question

[communication_meeting]
Q33. Since January, have you had a meeting with the school or district about [STUDENT FIRST NAME]'s attendance?

0 No
1 Yes
90 Don't Know
91 Refused
92 Terminated at this question

[asthma]
Q34. Does [STUDENT FIRST NAME] suffer from asthma?

0 No
1 Yes
90 Don't Know
91 Refused
92 Terminated at this question

[allergies]
Q35. Does [STUDENT FIRST NAME] suffer from allergies?

0 No
1 Yes
90 Don't Know
91 Refused
92 Terminated at this question

[relationship]
Q36. Thank you. Just a few final questions. What is your relationship to [STUDENT FIRST NAME]?
(Caller reads options)

1 Parent
2 Grandparent
3 Aunt or uncle
4 Step parent
5 Sibling

6 Cousin
7 Foster parent
8 Other
91 Refused
92 Terminated at this question

[language]

Q37. What is the primary language spoken in your household?

1 English
2 Spanish
3 Portuguese
4 Chinese/Mandarin
5 Creole (Haitian)
6 Arabic
7 French
8 Other
90 Don't Know
91 Refused
92 Terminated at this question

[guardian_education]

Q38. Last question: what is the highest level of school you have completed?[6]

1 None, or grade 1-8
2 High school incomplete (Grades 9-11)
3 High school graduate (Grade 12 or GED certificate)
4 Technical, trade, or vocational school AFTER high school
5 Some college, associate degree, no 4-year degree
6 College graduate (B.S., B.A., or other 4-year degree)
7 Some post-graduate or professional schooling, no degree (e.g. some graduate school)
8 Post-graduate or professional degree after college (e.g., Master's Degree or Ph.D.; law or medical school)
90 Don't Know
91 Refused
92 Terminated at this question

Great, Thank you for your time! Enjoy your [day/evening/night]!

[6] PEW Research Center (2013). *Appendix D: Topline Questionnaire – October 2013 Higher Education and Gender Survey*. Retrieved from: http://www.pewsocialtrends.org/files/2014/02/higher-ed_topline.pdf.

Supplementary Figures

A. Encouragement

ABSENCES MATTER AND YOU CAN HELP

February 2015

Dear Parent/Guardian of Todd Rogers,

Students fall behind when they miss school—whether students are absent for excused or unexcused reasons.

You can have a big effect on Todd's absences going forward—and we appreciate your help.

Sincerely,
William R. Hite, Jr., Ed.D.
Superintendent
The School District of Philadelphia

_ _

We appreciate your help

**This card is part of the XYZ Attendance Project, which aims to increase awareness about the importance of attendance. This is a follow-up to cards we sent earlier in the year. If you have questions, or you do not want to receive future cards, please call [PHONE], email [EMAIL], or visit www.XYZattendanceproject.org. Please be sure to provide the following code: [UNIQUE CODE]. If you received this card in error or have already opted out of receiving these cards, please disregard this one. We apologize for the inconvenience.

B. Total absences

ABSENCES MATTER AND YOU CAN HELP

February 2015

Dear Parent/Guardian of Todd Rogers,

Todd has been absent 16 days this school year.

Students fall behind when they miss school—whether students are absent for excused or unexcused reasons.

You can have a big effect on Todd's absences going forward—and we appreciate your help.

Sincerely,
William R. Hite, Jr., Ed.D.
Superintendent
The School District of Philadelphia

Todd has missed 16 days of school so far this year.

**This card is part of the XYZ Attendance Project, which aims to increase awareness about the importance of attendance. This is a follow-up to cards we sent earlier in the year. If you have questions, or you do not want to receive future cards, please call [PHONE], email [EMAIL], or visit www.XYZattendanceproject.org. Please be sure to provide the following code: [UNIQUE CODE]. If you received this card in error or have already opted out of receiving these cards, please disregard this one. We apologize for the inconvenience.

