



Climate Change

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**Thomas Jefferson Middle School
Edison NJ, 08817**

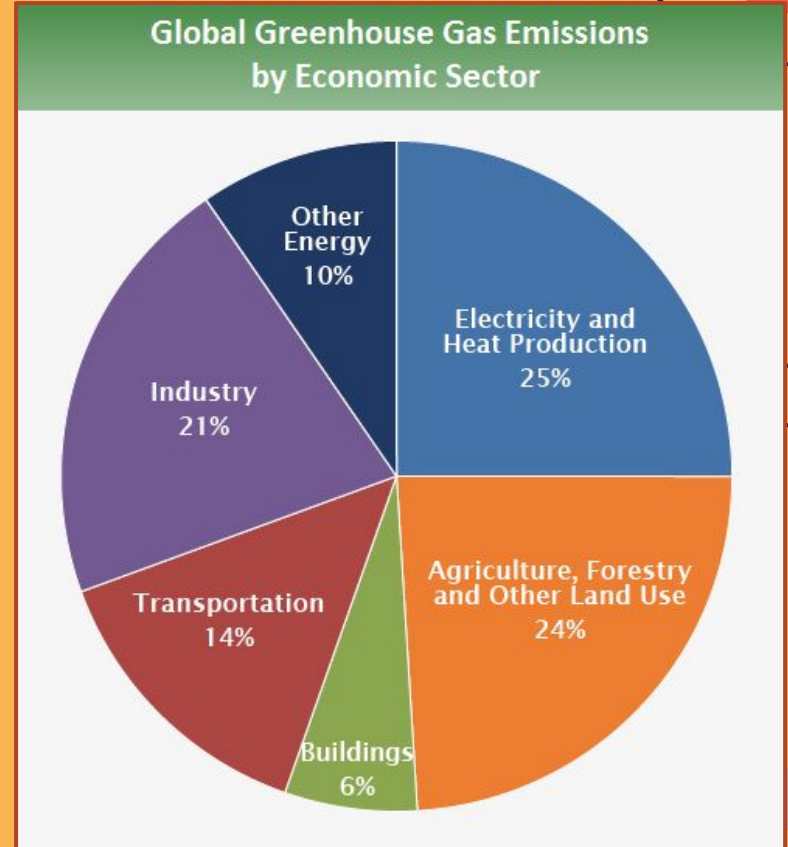
Teacher: Mr. Austria



By a show of hands, how many people are familiar with the term “Climate Change”?

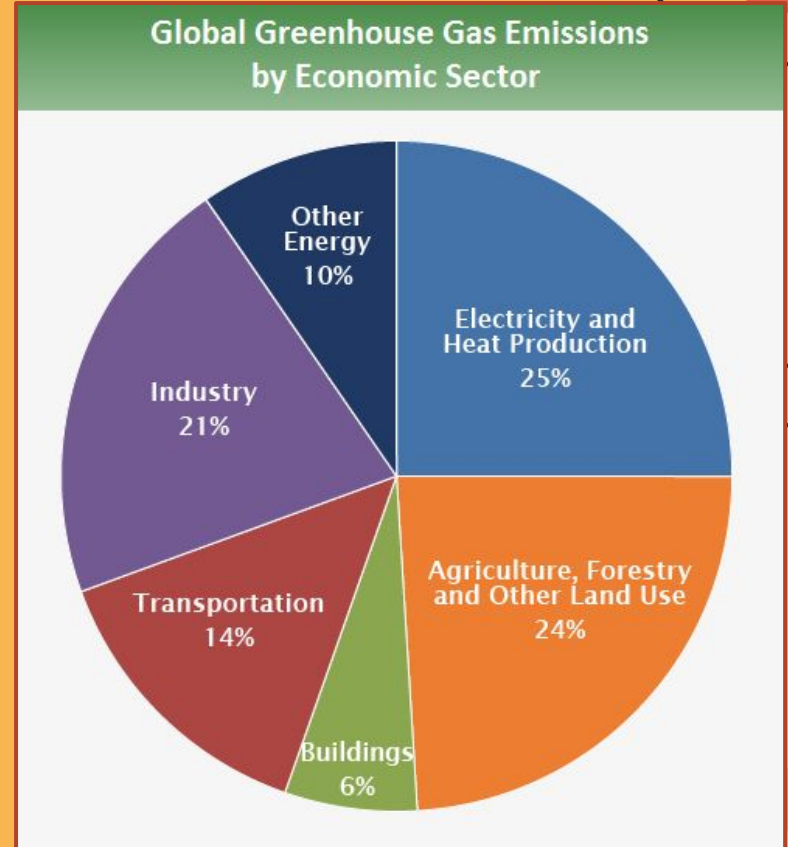
What is Climate Change?

- Global issue caused by greenhouse gas emissions and the burning of fossil fuels.



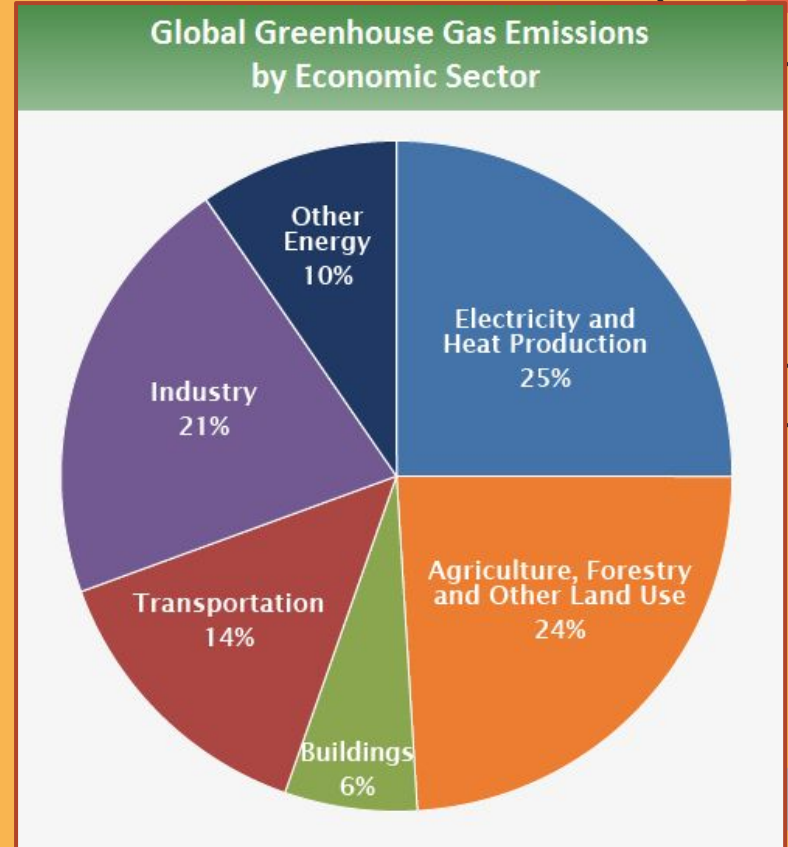
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- Global issue caused by greenhouse gas emissions and the burning of fossil fuels.
- Climate Change refers to long-term shifts and changes in weather and environment.



