

# **NOTICE LETTER**



# Division of Elementary and Secondary Education

*Transforming Arkansas to lead the nation in student-focused education*

**Johnny Key**  
*Secretary*

June 25, 2020

Joseph Fisher, Superintendent  
Guy-Perkins School District  
492 Highway 25 North  
Guy, AR 72061  
[joe.fisher@gptbirds.org](mailto:joe.fisher@gptbirds.org)

Melissa Fife



**State Board  
of Education**

**Diane Zook**  
*Melbourne  
Chair*

Darren Spainhour, Superintendent  
Greenbrier School District  
4 School Drive  
Greenbrier, AR 72058  
[spainhours@greenbrierschools.org](mailto:spainhours@greenbrierschools.org)

**Charisse Dean**  
*Little Rock  
Vice Chair*

**Re: School Choice Appeal: KayLea Fife**

**Susan Chambers**  
*Bella Vista*

Everyone:

**Dr. Fitz Hill**  
*Little Rock*

This letter is to notify you that the Arkansas State Board of Education is scheduled to hear the above-referenced appeal on **July 9, 2020**. The action item is set for the **10:00 a.m.** agenda in the Auditorium of the Arch Ford Education Building, Four Capitol Mall, Little Rock, Arkansas. Any additional materials any party chooses to submit should be provided to my office **no later than 12:00 noon on Monday, June 29, 2019**.

**Kathy McFetridge**  
*Springdale*

**Dr. Sarah Moore**  
*Stuttgart*

The Arkansas State Board of Education has requested the parent, the non-resident district, and the resident district attend this meeting and be available for questions.

**Ouida Newton**  
*Poyen*

The above-referenced appeal will be conducted pursuant to the legal authority and jurisdiction vested in the State Board by the Public School Choice Act and corresponding Rules. You may find a copy of the Rules on the Division of Elementary and Secondary Education's website by visiting the "Current Rules" page and clicking the link for "Public School Choice."

**R. Brett Williamson**  
*El Dorado*

Thank you in advance for your cooperation in this matter. Please do not hesitate to contact me at 501-683-0960 if you have any questions.

Warmly,

Mary Claire Hyatt  
Staff Attorney  
Division of Elementary and Secondary Education  
Four Capitol Mall, Room 301-A  
Little Rock, AR 72201  
[maryclaire.hyatt@arkansas.gov](mailto:maryclaire.hyatt@arkansas.gov)

Four Capitol Mall  
Little Rock, AR  
72201-1019  
(501) 682-4475  
[ArkansasEd.gov](http://ArkansasEd.gov)

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# APPEAL

post mark 6/11

Melissa Fife

Greenbrier, AR 72058

@ymail.com

June 10, 2020

Arkansas Public School Choice Act Appeals  
4 Capitol Mall  
Little Rock, AR 72201

Dear School Board,

re: School Choice Appeal for KayLea Fife

I am writing you to request reconsideration on the decision concerning my daughter, KayLea Fife's school choice application to remain in the Greenbrier School system. She will be entering the 8<sup>th</sup> grade for the school year 2020/2021. KayLea has been a student at the Greenbrier School system since Kindergarten. We recently built a house in the Guy-Perkins School district but our intent and hope was to keep her in the Greenbrier School System for her remaining years of school for a number of reasons. I hope to provide enough documentation to persuade you to allow her to stay in the Greenbrier School System.

I received a phone call from Mrs Halle Wood on 06/08/2020 advising me that I had received a letter from Greenbrier School District at our previous residence (Greenbrier, AR 72018) and picked that letter up on 06/09/2020 learning that our request had been denied for Kaylea to remain in the Greenbrier School system. I have included a copy of the letter from Mrs. Wood to provide documentation of our receipt of this denial letter to show I am within the 10 day requirement for appeal.

I am providing documentation as to why Greenbrier School District would be in the best interest for KayLea from an educational, social and psychological standpoint. I also work at Greenbrier Family Clinic in Greenbrier and that makes it a more suitable option for childcare and transportation for our family. I have included a letter from my employer stating where I work as confirmation. KayLea can walk to my work since the school is located right behind my place of employment. I am more readily available to be involved with KayLea and school functions by working close to her school.

RECEIVED  
LEGAL SERVICES

JUN 15 2020

DEPARTMENT OF EDUCATION  
CENTRAL ADMINISTRATION

I would also ask that when considering this request that COVID-19 and its impact on this previous school year is taken into consideration. Students were faced with such a different environment and approach to school and had to make adjustments during uncertain times. I believe changing school location, different staff and students would not be in her best interest at 13 years old during these times. AMI was a challenge that she handled well but we did have our moments of uncertainty. She pushed on successfully and is looking forward to rejoining her classmates again if they are able to return to school campuses next fall.

I have included the most recent Reports to the Public for Greenbrier School District for years 2017-2018 and 2018-2019. In these reports are statistics showing Greenbrier Schools have continued to rank in the top 5% for performance in the state. In the 2018-2019 report Greenbrier Middle School ranked #1 Best Middle School in Faulkner County according to NICHE.com. I have also included is the U.S. News and World Report ranking Greenbrier High School as #1 in Graduation Rate Ranking. It is my understanding that Greenbrier School District ranks higher than Guy-Perkins and I would not want to take her from a higher ranking school to a lower ranking school.

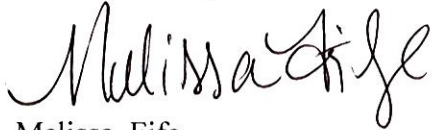
I have included a copy of KayLea's transcript. KayLea is currently enrolled in all Pre-AP courses for the school year 2020/2021. She continues to keep all A's in her classes and thrives very well at her current school in Greenbrier. She has been on a track to graduate with an Associates Degree with College credit courses. Making a school change could put this in jeopardy due to the effects it could have on her. The amount of anxiety she would have from changing school districts could cause a drop in her performance and cause a lesser desire to engage in school functions. KayLea is very happy and excelling well in her current environment at Greenbrier and she would be devastated if forced to change her school. We had no intent of that happening therefore did not plan on her needing to change schools.

I have included a letter of recommendation from her family doctor, Dr. Jessica Tackett. She recommends she stay in her current school district for her mental and social health due to her age, and delicate life stage and the importance of a continued supportive social environment. I have included research found in Frontiers in Psychology on how social behavior relates to grades and achievement scores. They found through their research that grades are impacted by social behaviors more so than achievement tests and can predict future academic success beyond school. If KayLea is not allowed to stay in Greenbrier that could impact her social skills and studies show that can impact her performance and testing.