C. Relative Absences

ABSENCES MATTER AND YOU CAN HELP

February 2015

Dear Parent/Guardian of Todd Rogers,

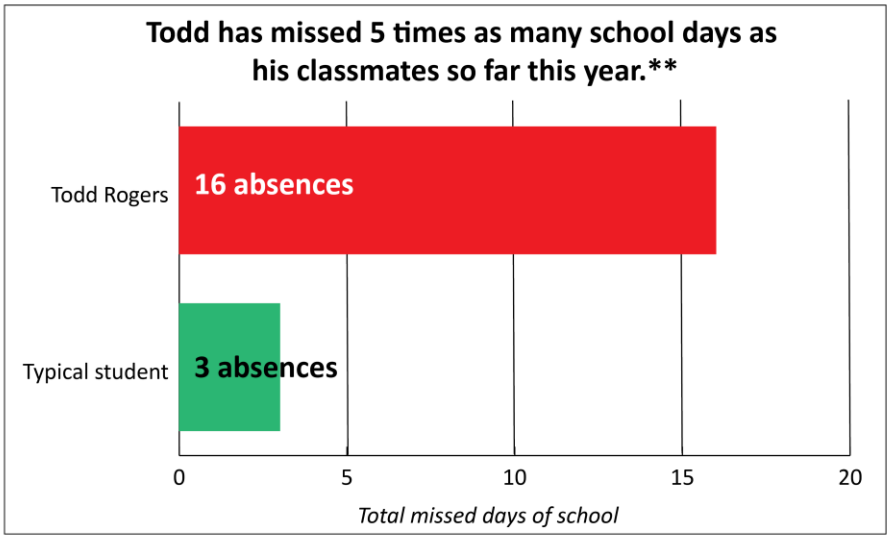
Todd has missed more school than his classmates.*

Todd was absent 16 days so far this school year.

Students fall behind when they miss school—whether students are absent for excused or unexcused reasons.

You can have a big effect on Todd's absences going forward—and we appreciate your help.

Sincerely,
William R. Hite, Jr., Ed.D.
Superintendent
The School District of Philadelphia