What is Climate Change?

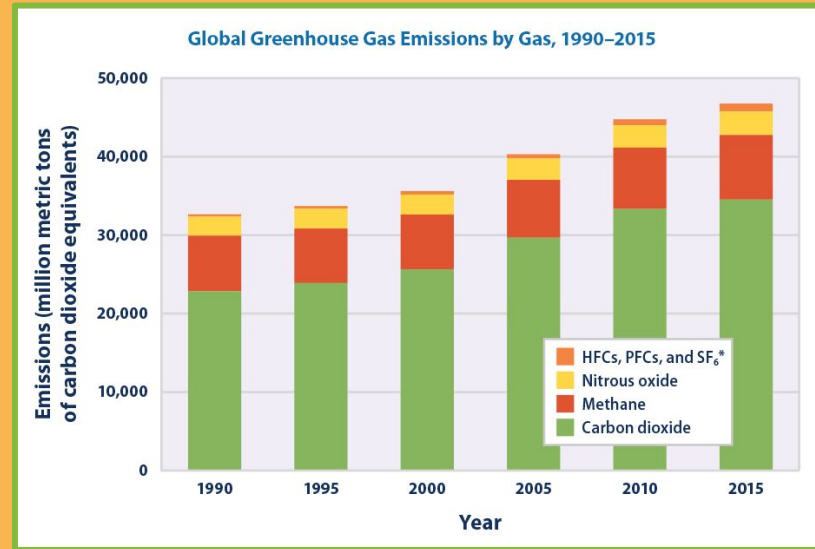
- Global issue caused by greenhouse gas emissions and the burning of fossil fuels.
- Climate Change refers to long-term shifts and changes in weather and environment.
- This phenomenon is generated because of societies around the world and their overuse of natural resources.



Impact of Climate Change: Past 20 years

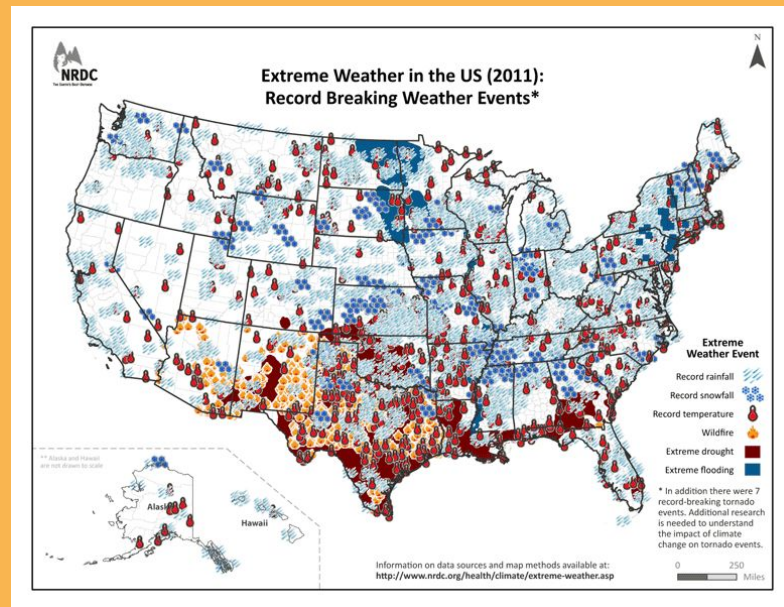
- Throughout the past 20 years, the International Energy Agency (IEA) stated that greenhouse gas emissions caused the earth to get 6°C, (43° F), warmer over the last century.

Greenhouse Gases: Data Table



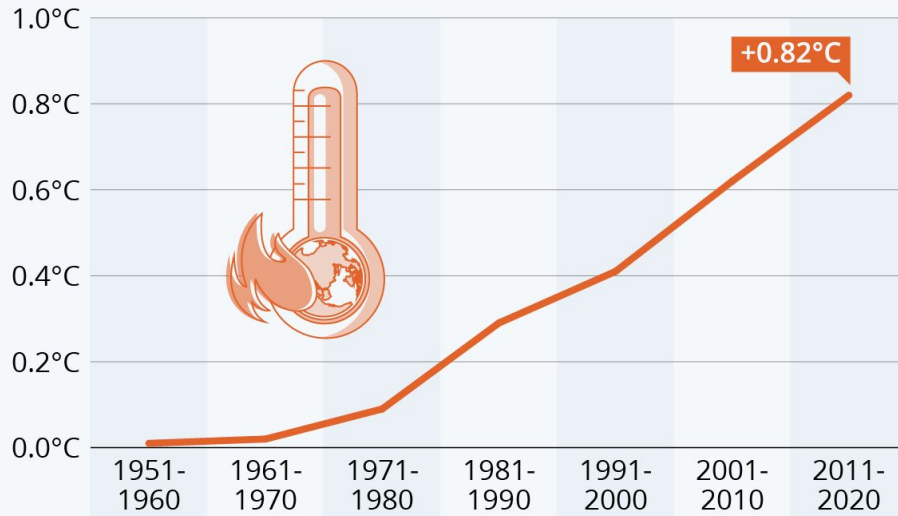
Impact of Climate Change: Past 20 years

- Throughout the past 20 years, the International Energy Agency (IEA) stated that greenhouse gas emissions caused the earth to get 6°C, (43° F), warmer over the last century.
- Extreme weather patterns:
 - Wildfires (Destruction of Forests)
 - Tsunami (Destruction of Coastal Shores)
 - Droughts (Destruction of Agriculture)
 - Melting glaciers (Increase of Sea Levels)



Each Decade Hotter Than the Last

Temperature changes each decade relative to the 20th century average (in degrees Celsius)