I have also included a report on how changing schools can affect a child found on fractions4kids.com. It discusses how changing schools should be handled with caution since this change can have negative consequences on a child. Curriculum can vary, teaching methods and pace can vary and cause a child to take time to adapt and could put a child academically behind up to six months due to moving and changing schools. Establishing new friendships can be traumatic for a child. It takes time to build a collaboration between school and parents.

I hope I have provided adequate information and documentation to support our request for this appeal and you would allow KayLea to remain in the Greenbrier School System. I plead with you to allow her to remain here. If there is anything else I could say, do or provide to change this decision I will do all that is needed to make sure my daughter is happy and thriving in Greenbrier.

Thank you for your consideration,

A handwritten signature in black ink that reads "Melissa Fife". The signature is written in a cursive style with a large, prominent "M" and "F".

Melissa Fife

---

Halle S Wood  
9 Lilac St  
Greenbrier, AR 72058

06/09/2020

Arkansas Public School Choice Act Appeals  
4 Capitol Mall  
Little Rock, AR 72201

To whom it may concern,

I am the current resident at [REDACTED] in Greenbrier, AR 72058. Melissa Fife was the previous resident. I notified Melissa that she received a letter from Greenbrier School District at this residence on 06/08/2020 and she picked that letter up on this date.

Sincerely,

Halle S Wood

---

*Halle S. Wood*



# GREENBRIER PUBLIC SCHOOLS

May 26, 2020

Regarding: School Choice Application for: Kaylea Fife

Dear Melissa Fife,

In accordance with the Arkansas Public School Choice Act of 2015, Greenbrier Public School District gives equal consideration to each transfer application made by non-resident students.

Following a review of your application received January 13, 2020, your request for transfer has been denied. This decision is based on the 3% cap in your resident district of Guy Public Schools which was met prior to receipt of application.

Thank you for your interest in our district. If you have further questions, please contact our office at 501-679-4808.

Sincerely,

Scott Spainhour  
Superintendent



**APPLICATION FOR SCHOOL CHOICE TRANSFER**  
(This form must be submitted to both the Resident and the Non-Resident Districts)

**TYPE OF SCHOOL CHOICE TRANSFER REQUESTED**

*Please choose only one option per form submitted.*

Public School Choice Act of 2015

Opportunity School Choice Act

**NOTE:** Applications for the Public School Choice Act of 2015 must be sent to the resident and nonresident districts. Applications for the Opportunity School Choice Act must be sent to the resident district, the nonresident district, and the Division of Elementary and Secondary Education.

*If you are unsure which type of school choice best applies, please review the page following this form for information about the different types of school choice that may be available to your student.*

**SIBLING INFORMATION**

If applying for a transfer under the Public School Choice Act of 2015, does the applicant already have a sibling or step-sibling in attendance in the nonresident district listed below pursuant to the Public School Choice Act of 2013 or the Public School Choice Act of 2015? If so, please list:

**APPLICANT INFORMATION**

Student Name: Kaylea Laine Fife

Student Date of Birth: [REDACTED] Gender: Male  Female

Is the applicant currently under expulsion? Yes  No

**MILITARY FAMILY INFORMATION**

Does the applicant have a parent or guardian who is an active-duty member of the military who has been transferred to and resides on a military base? If so, please state the date of the parent's or guardian's arrival on the military base: NO

**NOTE:** In order to take advantage of school choice options available to military families who have recently transferred to a military base, you must submit military transfer orders and proof of residency on the military base to the resident and nonresident school districts.

2 or More Races  Asian  African-American   
Hispanic  Native American/  
Native Alaskan  Native Hawaiian/  
Pacific Islander   
White

District and School Name: County Name:  
Guy Perkins School District Faulkner County

Address: 492 AR - 25 Guy, AR 72061

Phone: 501-679-7224

District and School Name: County Name:  
Greenbrier School District Faulkner County

Address: 9267 4 School Dr, Greenbrier, AR 72058

Phone: 501-679-4808

Name: Home Phone:  
Melissa Fife

Address: [Redacted] [Redacted]

Parent/Guardian Signature Date:  
Melissa Fife 1/10/2020

Date and Time Received by Nonresident District:

Date and Time Received by Resident District:
Resident District LEA #:
Nonresident District LEA#:
Student's State Identification #:
Application      Accepted <input type="checkbox"/> Rejected <input type="checkbox"/>
Reason for Rejection (If Applicable):
Date Notification Sent to Parent/Guardian of Applicant:

# **RESPONSE**



## Guy-Perkins School District

492 Highway 25 North

Guy, Arkansas 72061

501-679-7224

[www.gptbirds.org](http://www.gptbirds.org)

June 16, 2020

Office of the Commissioner  
ATTN: Arkansas Public School Choice Act Appeals  
4 Capitol Mall  
Little Rock AR 72201

RE: School Choice Application – Kaylea Fife

Dear Arkansas State Board of Education:

The Guy-Perkins School District has received a copy of the Fife family school-choice appeal, based on the district reaching its 3% cap. Enclosed is a copy of their school choice application and the worksheet used by the Guy-Perkins School District to determine the 3% cap. If you need additional information, please contact Denee' Acre at 501-679-7224, or [denee.acre@gptbirds.org](mailto:denee.acre@gptbirds.org).

Sincerely,

A handwritten signature in blue ink, appearing to read 'Joe Fisher', is written over the word 'Sincerely,'.

Dr. Joe Fisher  
Superintendent

# SCHOOL CHOICE 2020-21

3% cap for 20-21 is **10**

## IN

Student Name	grade	resident school	received date and time	
1. [REDACTED]		Greenbrier	03-13-2020	1:45 PM
2. [REDACTED]	10	Greenbrier	04-03-2020	2:45 PM

## OUT

Student Name	grade	choice school	rcv'd by GP	rcv'd by non res	
1. [REDACTED]	K (sibling)	Greenbrier	01-10-2020	07-31-2019	2:35
2. [REDACTED]	K (siblings)	Greenbrier	02-05-2020	02-04-2020	3:30
3. [REDACTED]	K (siblings)	Quitman	02-12-2020	02-12-2020	11:15
4. [REDACTED]	K (sibling)	Greenbrier	03-09-2020	03-09-2020	1:31
5. [REDACTED]	1st	Quitman	01-13-2020	10-18-2019	8:00
6. [REDACTED]	7th	Greenbrier	01-10-2020	11-22-2019	1:30
7. [REDACTED]	8th	Greenbrier	01-10-2020	11-22-2019	1:31
8. [REDACTED]	7th	Southside	12-20-2019	12-20-2019	
9. [REDACTED]	10th	Greenbrier	01-10-2020	01-07-2020	9:52
10. [REDACTED]	8th	Greenbrier	01-10-2020	01-07-2020	9:52
11. [REDACTED]	6th	Greenbrier	01-10-2020	01-07-2020	9:52
12. [REDACTED]	2nd	Greenbrier	01-10-2020	01-07-2020	9:52