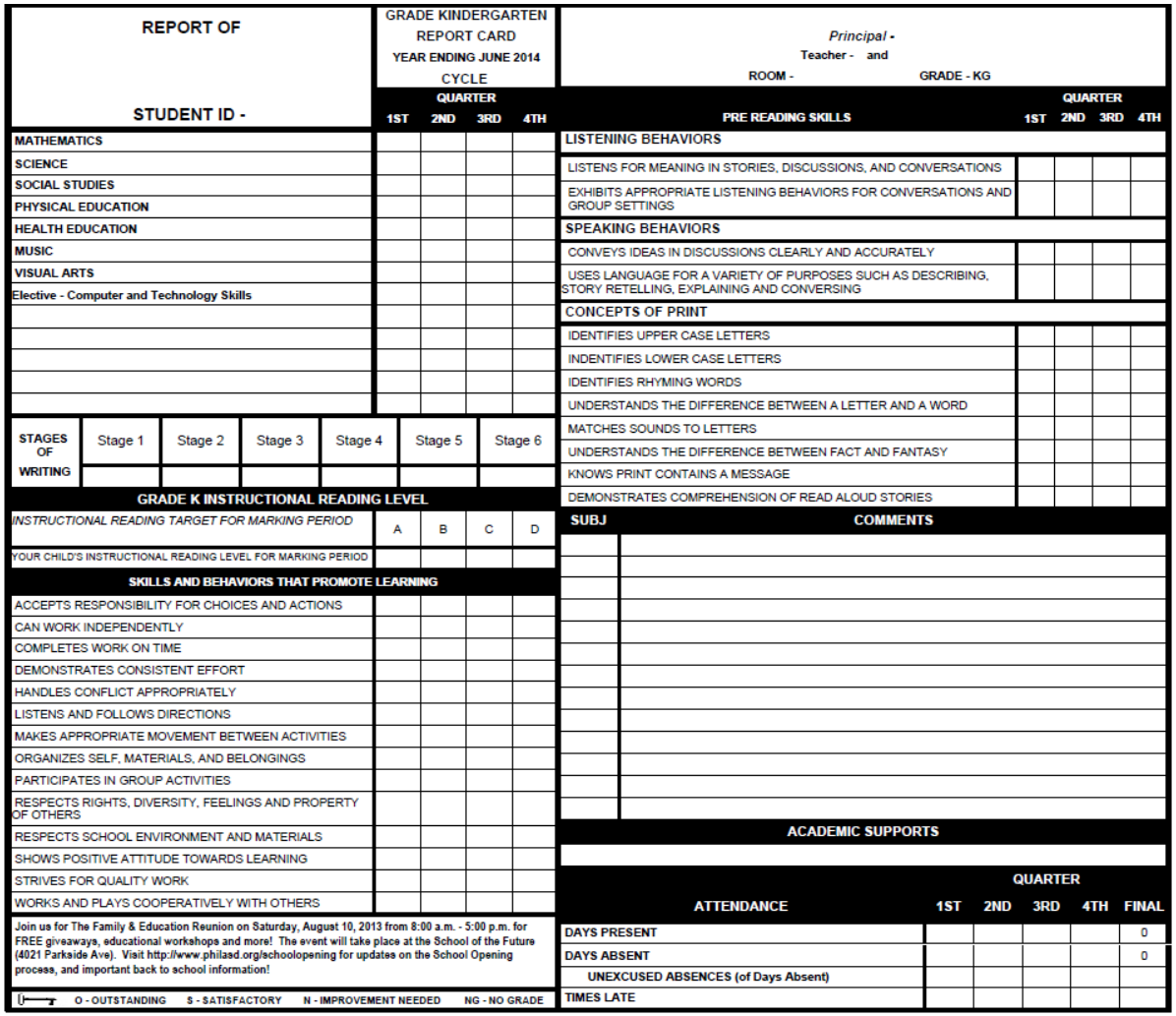


* Todd's absences are compared to the typical number of absences among his classmates in 12th grade at JFK School.

** This card is part of the XYZ Attendance Project, which aims to increase awareness about the importance of attendance. This is a follow-up to cards we sent earlier in the year. The number of absences listed above includes excused and unexcused absences as of 2/4/15. If you have questions, or you do not want to receive future cards, please call [PHONE], email [EMAIL], or visit www.XYZattendanceproject.org. Please be sure to provide the following code: [UNIQUE CODE]. If you received this card in error or have already opted out of receiving these cards, please disregard this one. We apologize for the inconvenience.

D. Report cards

The following images highlight how attendance information has been conventionally presented to guardians in SDP.
Grade K



REPORT OF

STUDENT ID -

GRADE KINDERGARTEN
REPORT CARD
YEAR ENDING JUNE 2014
CYCLE

Principal -
Teacher - and
ROOM - GRADE - KG

	QUARTER 1ST	2ND	3RD	4TH
MATHEMATICS				
SCIENCE				
SOCIAL STUDIES				
PHYSICAL EDUCATION				
HEALTH EDUCATION				
MUSIC				
VISUAL ARTS				
Elective - Computer and Technology Skills				

STAGES OF WRITING	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6

GRADE K INSTRUCTIONAL READING LEVEL

INSTRUCTIONAL READING TARGET FOR MARKING PERIOD	A	B	C	D
YOUR CHILD'S INSTRUCTIONAL READING LEVEL FOR MARKING PERIOD				

SKILLS AND BEHAVIORS THAT PROMOTE LEARNING				
ACCEPTS RESPONSIBILITY FOR CHOICES AND ACTIONS				
CAN WORK INDEPENDENTLY				
COMPLETES WORK ON TIME				
DEMONSTRATES CONSISTENT EFFORT				
HANDLES CONFLICT APPROPRIATELY				
LISTENS AND FOLLOWS DIRECTIONS				
MAKES APPROPRIATE MOVEMENT BETWEEN ACTIVITIES				
ORGANIZES SELF, MATERIALS, AND BELONGINGS				
PARTICIPATES IN GROUP ACTIVITIES				
RESPECTS RIGHTS, DIVERSITY, FEELINGS AND PROPERTY OF OTHERS				
RESPECTS SCHOOL ENVIRONMENT AND MATERIALS				
SHOWS POSITIVE ATTITUDE TOWARDS LEARNING				
STRIVES FOR QUALITY WORK				
WORKS AND PLAYS COOPERATIVELY WITH OTHERS				

Join us for The Family & Education Reunion on Saturday, August 10, 2013 from 8:00 a.m. - 5:00 p.m. for FREE giveaways, educational workshops and more! The event will take place at the School of the Future (4021 Parkside Ave). Visit http://www.philasd.org/schoolopening for updates on the School Opening process, and important back to school information!