Source: NOAA

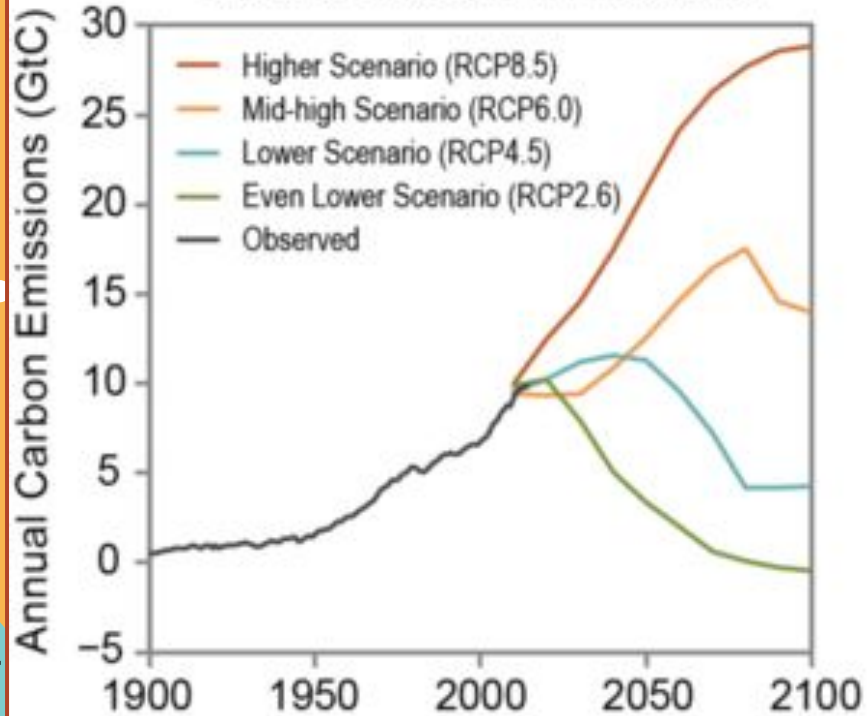


statista

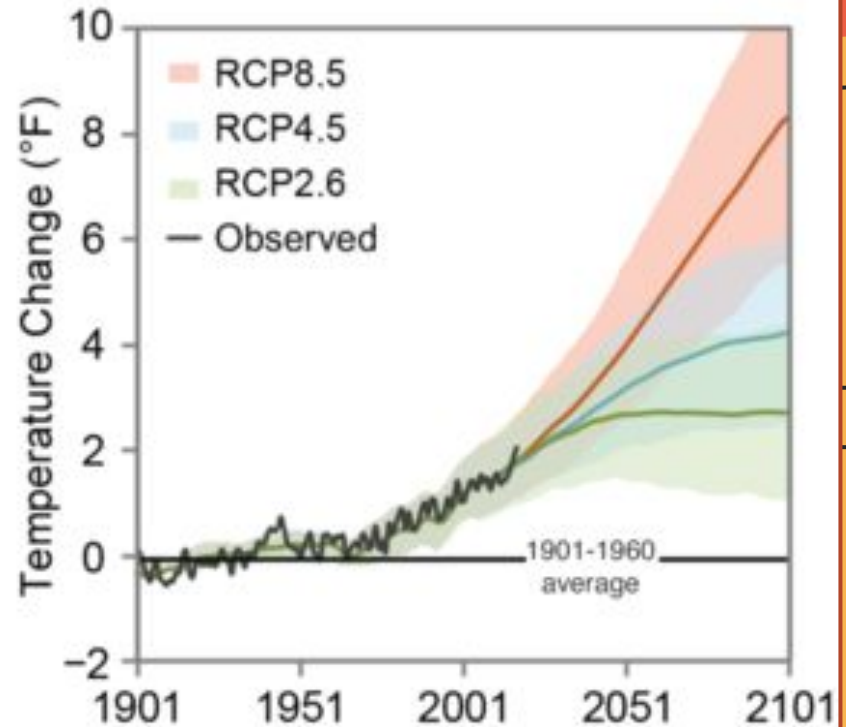
$$0.82^{\circ} \text{ C} = 33.5^{\circ} \text{ F}$$

(Source: Statistica)

Projected Annual Global Carbon Emissions



Projected Global Temperatures



What are the problems we may face if people don't take **initiative** to improve?

- Since people are not being cautious of this issue, Climate Change could deteriorate the planet



What are the problems we may face if people don't take **initiative** to improve?

- Since people are not being cautious of this issue, Climate Change could deteriorate the planet.
- *A Quote from ClimateClock.world:*
"The Climate Clock melds art, science, technology, and grassroots organizing to get the world to #ActInTime. The project is centered on a simple tool: a clock that counts down the critical time window to reach zero emissions (our "Deadline") while tracking our progress on key solution pathways ("Lifelines")."



What are the problems we may face if people don't take **initiative** to improve?

- Since people are not being cautious of this issue, Climate Change could deteriorate the planet
- *A Quote from ClimateClock.world:*
"The Climate Clock melds art, science, technology, and grassroots organizing to get the world to #ActInTime. The project is centered on a simple tool: a clock that counts down the critical time window to reach zero emissions (our "Deadline") while tracking our progress on key solution pathways ("Lifelines")."
- Natural disasters such as hurricanes, tornadoes and wildfires may occur frequently if people don't take action to improve.





**Policies in
Place
Pros & Cons**

Policy #1: NJ Get Past Plastic

The *NJ Get Past Plastic* law states that single use plastic bags are not allowed and plastic straws are only available upon request in the state of New Jersey.



Pros & Cons: NJ Get Past Plastic

Pros	Cons
<ul style="list-style-type: none">● Since it is an official policy/law, the people will have to follow it.● There will be less plastic pollution in the community, so people can be more safe in the environment.	<ul style="list-style-type: none">● May be hard for some companies to reduce climate change if the company is based on making things out of plastic● Some people may not want to follow these policies or laws because of their beliefs/biases on ideas.



Policy #2: The Clean Air Act

The Clean Air Act is a policy that is trying to reduce greenhouse gasses including carbon dioxide and methane.

It's a federal law that regulates air emissions from stationary and mobile sources.



Pros & Cons: **The Clean Air Act**

Pros	Cons
<ul style="list-style-type: none">• To this day, the Clean Air Act works to cut pollution and protect the health of the citizens.• Using this policy, the people can have clean air to breath in and this prevents any health problems that may occur.	<ul style="list-style-type: none">• The Clean Air Act will ship jobs overseas, harm our trade balance or put us behind China and other developing countries who aren't limiting their greenhouse gas pollution.



Our End Goal

- Preventing Climate Change is a major help for all the people in this world and it may truly change their lives in several ways.
- There will be less pollution and drastic weather changes throughout the country which will definitely help the people avoid any health problems.
- Solutions to prevent climate change can influence the world by increasing the life span of our planet and the creatures and people like us living on earth.



Swaying Government Officials and the Public

- We can get government officials and the public to be on our side by informing them about how Climate Change can:
 - Create more heat in the atmosphere and the planet.
 - Make our planet more prone to natural disasters.
 - Address how Climate Change can negatively impact on our health.