\*\*\*\*\*

## DENIED OVER 3% CAP ↓

**NET 10 is our cap**

\*\*\*\*\*

1. [REDACTED]	3rd	Greenbrier	01-10-2020	01-07-2020	1:09
2. [REDACTED]	6th	Quitman	01-13-2020	01-08-2020	10:45
3. Kaylea Fife	8th	Greenbrier	01-13-2020	01-13-2020	9:06
4. [REDACTED]	K	Quitman	01-14-2020	01-01-2020	7:50
5. [REDACTED]	K	Greenbrier	01-29-2020	01-29-2020	1:42
6. [REDACTED]	11 <sup>th</sup>	Quitman	02-18-2020	02-18-2020	9:52
7. [REDACTED]	2nd	Greenbrier	03-09-2020	03-09-2020	11:03
8. [REDACTED]	5 <sup>th</sup>	Greenbrier	04-13-2020	04-13-2020	2:06
9. [REDACTED]	8th	Greenbrier	04-22-2020		
10. [REDACTED]	4th	Greenbrier	04-22-2020		
11. [REDACTED]	1st	Greenbrier	04-22-2020		

Copy

**APPLICATION FOR SCHOOL CHOICE TRANSFER**  
*(This form must be submitted to both the Resident and the Non-Resident Districts)*



Public School Choice Act of 2015

Opportunity School Choice Act

**NOTE:** Applications for the Public School Choice Act of 2015 must be sent to the resident and nonresident districts. Applications for the Opportunity School Choice Act must be sent to the resident district, the nonresident district, and the Division of Elementary and Secondary Education.

*If you are unsure which type of school choice best applies, please review the page following this form for information about the different types of school choice that may be available to your student.*



If applying for a transfer under the Public School Choice Act of 2015, does the applicant already have a sibling or step-sibling in attendance in the nonresident district listed below pursuant to the Public School Choice Act of 2013 or the Public School Choice Act of 2015? If so, please list:

not yet



Student Name: Kaylea Laine Fife 8th grade

Student Date of Birth:

Gender: Male  Female

Is the applicant currently under expulsion? Yes  No



Does the applicant have a parent or guardian who is an active-duty member of the military who has been transferred to and resides on a military base? If so, please state the date of the parent's or guardian's arrival on the military base: no

**NOTE:** In order to take advantage of school choice options available to military families who have recently transferred to a military base, you must submit military transfer orders and proof of residency on the military base to the resident and nonresident school districts.

Copy

2 or More Races	<input type="checkbox"/>	Asian	<input type="checkbox"/>	African-American	<input type="checkbox"/>
Hispanic	<input type="checkbox"/>	Native American/ Native Alaskan	<input type="checkbox"/>	Native Hawaiian/ Pacific Islander	<input type="checkbox"/>
White	<input checked="" type="checkbox"/>				

resident -

District and School Name:	County Name:
Amy Perkins School District	Faulkner County
Address: 492 AR-25 Amy, AR 72061	
Phone: 501-679-7224	

choice -

District and School Name:	County Name:
Greenbrier School District	Faulkner County
Address: 9267 4 School Dr, Greenbrier, AR 72058	
Phone: 501-679-4808	

Name:	Home Phone:
Melissa Fife	[Redacted]
Address: (Current construction @ [Redacted])	
Parent/Guardian Signature	Date:
Melissa Fife	1/10/2020

Date and Time Received by Nonresident District: RECEIVED JAN 13 2020 9:06 am



Copy

Date and Time Received by Resident District:
Resident District LEA #:
Nonresident District LEA#: 2303000
Student's State Identification #:
Application      Accepted <input type="checkbox"/> Rejected <input checked="" type="checkbox"/>
Reason for Rejection (If Applicable): 390 cap met in resident district
Date Notification Sent to Parent/Guardian of Applicant:

# **ASSOCIATED DOCUMENTS**



# Greenbrier Family Clinic

A BAPTIST HEALTH AFFILIATE

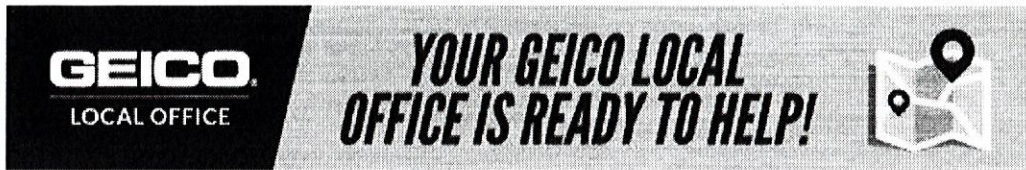
Gary Bowman D.O.  
Jessica Tackett D.O.  
Charles Clifton M.D.

To Whom It May Concern:

Melissa Fife is an employee of Greenbrier Family Clinic address is 49 South Broadview  
Greenbrier, Ar. 72058 .

Vicky Romine  
Clinic Manager

501-679-4030



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## How does changing Schools affect a child ?

During the course of their academic lives, children have to change school for a variety of reasons. For example parents may change jobs or separate and as a result their children have to change schools. Sometimes the changes may occur due to personal choices (e.g. search for a better quality of life) or social reasons (e.g. change in financial situation). Census data suggests that up to 18% of American school age children change homes in any given year. Most children will transfer to a new school or district at least once before they graduate from high school.

Although the reasons may be valid, changing schools must be handled with extreme caution since changes can have negative consequences on your child.

### Academic changes and challenges

The curriculum can vary within a grade from one school district to the next. Teachers may adjust their pace to fit a particular class. When a new child arrives they may be ahead or behind the new class. Teachers also have different styles of teaching and new students may have to take time to adapt. In the 1990's a study by the American Medical Association, involving ten thousand students found out that children who move frequently are 35 % more likely to fail a grade. It can also put a child academically behind by up to six months. The statistics further show that changing high schools puts students at a higher risk of in fact dropping out.