O - OUTSTANDING S - SATISFACTORY N - IMPROVEMENT NEEDED NG - NO GRADE

PRE READING SKILLS	QUARTER 1ST	2ND	3RD	4TH
LISTENING BEHAVIORS				
LISTENS FOR MEANING IN STORIES, DISCUSSIONS, AND CONVERSATIONS				
EXHIBITS APPROPRIATE LISTENING BEHAVIORS FOR CONVERSATIONS AND GROUP SETTINGS				
SPEAKING BEHAVIORS				
CONVEYS IDEAS IN DISCUSSIONS CLEARLY AND ACCURATELY				
USES LANGUAGE FOR A VARIETY OF PURPOSES SUCH AS DESCRIBING, STORY RETELLING, EXPLAINING AND CONVERSING				
CONCEPTS OF PRINT				
IDENTIFIES UPPER CASE LETTERS				
INDENTIFIES LOWER CASE LETTERS				
IDENTIFIES RHYMING WORDS				
UNDERSTANDS THE DIFFERENCE BETWEEN A LETTER AND A WORD				
MATCHES SOUNDS TO LETTERS				
UNDERSTANDS THE DIFFERENCE BETWEEN FACT AND FANTASY				
KNOWS PRINT CONTAINS A MESSAGE				
DEMONSTRATES COMPREHENSION OF READ ALOUD STORIES				

SUBJ	COMMENTS

ACADEMIC SUPPORTS

ATTENDANCE	QUARTER 1ST	2ND	3RD	4TH	FINAL
DAYS PRESENT					0
DAYS ABSENT					0
UNEXCUSED ABSENCES (of Days Absent)					
TIMES LATE					

TO THE PARENT OR GUARDIAN OF:

THE SCHOOL DISTRICT OF PHILADELPHIA

Dear Parent/Guardian,

It is our goal to provide you with a Report Card for Grade Kindergarten that keeps you well informed, empowered, and involved in your child's education. Please review the grades and teacher comments with your child and contact your child's school or teacher if you have any questions.