Our Proposal

Our Proposal

- Address Climate Change and encourage Edison Township School District to do the following:
 - Invest in renewable resources instead of using electricity companies that run on fossil fuels
 - Encourage Edison schools to help reduce Edison's carbon footprint
 - Work with the town of Edison to limit greenhouse gas emissions





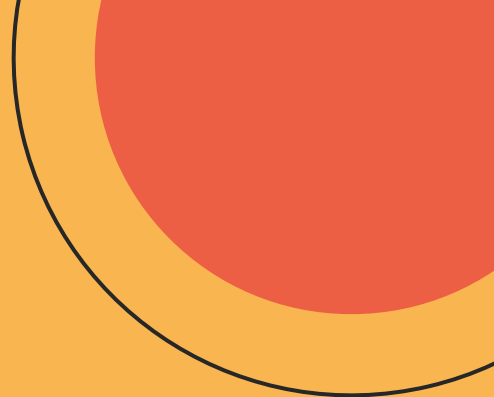
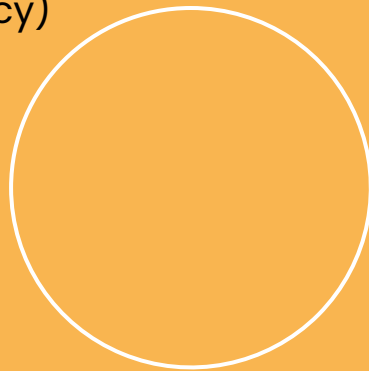
Thank You!

Sources:

www.epa.gov (enviromental protection agency)

www.climate.org

www.statista.com





Improving Transportation To Benefit The Students Of Edison

Devika Lakhota

Vinuthna Yerra

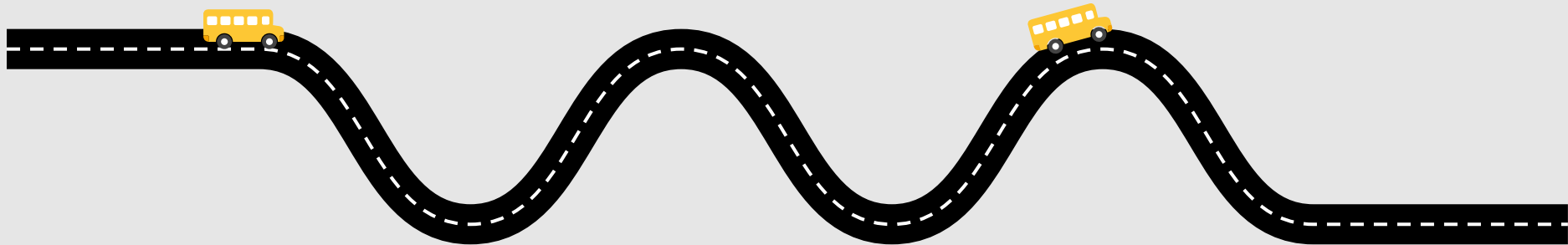
Tisha Khatri

Alekhya Chittigidde

Anushri Saravanakumar

Personal Experience

- All members take the bus to school
- Similar experiences with **long wait time** in all seasons
- **Have missed the bus multiple times** due to early arrivals
- All members have **had to ask parents for ride** to get to school on time



Issues Experienced By Our Peers

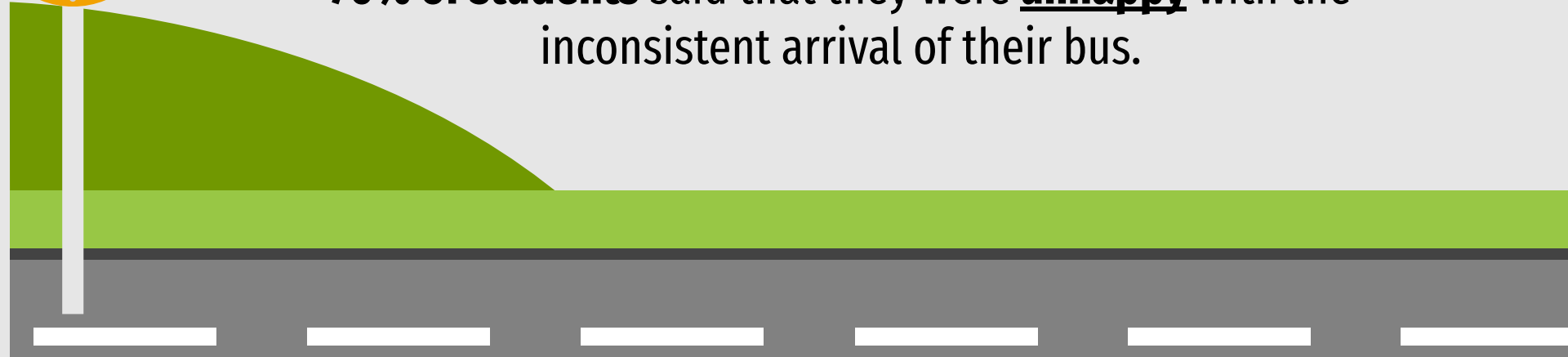
- “We have to **wait outside for a long time** in a bad weather”
- “I’ve **missed my bus** numerous times”
- “I have to ask my parents to drive me to school, which results in **getting a tardy slip**”



How many students feel similarly about school buses?

Our group asked a **total of 80 students** whether their bus arrives consistently at its destination in the morning and afternoon.

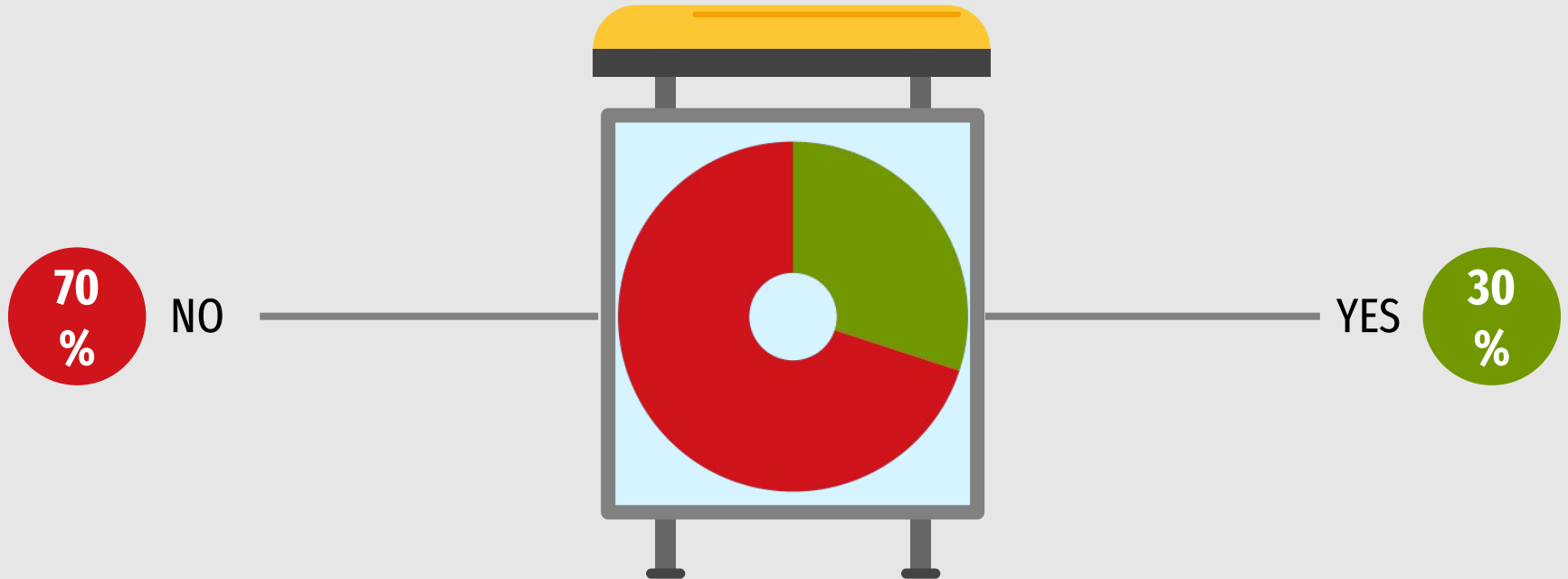
70% of students said that they were **unhappy** with the inconsistent arrival of their bus.