### Peer Relationships

Interaction with their peers is extremely important to children .They may leave a school where they know most of their classmates and move to a new school where they have to begin all over to establish new friendships. This can be quite traumatic for a child.

### Relationship between School /Parents and Child

An important part of the success of a school is that there is usually a strong collaboration and working relationship between schools and parents. This takes time to build. This makes it difficult and challenging for all parties to begin building a strong

relationship. It can also take a while for records from the previous school to arrive.

### **Disruption to a class**

A new student can have an effect on the class dynamics. It is not only that new students have to adjust, it's the fact that their new classmates have to as well. In addition a teacher normally has to take time out from normal schedules to assess and assimilate new children.

### **Increases the risk of Psychotic Symptoms**

Recent research has found that children who had changed schools three or four times in their childhood were found to be at least 60 % more likely to display at least one psychotic symptom. Studies have also shown that changing schools can often lead to feelings of low self-esteem.

Sometimes it is unavoidable that a child must change schools. If this is the case then everything must be done to make the transition as smooth as possible. Whatever the reason for changing school, working closely and positively with your child and their new school will be in their best interest.

### **Some tips on helping your child through the challenges of changing schools:**

- Keep in touch with your kid's best friends from the former school through phone or occasional vacation meetups
- Teach your child social skills that will help them easily make new friends and connect with new classmates.
- Identify areas where your child could potentially fall behind and assist them in those areas.
- Constantly check your child's progress and get updates from the school on their current situation.

## **How does changing Schools affect a child?**





# How Does Social Behavior Relate to Both Grades and Achievement Scores?

Jeffrey M. DeVries\*, Katharina Rathmann and Markus Gebhardt

Faculty of Rehabilitation Sciences, Technische Universität Dortmund, Dortmund, Germany

Prosocial behavior and peer problems are an important correlate of academic development; however, these effects vary by achievement measures and social behaviors. In this paper, we examined data from the German National Education Panel Study (NEPS), and we use structural equation modeling (SEM) to model the effects of prosocial behavior and peer problems on grades and competencies for both math ( $n = 3,310$ ) and reading ( $n = 3,308$ ) in grades 5 and 7. Our models account for the moderating effect of both gender and socioeconomic status (SES) as determined by parental education. We conclude that social behaviors relate to grades more strongly than competencies, that peer problems relate more strongly to achievement than prosocial behavior, and that the relationship is weaker in later grades. We discuss the implication that grades and achievement tests are not interchangeable measures for educators and researchers.

## OPEN ACCESS

### Edited by:

Puri Checa,  
Universidad de Granada, Spain

### Reviewed by:

Angela Jocelyn Fawcett,  
Swansea University, United Kingdom  
Jesús Nicasio García Sánchez,  
Universidad de León, Spain

### \*Correspondence:

Jeffrey M. DeVries  
jeffrey.devries@tu-dortmund.de

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Front. Psychol. 9:857.  
doi: 10.3389/fpsyg.2018.00857

**Keywords:** prosocial behavior, peer problems, grades, competency, large-scale assessment, structural equation modeling, academic achievement

## INTRODUCTION

Academic progress can be measured in multiple ways including grades and achievement scores, but these methods are not interchangeable. Grades are more strongly connected to multiple noncognitive factors, including social behaviors, than achievement tests (Borghans et al., 2011; Farrington et al., 2012; Lechner et al., 2017). Although social behaviors are an indirect predictor, they can broadly predict future academic success (Durlak et al., 2010). However, due to their indirect nature, sufficiently large-scale studies are required to discern the differential relationship social behaviors have with both grades and achievement scores. The National Education Panel Study (NEPS; Blossfeld et al., 2011) is a large-scale longitudinal study of multiple cohorts of German students, which gives a unique opportunity to examine such relationships. In this paper, we model the relationship between social behaviors (specifically prosocial behavior and peer problems), competency, and grades with data from NEPS, in order to unravel which academic measures (grades vs. achievement scores) correlate with social behavior.

## Social Behavior and Academic Achievement

Within the social-emotional learning framework, social behaviors support the social medium of learning (Vygotsky, 1978; Slavin, 1995, 2014; Baroody et al., 2016). Farrington et al. (2012) list social behaviors as one of five critical noncognitive factors that predict success beyond school. Two specific types of behaviors can be linked to academic achievement: prosocial behavior and peer problems. These two behaviors have been linked to various academic skills such as study

habits, and classroom behavior, and peer interactions, which in turn affect academic performance. Wentzel (1993, 1998) has repeatedly found a strong link between prosocial behavior and academic achievement. More recently, Gerbino et al. (2018) analyzed data from an Italian large-scale assessment. They demonstrated that prosocial behavior remained a significant predictor of grades even after accounting for other variables such as personality factors and IQ. Relatedly, Lewis et al.'s (2017) large-scale twin study indicated that prosocial behavior substantially improved predications based on genetics and environmental characteristics. Similarly, peer problems also correlate to lower achievement (Wentzel and Caldwell, 1997), and Malecki and Elliot (2002) found that poor social skills indicated worse performance on achievement tests. More recently, Askell-Williams and Lawson (2015) showed that children with peer problems were more likely to have lower academic motivation as well as other school-related difficulties.

Nonetheless, some inconsistent results remain. Adams et al. (1999) found that after accounting for hyperactivity, conduct problems, and emotional problems, neither peer problems nor prosocial behavior related to math achievement test results; however, prosocial behavior remained related to reading achievement test results. This contrasts with Gerbino et al. (2018) results which indicated that prosocial behavior remains a significant correlate of overall grades after accounting for multiple other factors.

### Grades vs. Achievement Tests

One factor that could help explain such discrepancies is the use of grades vs. achievement tests to measure academic achievement. For instance, many educators include behavior measures in their grading (Cross and Frary, 1999), and grades have been shown to reflect numerous personality factors in addition to academic competence (Borghans et al., 2011; Andrei et al., 2015; Lechner et al., 2017; Gerbino et al., 2018). For example, Lockl et al. (2017) found that theory of mind in kindergarten predicted grades in grade 1 and 2, but they did not examine any connection to achievement test scores. Moreover, theory of mind represents a specific aspect of social development, and more research examining peer problems and prosocial behavior is needed. Despite this, large-scale studies examining both grades and achievement testing alongside social behavior are rare.