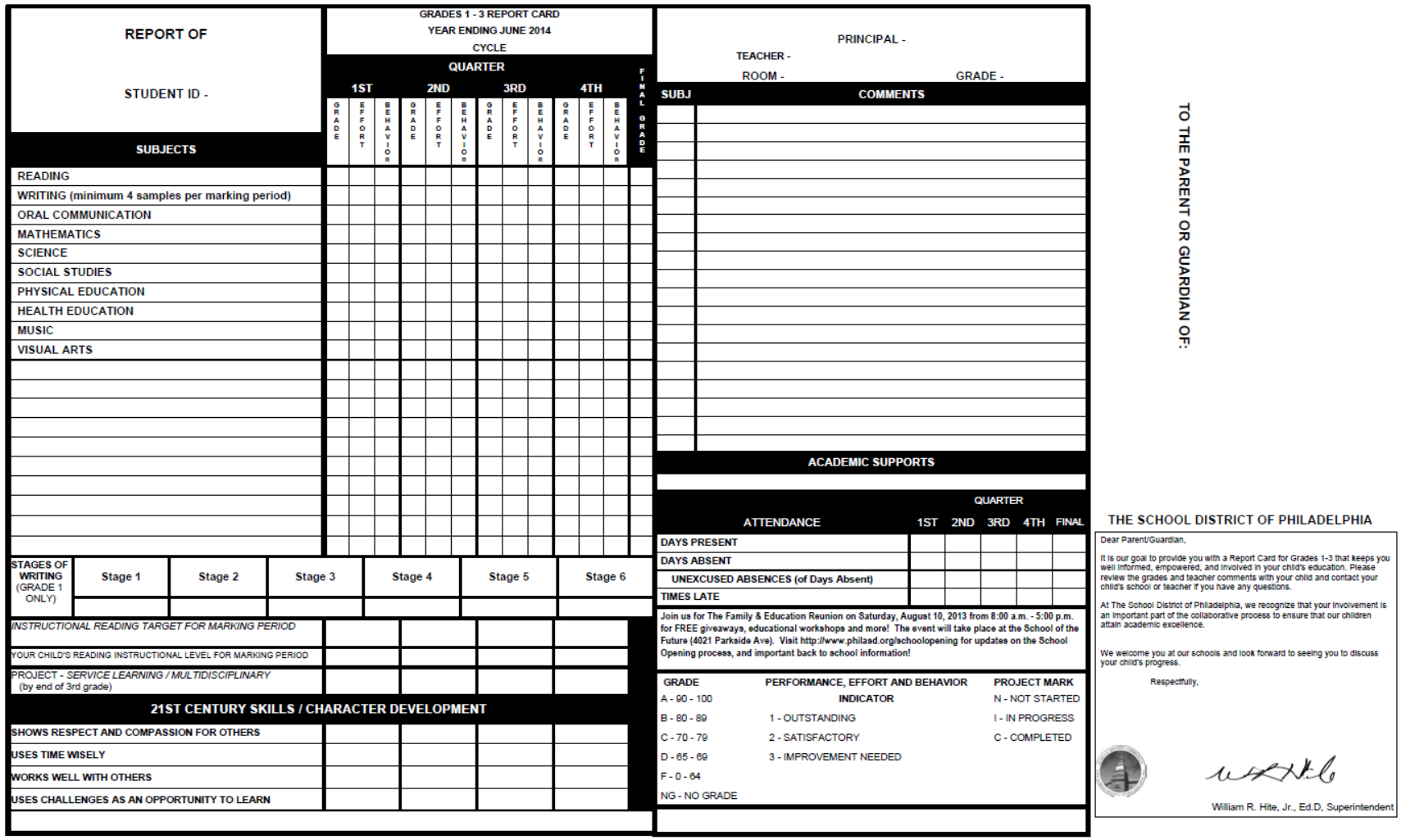
At The School District of Philadelphia, we recognize that your involvement is an important part of the collaborative process to ensure that our children attain academic excellence.

We welcome you at our schools and look forward to seeing you to discuss your child's progress.

Respectfully,

William R. Hite, Jr., Ed.D, Superintendent

Grades 1-3



REPORT OF

STUDENT ID -

GRADES 1 - 3 REPORT CARD
YEAR ENDING JUNE 2014
CYCLE

PRINCIPAL -

TEACHER -

ROOM - GRADE -

SUBJECTS	QUARTER 1ST GRADE	1ST EFFORT	1ST BEHAVIOR	2ND GRADE	2ND EFFORT	2ND BEHAVIOR	3RD GRADE	3RD EFFORT	3RD BEHAVIOR	4TH GRADE	4TH EFFORT	4TH BEHAVIOR	FINAL GRADE
READING													
WRITING (minimum 4 samples per marking period)													
ORAL COMMUNICATION													
MATHEMATICS													
SCIENCE													
SOCIAL STUDIES													
PHYSICAL EDUCATION													
HEALTH EDUCATION													
MUSIC													
VISUAL ARTS													

STAGES OF WRITING (GRADE 1 ONLY)	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6

INSTRUCTIONAL READING TARGET FOR MARKING PERIOD				
YOUR CHILD'S READING INSTRUCTIONAL LEVEL FOR MARKING PERIOD				
PROJECT - *SERVICE LEARNING / MULTIDISCIPLINARY* (by end of 3rd grade)				

21ST CENTURY SKILLS / CHARACTER DEVELOPMENT				
SHOWS RESPECT AND COMPASSION FOR OTHERS				
USES TIME WISELY				
WORKS WELL WITH OTHERS				
USES CHALLENGES AS AN OPPORTUNITY TO LEARN				