Research Method: Survey

“Are The Bus Arrival Times Consistent?”

Survey of 80 students



Research Method: Understanding District Policy

“2022-23 BUS PASS POLICY - BE AT THE STOP 45 MINUTES BEFORE SCHOOL STARTS”

PROS:

- The goal of this policy is that students will be at the bus stop on time, and **won't miss the bus.**

CONS:

- Buses arrive 20 minutes before or after the 45-minute mark which results in students **missing their bus.**



Why did we choose this topic?

We chose this topic because students get negatively impacted when the bus arrives late or too early at the stop. Some students end up not going to school that day at all because there is no way of transportation for them, after they miss their bus.



What times do the buses show up at in the mornings?

- We **randomly chose 4 buses** from our school and decided to **track** them in the mornings for a week.
- As shown, the buses came at times that are **after or before the expected time, 7:45.**



What times do the buses show up at in the mornings?

We tracked the arrival time of 4 buses at their first stop

Bus ID	Monday 4/10	Tuesday 4/11	Wednesday 4/12	Thursday 4/13
TJ 1	8:03 am	8:00 am	8:05 am	8:10 am
TJ 2	7:52 am	7:52 am	7:59 am	7:53 am
TJ 4	7:52 am	7:50 am	7:45 am	7:40 am
TJ 8	7:50 am	7:35 am	7:40 am	7:42 am

Research Method : Looking into solutions that exist

- Many schools have **already implemented transportation tracking systems.**
- Rutgers University has created an app called **Transloc.**
- Princeton University has an app called **TigerTransit** that serves the same purpose.

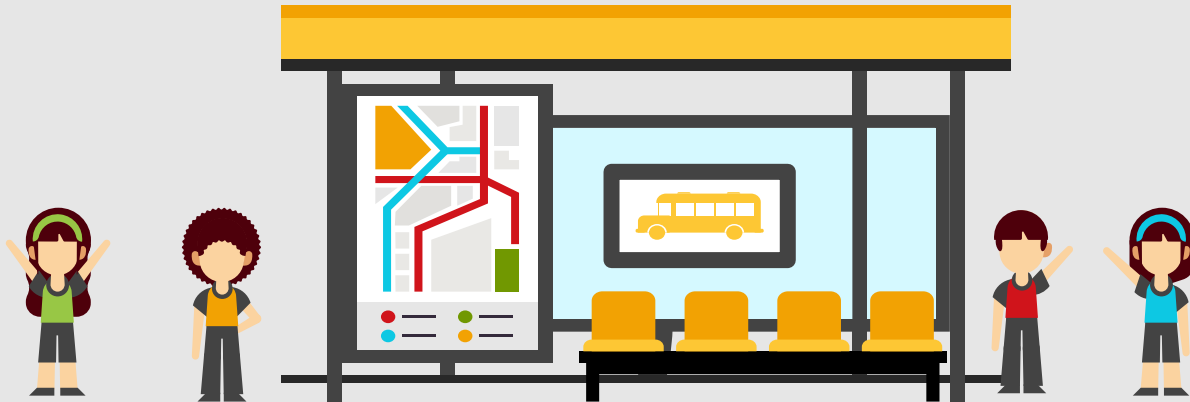
According to reviews, students find these apps **useful and convenient.**



Our proposal

- Create a **bus tracking app**
- Easily track the **location of students' buses**
 - Know **exactly** when it will arrive
- Parents can use this app **to ensure their child's safety**

Enjoy a worry-free school bus experience!



← **Example of our app** →

Student/Parent Perspective

03:50



Calendar



Photos



Mail



Clock



Maps



Camera



Weather



Notes



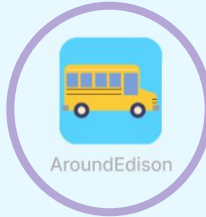
Phone



Music



Messages



AroundEdison



AroundEdison



Login

About

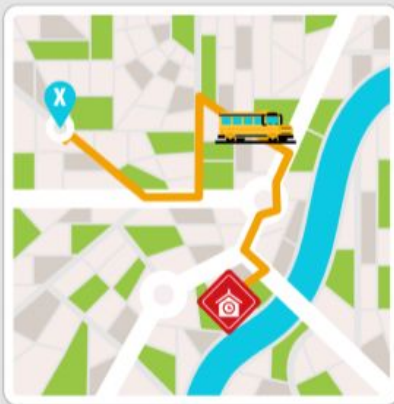
- This app is connected to Parent Portal,
- This also means that the app has access to your parents' contact information, allowing them to receive notifications in the event of a delay or crash.
- Parent Portal knows which bus you're assigned to, so the tracker app will only display information relevant to that specific bus.

John Smith, Grade 8, TJ-4

Your Bus Id # Today

Substitute Driver: Yes/No

Your Bus:



- Once the user logs in, they will be directed to the app's main page. Here, they can find out the id number, or the number painted on the side of the bus. This will help them easily identify the bus in real life. They can also check if there is a substitute driver for the day. Additionally, the page displays the real-time location of the bus, providing users with up-to-date information.

- The tracker will be active according to the students' school hours, starting 45 minutes before school and ending at the start of school. It will then resume at dismissal time and display until the students arrive home.

- Morning Times -

- Elementary (8:10 am - 8:55 am)
 - Middle (7:45 am - 8:30 am)
 - High (6:55 am - 7:40 am)

- Evening Times -

- Elementary (3:30 pm - Drop off time)
 - Middle (3:00 pm - Drop off time)
 - High (2:30 pm - Drop off time)

- The app sends users a notification when their bus is five minutes away from their stop, providing them with an estimated arrival time and allowing them to prepare for their bus' arrival.

← **Example of our app** →

Driver's Perspective



AroundEdison

01:00

PM

AroundEdison



Login



Which Bus Route Are You Driving?

Are You A Substitute Driver For
This Route?