### Moderating Variables

Among others, two key moderating variables in these studies have been socio-economic status (SES) and gender. Children of higher SES tend to show fewer social problems and more prosocial behavior (Letourneau et al., 2013). They have higher levels of inclusion at school (Veland et al., 2015), receive better grades (Lekholm and Cliffordson, 2008), and perform better on other achievement measures (Sirin, 2005). Furthermore, lower SES children engage in more prosocial behavior (Piff and Robinson, 2017), but they are also at higher risk of developing social problems (Bradley and Corwyn, 2002). Additionally, well established differences have been found in developmental trajectories for boys and girls for prosocial behavior and peer problems (Card et al., 2008; Chaplin and Aldao, 2013), as well as

in both math and reading achievement (Robinson and Lubienski, 2011). It is therefore important to consider both gender and SES as important moderators when examining achievement and social behavior.

### The Present Study

This study investigates the differential effects of prosocial behavior and peer problems on both grades and achievement tests. We examine both math and reading achievement measures in a longitudinal, large-scale assessment, and account for both gender and socioeconomic status (SES). The use of large-scale panel data is important because the effects of social behavior are predicted to be important, but indirect (Farrington et al., 2012). Because such indirect effects are a particularly difficult hurdle when predicting effects of different strengths, we use the NEPS database (Blossfeld et al., 2011), which includes data from a large-scale German longitudinal survey with enough participants to model all necessary variables.

Based on the role of social skills as a noncognitive factor in learning (see Farrington et al., 2012), we expect that more desirable social behavior will correlate to both better grades and better competencies in reading and math. In a recent similar study, internalizing problems were shown to have a detrimental effect on achievement outcomes of secondary students (Deighton et al., 2018). However, because grades are a better reflection of noncognitive factors in learning, our first prediction is that grades will be more impacted by social behaviors than competency (see Borghans et al., 2011; Lechner et al., 2017). Furthermore, both gender and SES are well-known moderators of achievement and social behavior. Therefore, our second prediction is males will do better on math measures while females will do better on reading measures, and that students with higher SES will outperform those with lower SES on both measures. In a similar analysis, (Gerbino et al., 2018) showed that effects of social behaviors on grades remained after accounting for moderating personality factors. Therefore, our final predication is that the effects of prosocial behavior and peer problems will remain after accounting for gender and SES as determined by parental education.

## METHODS

### Data and Participants

All data came from the NEPS database (Blossfeld et al., 2011), which contains multiple large representative cohorts of German students. NEPS data are collected each year from selected students, teachers, parents, and administrators. We focused on NEPS cohort 3, which began in grade 5. We used data from waves 1 (grade 5, October 2010–January 2011), 2 (grade 6, October 2011–January 2012), and 3 (grade 7, October 2012–January 2013). All participants with data on any of the key variables were included in our models. Because of small differences in who took the reading and math competency NEPS tests and in who reported their grades for German and math, the number of participants varied slightly between both datasets. We provide an overview of the participants in **Table 1**.

**TABLE 1** | Participant information.

	Math model ( <i>n</i> = 3310)	Reading model ( <i>n</i> = 3308)
<b>GENDER (PERCENT)</b>		
Male	51.6%	50.6%
Female	48.2%	49.4%
<b>AGE (MEAN, SD)</b>		
Years	12.0 (0.8)	12.0 (0.8)
<b>PARENTAL EDUCATION (PERCENT)</b>		
Basic	14.0%	14.0%
Vocational	56.0%	56.0%
University	30.0%	30.0%
<b>SCHOOL TYPE (PERCENT)</b>		
Secondary—Hauptschule	7.6%	7.6%
Secondary—Realschule	22.1%	22.2%
Secondary—Gymnasium	52.2%	52.4%
Other	18.1%	17.8%

Parental Education was determined by CASMIN.

## Data Collection

We focused on a small subset of the collected data for our models: math competency, math grades, SDQ scores for the subscales of peer problems and prosocial behavior, gender, and parental education level.

## Competency Measures

We used the uncorrected weighted maximum likelihood estimates (WLE) from grades 5 and 7 in the NEPS dataset for both math and reading competency. Analyses by the NEPS team confirmed unidimensionality, reliability, and measurement invariance of these estimates across gender, books in household, and migration background (Haberkorn et al., 2012; Krannich et al., 2017). Math and Reading competency were assessed in waves one and three (grades five and seven).

## Grades

Self-reported math and German whole-year grades were used for grades 5 and 7. In the German school system, grades are ordered from 1 to 5, with lower scores representing better grades (1 = very good, 2 = good, 3 = satisfactory, 4 = sufficient, 5 = failing).

## Prosocial Behavior and Peer Problems

The prosocial behavior and peer problems subdimensions of the Strengths and Difficulties Questionnaire (SDQ) were used to assess social behavior in wave two. The SDQ is a frequently used questionnaire to assess psychological characteristics of children (Goodman, 1997; Goodman et al., 2010) and has been demonstrated to meet basic psychometric properties for longitudinal analyses in German samples (DeVries et al., 2017). The other three SDQ subscales were unavailable in the NEPS database for this time period.

## Socioeconomic Status (SES)

In parent interviews in wave one, a parent responded about his or her own educational attainment as well as his or

her partner's attainment. Responses were rated based on the Comparative Analysis of Social Mobility in Industrial Nations (CASMIN) scale (Brauns et al., 2003). The scale was reduced to three basic categories: low (no secondary degree, or secondary degree with basic vocational training), intermediate (advanced vocational training or vocational postsecondary school), and high (university level or higher). Only the higher rating from either parent was used for each child.

## Analysis

We analyzed the data with structural equation modeling (SEM). Separate models were calculated for math and reading. A confirmatory factor analysis was conducted for each model with prosocial behavior and peer problems treated as latent variables calculated from individual items from relevant SDQ subscales. Additionally as depicted in **Figures 1, 2**, gender, parental education, grades (5th and 7th year), and competency were regressed onto each other and the latent variables. Mplus was used for all SEM analyses (Muthén and Muthén, 1998–2017), and an example of our Mplus instruction file is available in the Appendix. Estimations were performed using robust maximum likelihood estimation (MLR), and we report root mean square error of approximation (RMSEA), comparative fit index (CFI) and square root mean residual (SRMR). Acceptable fits included RMSEA < 0.08, CFI > 0.90, and SRMR < 0.10, and good fits included RMSEA < 0.05, CFI > 0.95, and SRMR < 0.08 (Hu and Bentler, 1998).