SUBJ	COMMENTS

ACADEMIC SUPPORTS

ATTENDANCE	QUARTER 1ST	2ND	3RD	4TH	FINAL
DAYS PRESENT					
DAYS ABSENT					
UNEXCUSED ABSENCES (of Days Absent)					
TIMES LATE					

Join us for The Family & Education Reunion on Saturday, August 10, 2013 from 8:00 a.m. - 5:00 p.m. for FREE giveaways, educational workshops and more! The event will take place at the School of the Future (4021 Parkside Ave). Visit http://www.philasd.org/schoolopening for updates on the School Opening process, and important back to school information!

GRADE	PERFORMANCE, EFFORT AND BEHAVIOR INDICATOR	PROJECT MARK
A - 90 - 100		N - NOT STARTED
B - 80 - 89	1 - OUTSTANDING	I - IN PROGRESS
C - 70 - 79	2 - SATISFACTORY	C - COMPLETED
D - 65 - 69	3 - IMPROVEMENT NEEDED	
F - 0 - 64		
NG - NO GRADE		

TO THE PARENT OR GUARDIAN OF:

THE SCHOOL DISTRICT OF PHILADELPHIA

Dear Parent/Guardian,

It is our goal to provide you with a Report Card for Grades 1-3 that keeps you well informed, empowered, and involved in your child's education. Please review the grades and teacher comments with your child and contact your child's school or teacher if you have any questions.

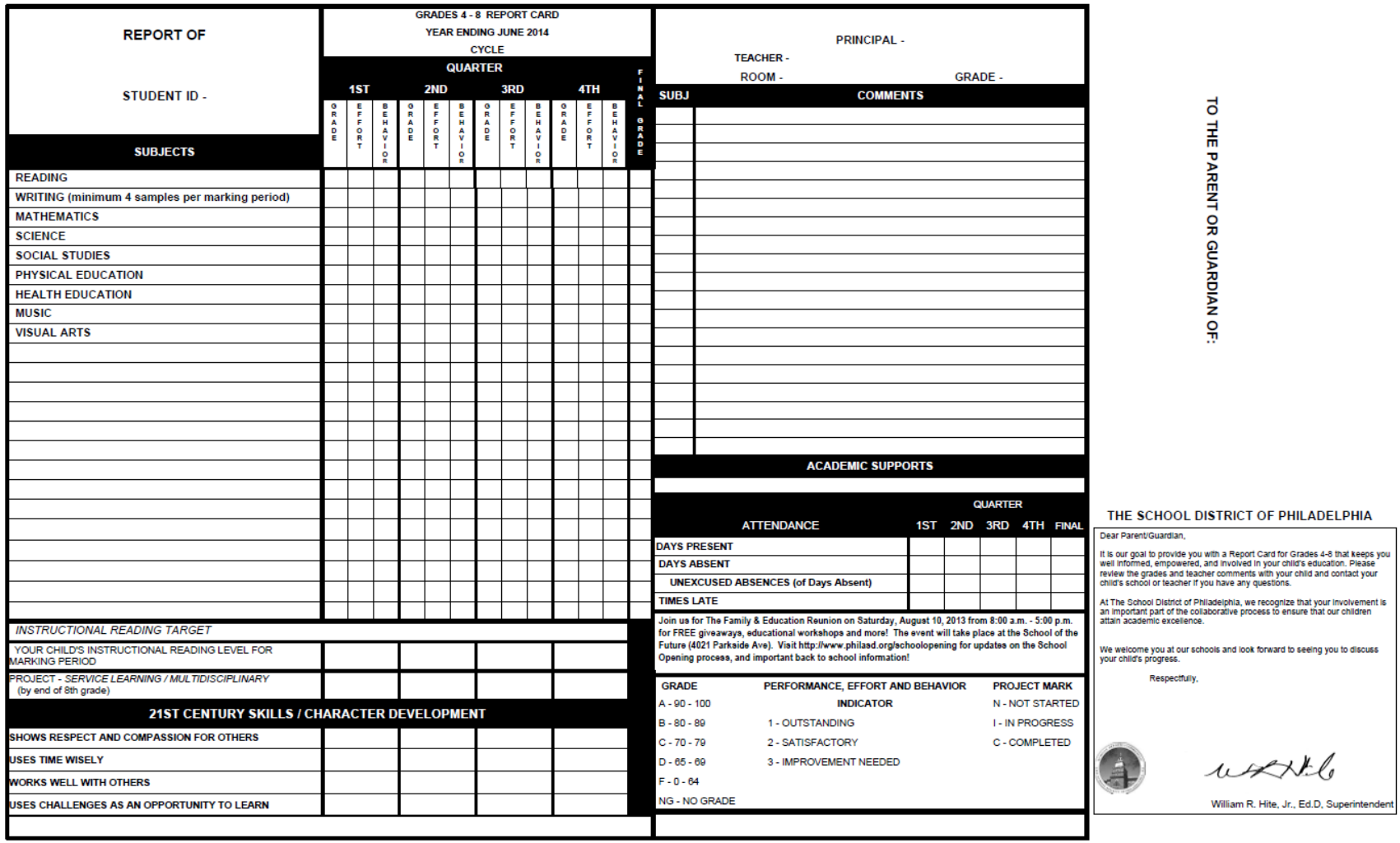
At The School District of Philadelphia, we recognize that your involvement is an important part of the collaborative process to ensure that our children attain academic excellence.