Continue

- To ensure accountability, the bus driver will be required to provide some form of identification, allowing us to identify who is operating the bus.
- The bus driver will input the information regarding the route they are driving, as well as whether they are a substitute driver for that particular route on that day. This information will be used to tell the students if they have a substitute driver or not.

Directions to _____

Crash Notification



- This page will show the bus driver the directions, to help them get to the bus stop that they need to. Additionally, it includes a crash notification button that alerts parents of each child on the bus in the event of an accident or breakdown. If the driver is unable to activate the button, parents can check the app for updates on the bus's status, as a long period of inactivity may indicate a delay.

4 Step Plan

Step 1

Get **permission** to make our app, and use the bus trackers



Step 2

Get **funding** and hire someone to create the app

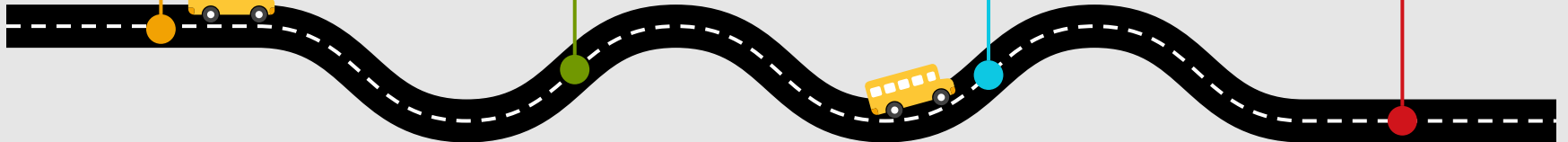


Step 3

Create the app

Step 4

Spread the word about our app to our community



Previous Ideas

- Edison had previously collaborated with **Versatrans** to develop a bus tracking system that kept parents and students informed about their designated buses.
- However, due to technological issues, the website is **no longer in frequent use.**



! Potential Problems !



Officials do not
approve of the idea

Bus companies don't
give tracker access

No funding to create
the app

Privacy issues

Why should people care about this topic?



Less students at school.
Students also tardy/absent.

**School
Administration**

Have to drive your kids to
school because of bus
issues.

Parents

Have to wait outside for a
long time. Also tardy/absent
on a lot of days.

Students

Students waiting late buses to arrive at 4:19 pm



Sources

- [Mobile Access | Rutgers University](#)
- [TransLoc on the App Store](#)
- [TigerTransit | Transportation and Parking Services](#)
- [MY STOP - GPS Bus Locator](#)
- Our Bus Passes



Thank you for your time!

Microaggressions In Schools: Racial Discrimination

Edison HHMS

Alex D, Qian Yan C, Gabriel A,
Samantha B, Fatima Y, & Rishitha J



Research Questions

What is a microaggression?

How common are microaggressions in schools?

How do microaggressions impact students?

How can we teach students about microaggressions?

What are common examples of racial microaggressions?

Interest In Topic

Our group was assigned with the topic of racism, which is a broad subject. While contemplating a more specific topic to research, we thought it would be best to delve into the smaller aspects of racism, such as microaggressions.

Microaggressions address discrimination against all groups, so we narrowed it down to racial microaggressions in educational facilities, as we felt that it has been a serious problem in need of addressing.



What Are Microaggressions?

Microaggressions are a form of racism when someone tries to stereotype, insult, slander, or belittle those who are in other racial groups.

Where are you *really* from

Saying someone's cultural food is gross

“Really? You don't look...”



“I’m not racist. I have several friends who are ____.”

Asking someone to do something because they are a certain minority

“I can’t pronounce your name, I’m going to call you _____.”

Ways to deal with microaggressions

According to Harvard Business Review the most common way to deal with microaggressions is to...

Let it go

This is the most common response, to not address it and move on.

Respond Immediately

This provides less time to contemplate your response and might lead to ill-articulated “comebacks”. This can result in lashing out, and consequences for escalating the situation.

★ Respond Later ★

This response allows you to process the experience and think about your response before reaching out to the aggressor.

(This way you won't say anything you might regret.)

Impacts of Microaggressions on Students

Changes in behavior

Students who were victims of microaggressions have experienced changes in demeanor, resulting in them being more likely to partake in risky behaviors that include using drugs, participating in fights, and more.

Changes in health

Studies show that students who had experienced acts of racial microaggressions experience more mental issues, which may include self-doubt, frustration, as well as other symptoms.

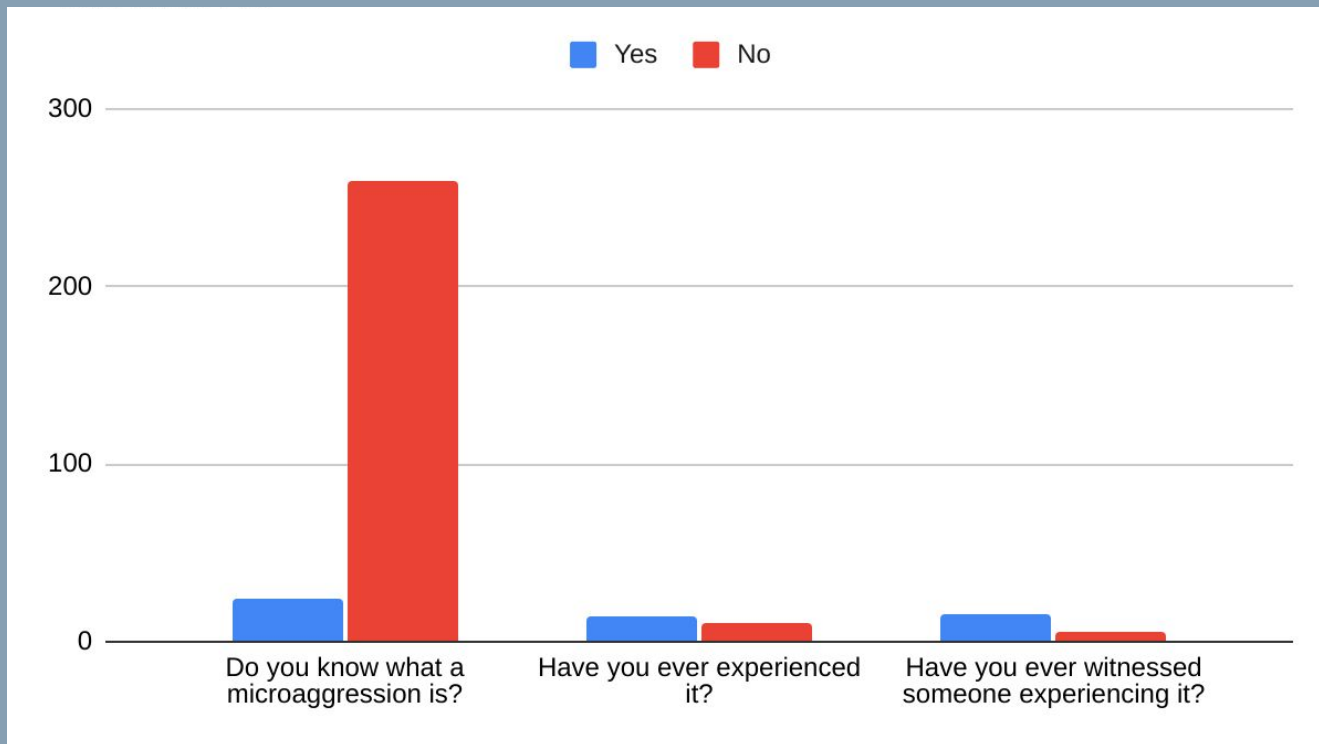
How common are microaggressions in school?