## RESULTS

### Model Fits Math

Overall, the math model produced a good fit of the data, RMSEA = 0.036 (90% CI = 0.033–0.039), CFI = 0.93, and SRMR = 0.040. While the CFI falls below our threshold of 0.05, it remains in the acceptable range. Despite this, the RMSEA and SRMR are well below the threshold for a good fit. We therefore concluded we had a good fit.

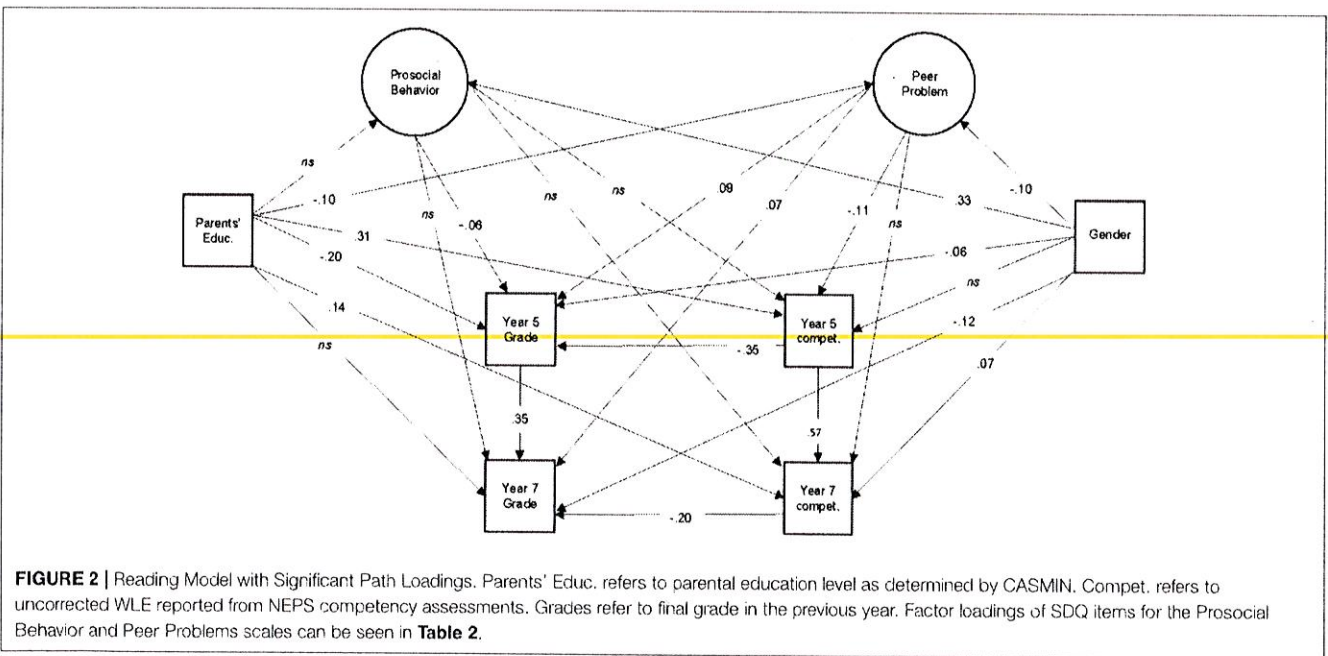
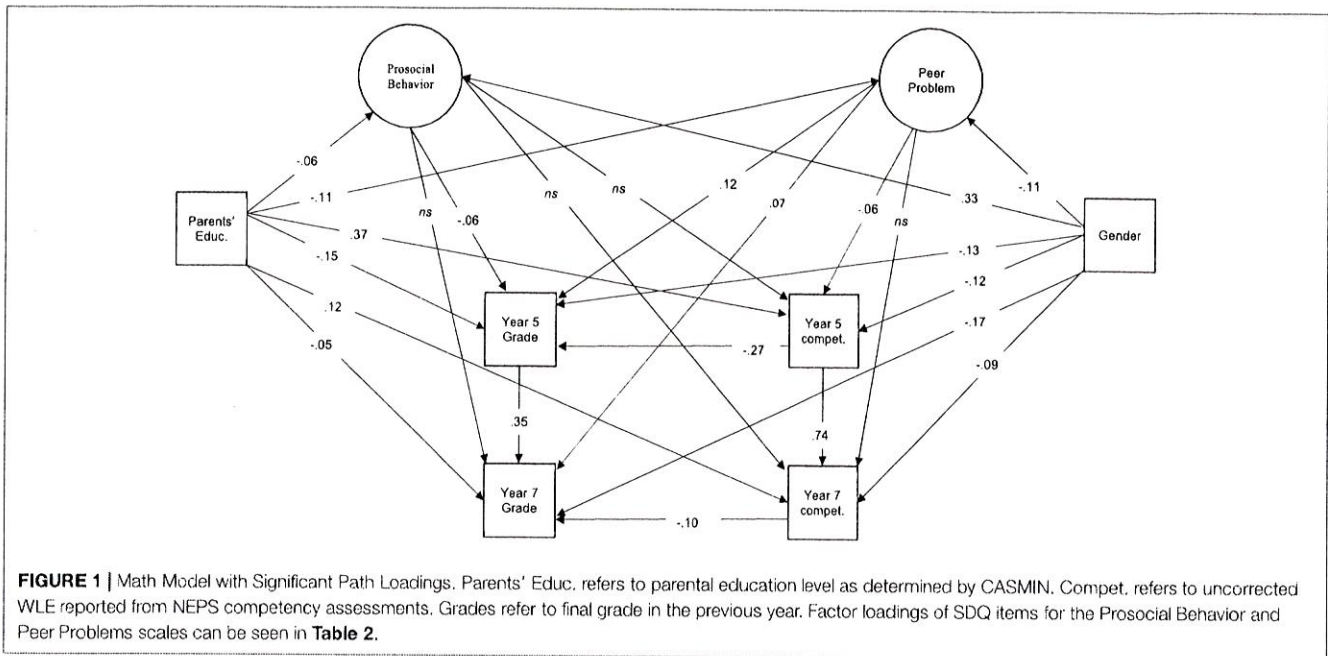
### Reading

Similarly, the reading model provided a good fit, RMSEA = 0.044 (90% CI = 0.038–0.049), CFI = 0.92, and SRMR = 0.046. As in the math model, the CFI was below threshold for a good fit, but was in the range of acceptable fits. Given the good values for the RMSEA and SRMR, we concluded that the fit was good.