We welcome you at our schools and look forward to seeing you to discuss your child's progress.

Respectfully,

William R. Hite, Jr., Ed.D, Superintendent

Grades 4-8



REPORT OF

STUDENT ID -

GRADES 4 - 8 REPORT CARD
YEAR ENDING JUNE 2014
CYCLE

PRINCIPAL -

TEACHER -

ROOM -

GRADE -

SUBJECTS	QUARTER 1ST GRADE	1ST EFFORT	1ST BEHAVIOR	2ND GRADE	2ND EFFORT	2ND BEHAVIOR	3RD GRADE	3RD EFFORT	3RD BEHAVIOR	4TH GRADE	4TH EFFORT	4TH BEHAVIOR	FINAL GRADE
READING													
WRITING (minimum 4 samples per marking period)													
MATHEMATICS													
SCIENCE													
SOCIAL STUDIES													
PHYSICAL EDUCATION													
HEALTH EDUCATION													
MUSIC													
VISUAL ARTS													

INSTRUCTIONAL READING TARGET				
YOUR CHILD'S INSTRUCTIONAL READING LEVEL FOR MARKING PERIOD				
PROJECT - *SERVICE LEARNING / MULTIDISCIPLINARY* (by end of 8th grade)				

21ST CENTURY SKILLS / CHARACTER DEVELOPMENT				
SHOWS RESPECT AND COMPASSION FOR OTHERS				
USES TIME WISELY				
WORKS WELL WITH OTHERS				
USES CHALLENGES AS AN OPPORTUNITY TO LEARN				

SUBJ	COMMENTS

ACADEMIC SUPPORTS

ATTENDANCE	QUARTER 1ST	2ND	3RD	4TH	FINAL
DAYS PRESENT					
DAYS ABSENT					
UNEXCUSED ABSENCES (of Days Absent)					
TIMES LATE					

Join us for The Family & Education Reunion on Saturday, August 10, 2013 from 8:00 a.m. - 5:00 p.m. for FREE giveaways, educational workshops and more! The event will take place at the School of the Future (4021 Parkside Ave). Visit http://www.philaad.org/schoolopening for updates on the School Opening process, and important back to school information!