During a study, nearly 30% of students have observed or experienced a microaggression during group work with other students, more than 25% during a lecture, and more than 37% during a class discussion.

Research Method 1

Surveys

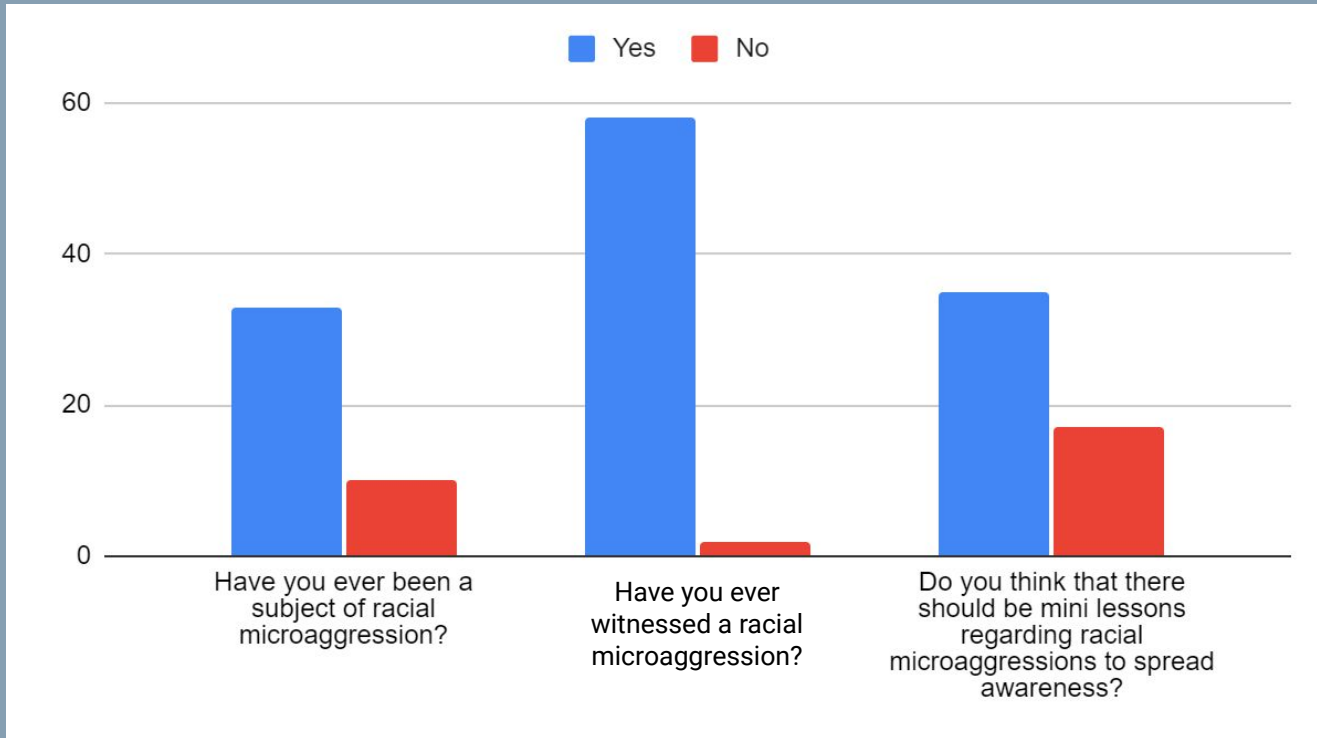
Student Surveys pt. 1



Explanation of Bar Graph 1

As seen on the graph, most survey participants weren't familiar with microaggressions, therefore we were unable to gain sufficient information. So, to further our research, we decided to conduct another survey with the definition of a microaggression included.

Student Surveys pt. 2



Explanation of Bar Graph 2

As shown on the graph, a large percentage of students have either been a target or a witness of a racial discrimination. Most agree that there should be mini lessons so more students can be aware of how their words affect others and how to effectively deal with the discrimination in a rational way.

Participant Demographics

Survey 1

No. Of Students: 283

Participants: 6-8th graders

Survey 2

No. Of Students: 60

Participants: 6th-8th graders



Research Method 2

Interviews with the school counselors

#2: Interviews

1. Do you encounter students who are victims of racial microaggressions? If so, is it common?

Yes - around once a week, it's pretty common.

1. Do students come to you about witnessing/experiencing racial microaggressions against other people? If so, is it common?

Yes, it's more common for witnesses to report incidents.

1. How do you help students deal with racial microaggressions against themselves and/or others?

It ultimately depends on the situation. We always offer counseling for the victim and the aggressor to reflect on their actions and educate them on microaggressions. (refer to other counselors outside of school)

1. Do you believe that having a curriculum or teaching materials on microaggressions (generally) would help you? Do you think it would change students' behaviors?

Definitely, the more you know the better. Most students are unaware about microaggressions; with education, more people are aware.

(Answers of all counselors are summarized)

Research Restrictions

- We were not able to survey students directly
- We had to stay away from personal information, and this topic is a very personal one by nature
- Only a few people knew about microaggressions

Action Plan

Our goal for this project is to educate more people about microaggressions. To accomplish this, we plan on collaborating with our school counselors to implement a lesson plan or curriculum around discriminatory language and behavioral slights towards people of different races. We have already begun to discuss this topic when we interviewed the counselors and received positive feedback as well as words of encouragement.

Conclusions

According to the 1st survey, barely any students know what microaggressions are. However, more than half of the surveyed students realized that they have witnessed/experienced a microaggression after learning what it meant & being presented with examples. Racial microaggressions are an undeniably critical problem that needs to be dealt with accordingly, starting with spreading awareness in educational institutions. Ultimately, the term microaggression is not well known, however extremely common.