### Reliability and Factor Loadings for the Latent Factors

Cronbach's  $\alpha$  for peer problems was 0.60, and for prosocial behavior was 0.71, while McDonald's total  $\omega$  for peer problems was 0.61 and for prosocial behavior was 0.72. Factor loadings for both the math and reading models can be seen in **Table 2**. They were significant at  $p < 0.001$ , and ranged between 0.38 at and 0.69. While Cronbach's  $\alpha$  and McDonald's  $\omega$  for the prosocial peer problems were low, overall the measures performed similarly to values from the meta-analysis conducted by Stone et al. (2010). Given the acceptable fit values and overall good model fits, we





conclude the models fit the data reasonably well and provided sufficient reliability.

### General Findings of Prosocial Behavior and Peer Problems

The standardized path loadings are reported in **Figures 1, 2**. Prosocial behavior only related to both math and reading grades in grade 5. It did not relate to either math or reading competency. Peer problems, however, were significantly related to math grades at year 5 and 7, as well as competency in grade 5 in both math and reading models.

### Grades vs. Achievement Scores

As seen in **Figures 1, 2**, peer problems were predictive of grades broadly in both the reading and math models, and only of competency in the 5th grade. Meanwhile, prosocial behavior was significantly related to 5th year grades, but not 7th year, and never to competency.

We conclude that there is a greater overall relationship between grades and social behavior, particularly peer problems. Although, there is an indication of a relationship between peer problems and competency at an earlier grade.

**TABLE 2 |** Standardized factor loadings for peer problems and prosocial behavior.

SDQ items	Math M (SE)	Reading M (SE)
<b>PEER PROBLEMS</b>		
Item 3: Loner	0.40 (0.03)	0.38 (0.03)
Item 5: Has Friends	0.45 (0.03)	0.46 (0.03)
Item 6: Popular	0.48 (0.03)	0.46 (0.03)
Item 8: Is teased	0.61 (0.03)	0.59 (0.03)
Item 10: Gets along better with adults than with children	0.45 (0.03)	0.47 (0.03)
<b>PROSOCIAL BEHAVIOR</b>		
Item 1: Considerate	0.62 (0.02)	0.62 (0.02)
Item 2: Likes to share things	0.51 (0.02)	0.51 (0.03)
Item 4: Helpful	0.68 (0.02)	0.69 (0.02)
Item 7: Nice to younger children	0.51 (0.02)	0.51 (0.03)
Item 9: Often helps voluntarily	0.53 (0.02)	0.53 (0.02)

All loadings were significant at  $p < 0.001$ . All other loadings and path values for the math and reading models are visible in **Figures 1, 2**, respectively.

## SES and Gender

**Figures 1, 2** also indicate the effects of gender and parental education on competency and grades in both the math and reading models. Parental education was related to better grades and competency in both the math and reading models at both measurement points.

Gender was also a strong predictor of performance. Girls had worse math grades and competency than boys at both measurement points, and they had better grades than boys in both measurement points. However, they had better reading competency than boys in grade 7, but not at grade 5.

Overall, we conclude that gender and SES as determined by parental education correlated significantly with our dependent variables. Loadings from parental education appear to decrease from grades 5 and 7, and the effect of gender on reading became stronger between grades 5 and 7.

## Social Behavior on Grades After the Controlling for Moderators

Both of the math and reading models modeled the variance attributed to gender and parental education separately from the variance of prosocial behavior and peer problems. A small to medium sized standardized path loading (path loadings between 0.06 and 0.12) on peer problems on grades and 5th grade competency remained. Thus, we can support our final prediction: that the relationship between social behavior and achievement remains despite including powerful moderating variables in our analyses.

## DISCUSSION

### Overview of Findings

Using data from a large-scale assessment of German students in early secondary schools, we provided evidence that social behavior has a disproportionate evidence on grades in comparison to achievement tests. Specifically these findings

help reconcile differential findings from studies using only grades or achievement tests as an outcome measure (e.g., (Adams et al., 1999; Malecki and Elliot, 2002; Lockl et al., 2017; Gerbino et al., 2018)). In our model, significant relationships between social behavior and both grades and early test scores, but not later test scores, remained. This remained true for both peer problems and prosocial behavior and true in both math and reading models.

### Interpretation and Theoretical Implication

This novel finding was predicted by previous work which found noncognitive factors correlate more to grades than to IQ scores (Borghans et al., 2011; Lechner et al., 2017). The idea was further developed by Farrington et al. (2012), who identified social skills as one of several types of noncognitive factors influencing grades, one of which was social skills. Moreover, Farrington et al. (2012) called for future research to remedy to major insufficiencies in this line of research: research at the secondary level and research focusing on specific aspects of social skills. Our study addresses both these issues by examining early secondary students and by using the SDQ to define two specific dimensions of social skills: prosocial behavior and peer problems.

We further expand on the findings that internalizing problems are linked to reduced academic performance (Deighton et al., 2018) and that grades are also positively affected by prosocial behavior (Gerbino et al., 2018). One specific aspect of internalizing (i.e., peer problems) had a stronger negative impact on achievement, while prosocial behavior had a smaller positive effect only for grades. We also predicted a significant relationship between achievement test scores and social behavior, but were unable to support this prediction for math or reading beyond the 5th grade. Farrington et al. (2012) argued that social skills had an indirect effect and that it might be stronger for younger learners. Therefore, it is possible that the relationship between social behavior and competency fades as children age, or this relationship is too small to identify at later ages.

### Limitations and Future Work

Despite our large and robust data set, some limitations remained. Our research focused on 5th and 7th graders. Full data from 9th grade and beyond in this cohort is not yet available. Thus, we cannot yet know the impacts of social behavior and skills on other life success measures and over a longer timeframe. One key assumption from Farrington et al. (2012) is that grades prove to be a better measure of future success, because they include noncognitive factors that are also important in long-term success. Therefore, future longitudinal research is necessary on this and similar cohorts to examine the hypothesis. Furthermore, given only two measurement points, it is difficult to make any causal inferences from this data. Broader longitudinal studies combined with intervention studies and true experiments are required to demonstrate a cause-and-effect connection.

Additionally, our research was further limited by only using limited aspects of social behavior. While prosocial behavior and peer problems are important, other aspects are also important for a full measure of social behavior, such as emotional competence, self-regulation, and aggression. While this data was not fully

available in this survey data, future research should endeavor to include additional specific measures of social behavior.