GRADE	PERFORMANCE, EFFORT AND BEHAVIOR INDICATOR	PROJECT MARK
A - 90 - 100	1 - OUTSTANDING	N - NOT STARTED
B - 80 - 89	2 - SATISFACTORY	I - IN PROGRESS
C - 70 - 79	3 - IMPROVEMENT NEEDED	C - COMPLETED
D - 65 - 69		
F - 0 - 64		
NG - NO GRADE		

TO THE PARENT OR GUARDIAN OF:

THE SCHOOL DISTRICT OF PHILADELPHIA

Dear Parent/Guardian,

It is our goal to provide you with a Report Card for Grades 4-8 that keeps you well informed, empowered, and involved in your child's education. Please review the grades and teacher comments with your child and contact your child's school or teacher if you have any questions.

At The School District of Philadelphia, we recognize that your involvement is an important part of the collaborative process to ensure that our children attain academic excellence.

We welcome you at our schools and look forward to seeing you to discuss your child's progress.

Respectfully,

William R. Hite, Jr., Ed.D, Superintendent

High School

SCHOOL: **PRINCIPAL:**

REPORT OF: **STUDENT ID:**

ADVISOR: **ADVISORY:** **GRADE:**

SCHOOL DISTRICT OF PHILADELPHIA
SUBJECT AND ATTENDANCE REPORT
YEAR ENDING JUNE 2014

William R. Hite, Jr., Ed.D
SUPERINTENDENT

TO THE PARENT OR GUARDIAN OF:

COURSE : SECTION	SUBJECT	TEACHER'S NAME	FIRST QUARTER				SECOND QUARTER				THIRD QUARTER				FOURTH QUARTER				CUMULATIVE YTD FINAL/CREDITS			
			ALPHA GRADE	GRADE	CITIZENSHIP	ABSENCES YTD	ALPHA GRADE	GRADE	CITIZENSHIP	ABSENCES YTD	ALPHA GRADE	GRADE	CITIZENSHIP	ABSENCES YTD	ALPHA GRADE	GRADE	CITIZENSHIP	ABSENCES YTD	ALPHA GRADE	CUMULATIVE YTD * = FINAL GRADE	CREDITS EARNED

TOTAL CREDIT ACCUMULATION

ENGLISH
MATHEMATICS
SCIENCE
SOCIAL STUDIES
HEALTH/PHYS. ED
ARTS/HUMANITIES
WORLD LANGUAGES
ELECTIVES
TOTAL
PROJECT STATUS:

CREDITS REQUIRED FOR PROMOTION

GRADE 9 TO 10 - 5 CREDITS
GRADE 10 TO 11 - 11 CREDITS
GRADE 11 TO 12 - 17.5 CREDITS

TIMES LATE YTD																			* = FINAL GRADE	
DAYS PRESENT YTD																				
DAYS ABSENT YTD																			YTD = YEAR TO DATE	

ATTENDANCE INCLUDES

CREDITS REQUIRED FOR GRADUATION

ENGLISH	4.00
MATHEMATICS	3.00
SCIENCE	3.00
SOCIAL STUDIES	4.00
HEALTH	0.50
PHYSICAL ED.	1.00
ARTS/HUMANITIES	2.00
WORLD LANGUAGES	2.00
ELECTIVES *	4.00
TOTAL	23.50

* - One of the electives must be math or science

SUBJECT RATING SCALE

A	90 -100	ADVANCED
B	80 - 89	PROFICIENT
C	70 - 79	BASIC
D	65 - 69	BELOW BASIC
F	0 - 64	FAILING
P		PASSING
I		INCOMPLETE
M		PROJECT COMPLETED
N		PROJECT NOT COMPLETED

CITIZENSHIP RATING SCALE

1. EXCELLENT
2. SATISFACTORY
3. UNSATISFACTORY

CITIZENSHIP

DEMONSTRATES RESPONSIBILITY, GETS ALONG WELL WITH OTHERS, SHOWS RESPECT FOR OTHERS, DEMOSTRATES SELF-CONFIDENCE, RESPECTS MATERIALS AND SUPPLIES, FOLLOWS RULES AND SHOWS APPROPRIATE CITIZENSHIP IN CLASSROOM AND OTHER AREAS.

CUMULATIVE GRADE POINT AVERAGE **

CUMULATIVE WEIGHTED AVERAGE **

** The GPA and Weighted Average are calculated based on grades from completed courses only.