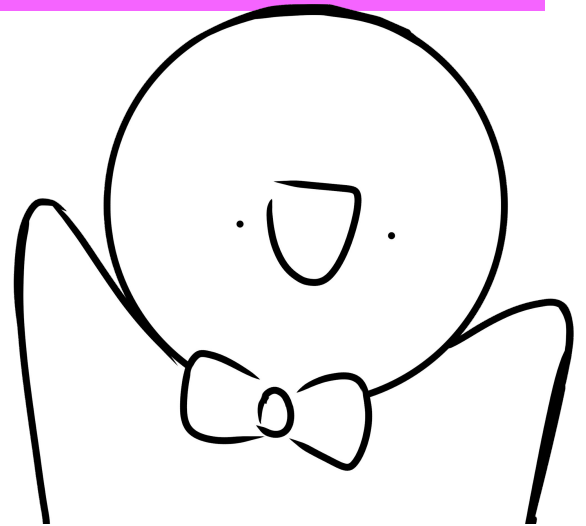
Reflection

- With more time, there could have been opportunities to interview school administration.
- The surveying process was difficult because the topic was unknown and sensitive to most.
- Looking back, we would've surveyed more students for the second student survey.

Resources

- wp.stolaf.edu – To Include is To Excel: Racial microaggressions in the classroom – St. Olaf College
- nea.org – Examples of Microaggressions
- npr.org – Microaggressions Are A Big Deal: How To Talk Them Out And When To Walk Away
- teaching.washington.edu – Addressing microaggressions in the classroom - Center for Teaching and Learning
- pfizer.com – Understanding Racial Microaggression and Its Effect on Mental Health | Pfizer.
- hbr.org – When and How to Respond to Microaggressions

Thank you!



Youth-led Participatory Action Research

Homelessness and Poverty





John Adams Middle School

This showcase features the work of Mahita Devarakonda, Sharayu Bachhav, Aarshati Yeola, Hannah Kochher, and Suniti Agarwal, with the help of Mr. Skyeler Sudia and various others.



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02

Regional Differences

What do these issues look like in different areas/regions?

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Homelessness Over the Years

How have circumstances changed? What changed them?

04

Aid

What can we do to help?





- Factors contributing to poverty and homelessness in New Jersey:
- High cost of living
- Lack of affordable housing
- Limited job opportunities
 - COVID-19 pandemic has exacerbated these issues:
 - Many individuals and families facing financial hardship due to job loss and economic instability
 - Local government agencies and non-profit organizations working to provide resources and support

01 Government Involvement

- Poverty is a persistent issue in New Jersey.
- Almost 3 million residents in New Jersey live below the poverty line, according to a recent report.
- Job loss is a major contributor to homelessness in New Jersey.
- The government has made efforts to improve digital services to help those who are newly unemployed and to prevent homelessness.
- The government launched the "Housing First" initiative, which prioritizes getting people into safe and permanent housing before addressing other issues.
- The initiative focuses on addiction, education, employment, and mental health, which could threaten housing stability.
- The focus on permanent housing is a departure from traditional transitional housing, which can be expensive and ultimately delays the inevitable need for permanent housing.



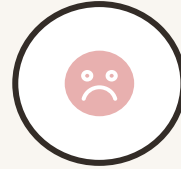
The Opioid Crisis

A prominent reason for increasing homelessness rates.



Overdose

The rate of heroin overdose is 3 times the national average in NJ. There have been about 14,000 opioid-related deaths since 2014 in NJ.



Recovery

There has been a 700% rise in admission rates for drug treatment programs since 2014.

02

Regional Differences



- In 2019, approximately three million individuals in New Jersey experienced some form of financial deprivation, with almost 800,000 individuals living below the federal poverty level (FPL).
- Despite the conservative nature of FPL, given the high cost of living in the state, poverty affected an estimated 9.2% of the population.
- In South Jersey, one in ten individuals lived in poverty, as reported by the US Census Bureau.
- This population lacks the resources or financial means to fulfill their basic needs, and efforts exist to support this demographic.
- The opioid crisis contributed to increasing poverty rates in low-income communities like Camden.



9.5% 8.5%

is the poverty rate in New Jersey.

is the poverty rate of seniors in New Jersey.

12%: 163,329 \$47,668

is the poverty rate in South Jersey.

is the minimum estimated income required for a family of four in New Jersey.

17%: 231,150

is the poverty rate of children in South Jersey.

14.3% 24.9%

is the poverty rate of children in New Jersey.

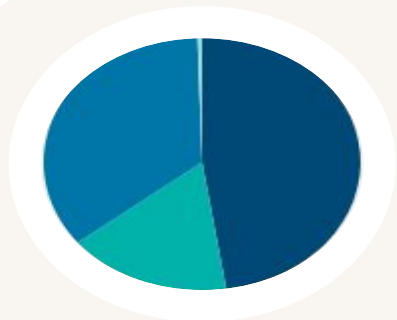
is the percentage of New Jersey residents who struggle to meet living standards.



0

3

+



- Unsheltered People in Families
- Sheltered Individuals
- Unsheltered Individuals
- Sheltered People In Families

Over the Years

- Homelessness has increased New Jersey from 2010 to 2022.
- In 2010, the state recorded a certain number of individuals living without shelter and surviving on limited resources.
- The homelessness population has increased by 8% this year and South Jersey has been disproportionately affected, with 14.6% of the population experiencing homelessness.
- The poverty rate in New Jersey rose from 7.9% in 2000 to 9.5% in 2018.
- 24.9% of residents in the state struggle to meet their basic needs.

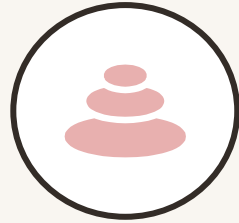
The Pandemic



- COVID-19 pandemic caused widespread unemployment
- Resulting low income for many households led to an increase in homelessness
- Closure of businesses providing free shelter and food for homeless individuals worsened the issue
- Difficulty in determining the safety of providing shelter for those in need
- Some shelters have been established, with a few offering nursing care to help the homeless recover from COVID-19
- Numerous organizations have been working hard to create safe shelters
- Shelters must meet the need for social distancing, medical care, and access to doctors willing to help.



Aid



Community Service

is vital in addressing poverty and homelessness by providing support, raising awareness, and promoting systemic change.



Raising Awareness

is crucial to promote understanding and encourage collective action towards addressing the issue.



Architecture

Anti-homeless architecture features every-day designs that obstruct the comfort of the homeless, such as divided and curved benches, curved platforms, concrete spikes, and much more.





**Linda M.
Flores-Tober**

Santosh Chavan





Anagha Nagesh




Ms. Flores-Tober leads the Elizabeth Coalition, a non-profit that aims to end homelessness in Union County, NJ by offering temporary shelter, food, and comprehensive services to promote long-term stability and self-sufficiency.

Mr. Chavan oversees HealthFirst quality programs and compliance, aiming to improve care. The non-profit health insurance company provides affordable coverage to families and individuals in NY, NJ, and CT, offering a variety of plans, partnerships with healthcare providers and hospitals, and services to promote wellness and community health.



Ms. Nagesh is a Youth Advisor for Frank Pallone of the New Jersey state government. Her organization writes legislatures and keeps the government aware of what the youth have on their minds.



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