Another limitation comes from the types of data available in the NEPS database. While, the NEPS data-base includes self-reports of grades, it does not include self-reports of SDQ measures. Future work should compare the relationship between other sources of social behavior (e.g., self-report, parent report), and other sources of grades (e.g., teacher reports, academic records, etc.). Another artifact of the NEPS dataset is the order of the data collection. The SDQ subscales were collected between the achievement measures in our study, but we nonetheless treated them as predictors of both earlier and later achievement. Later studies may address this limitation by including more data from later measurement points, as those data become available.

Future work should work to integrate more variables into the analysis. We use a simplified rating of parental education to determine SES; however, parental education represents only a part of the SES, further work should incorporate other measures of SES such as income and living situation into analyses. Additional future work should also incorporate other personality variables, such as compliance, work ethic, and conscientiousness, which may have some overlap with our social behavior measures. Furthermore, the complex interaction of teacher expectation and support based on gender and SES and other variables should be considered. With the integration of these variables alongside an examination of the teacher-student interactions, the reasons for these effects could be further explained.

Lastly, although our dataset was broad and representative, it only included data from students attending schools in Germany. Future research is necessary on datasets from other nations as well as from multinational studies.

## Application for Educational Practice

Our study further demonstrates the effect of social factors on grades and competency in math and reading. While there may be a potential bias effect on student grades for students based on prosocial behavior, this effect is small. Larger effects were observed for peer problems on both competency and grades. We recommend that teachers be aware of any social problems their students may possess as these learners may require additional support particularly in classrooms that use social learning styles.

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## CONCLUSION

Our goal was to examine the differential impact social behaviors (i.e., peer problems and prosocial behavior) on grades and achievement tests in both math and reading. **Our results showed that grades correlate more strongly to social behavior than test scores do at younger ages, and that specifically peer problems have a stronger relationship to academic performance.** Researchers should be careful when choosing which measure to use and especially when using both measures interchangeably. **Teachers should likewise be aware of the relationship between social behavior and their students' grades.** Future research into additional types of social behaviors and skills is necessary to identify the effects of specific aspects of social skills and behavior on specific grade types.

## ETHICS STATEMENT

This study used existing data from the German National Education Panel Study. From 2008 to 2013, data collection was supervised by the Framework Programme for the Promotion of Empirical Education Research. As of 2014, data collection was carried out by the Leibniz Institute for Educational Trajectories. Because the study used existing data, no new ethical review was required.

## AUTHOR CONTRIBUTIONS

JD served as primary author and data analyst. MG provided writing oversight, feedback, and initial study design, KR provided expertise on developing, modeling, and utilizing control variables (i.e., gender, SES) and theoretical expertise in their implementation in NEPS and their theoretical discussion.

## ACKNOWLEDGMENTS

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**Conflict of Interest Statement:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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## APPENDIX

Mplus instructions for the reading model. The math model was identical, except for substituting math for reading.

Variable:

Names are tw2\_1-tw2\_10, gender, rg5, rg7, ParEd, rc5, rc7,

SchoolID;

Usevariables are tw2\_1-tw2\_10, gender, rg5, rg7, ParEd, rc5,

rc7;

missing are all (-99 - -2);

Cluster is SchoolID;

Model:

!SDQ subscales

PP2 by tw2\_3 tw2\_5 tw2\_6 tw2\_8 tw2\_10;

PrS2 by tw2\_1 tw2\_2 tw2\_4 tw2\_7 tw2\_9;

!Achievement measures on social factors

rg5 rc5 rg7 rc7 on PP2;

rg5 rc5 rg7 rc7 on PrS2;

!Control Variables

PrS2 PP2 rc5 rc7 rg5 rg7 on Gender;

PrS2 PP2 rc5 rc7 rg5 rg7 on ParEd;

Gender with ParEd@0;

!Achievement measures - competency predicting grades

rg5 on rc5;

rg7 on rc7;

!Achievement measures - Grade 5 to Grade 7 regression

rg7 on rg5;

rc7 on rc5;

Analysis:

type is complex;

estimator is MLR;

Output:

stdyx;

sampstat;

Analysis:

type is complex;

estimator is MLR;



EDUCATION

## Greenbrier High School

72 Green Valley Dr, Greenbrier, Arkansas

(501) 679-4236

#859 in National Rankings

Overall Score 95.17/100



### QUICK STATS

Grades	10-12
Total Enrollment	790
Student-Teacher Ratio	15:1

### Overview



## Overview of Greenbrier High School

Greenbrier High School is ranked seventh within Arkansas. Students have the opportunity to take Advanced Placement® coursework and exams. The AP® participation rate at Greenbrier High School is 63%. The total minority enrollment is 7%, and 19% of students are economically disadvantaged. Greenbrier High School is the only high school in the Greenbrier School District.

## Operating status for schools in Arkansas

Schools in Arkansas have been ordered closed for the academic year, which went into effect on 3/17/20. There are 1,089 K-12 public schools in Arkansas with 493,447 students enrolled.

**For more information from Education Week, see Map: Coronavirus and School Closures**

*Last updated: April 13, 2020, 6:45 p.m. ET*



## Greenbrier High School 2020 Rankings

Greenbrier High School is ranked #859 in the National Rankings. Schools are ranked on their performance on state-required tests, graduation and how well they prepare students for college. Read more about how we rank the Best High Schools.

### All Rankings

#859 in National Rankings

#7 in Arkansas High Schools

#2 in Little Rock, AR Metro Area High Schools

SCORECARD

| 95.17

Took at Least One AP® Exam

63%

Passed at Least One AP® Exam	28%
Mathematics Proficiency	59%
Reading Proficiency	52%
Graduation Rate	98%

## Ranking Factors

How Greenbrier High School performed nationally and statewide out of 17,792 nationally ranked schools and 269 schools ranked in Arkansas.

---

### College Readiness Index Rank ?

**#2,756** NATIONAL

**#17** STATE

### College Curriculum Breadth Index Rank ?

**#1,853** NATIONAL

**#11** STATE

### Math and Reading Proficiency Rank ?

**#288** NATIONAL

**#5** STATE

### Math and Reading Performance Rank ?

**#690 (tie)** NATIONAL

**#11** STATE

### Graduation Rate Rank ?

**#2,693 (tie)** NATIONAL

**#1 (tie)** STATE



## Students/Teachers at Greenbrier High School

These counts and percentages of students and teachers are from data reported by schools to the government.

Total Enrollment: **790**

Total Minority Enrollment (% of total): ⓘ

**7%**

Total Economically Disadvantaged (% of total): ⓘ

**19%**

Full-Time Teachers: **52**

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