

Creating, Developing, Funding Educational Experiences to Engage K-12 Students

<http://bit.ly/MRC19>

Gina Adams
Connie Kennedy
Tracy Purrenhage



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WELCOME



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RRRASOC - Farmington Public Schools

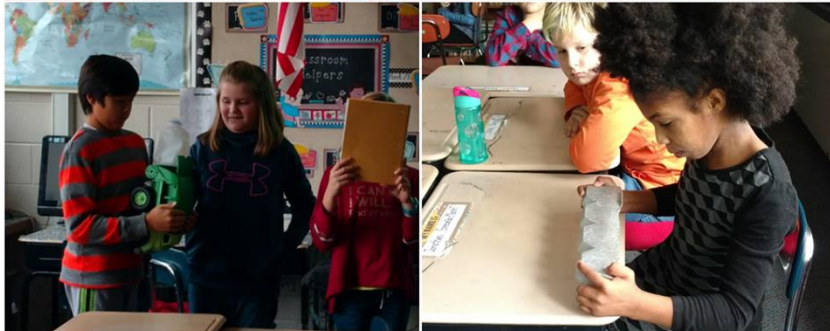
5th Grade MRF Tours

9 Elementary Schools
800 Students



Bay City - 5th Grade Recycling Presentations

4 Elementary Schools
300 Students



Why MRF Tours are an educational opportunity?

- MRF tours provide a great opportunity to explain & demonstrate the environmental & economic importance of recycling, the way in which materials are processed (& the associated challenges), as well as the importance of recycling properly.
- MRF tours for FPS students provides them with an interesting & impactful way to share the benefits described above & cultivate an ***ethos of community stewardship & environmentalism in our young people***. It offers us an opportunity to create ***“recycling ambassadors” that can share our message with their friends, fellow students, family & neighbors.***

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Why school recycling presentations are an educational opportunity?

Students in Bay City schools have a **great influence on the City's residents** and the future of recycling participation and success.

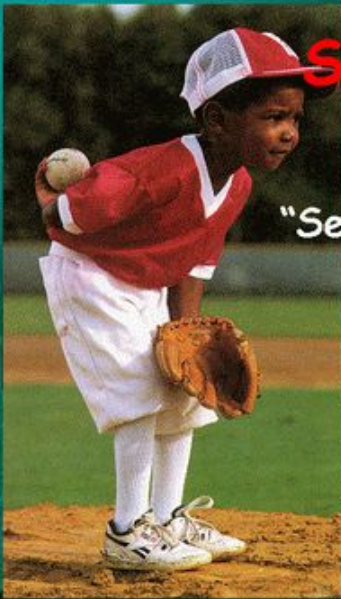
--Bay City

Environmental Education

- Social Diffusion
- Social Norms
- Self-Efficacy



RRRASOC - MRF Open House Student Tour Guides



SELF-EFFICACY

"Self-efficacy is the *belief* in one's capabilities to organize and execute the courses of action required to manage prospective situations."

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Self-Efficacy in Changing Societies

*Tell me and I'll forget;
Show me and I may remember;
Involve me and I'll understand.*



Developing Self-Efficacy

“A team of five students — ranging from fourth-graders to seventh-graders from local schools — helped lead the tours.

Shaila C., a fifth-grader at Farmington STEAM Academy, was among them.

“We take people in the facility and show them all the machines. They take pictures and we give them information,” Shaila C. said. “I came here on a field trip with my class. ... I thought it was interesting they could make so many things out of recycled materials.”

Students who showed enthusiasm about recycling on their field trips were invited to help lead the tours.

“You have to do training at home. You have to write a paragraph on why you think that you would be a great student tour guide,” said Isabella B., a fourth-grade student at Hillside Elementary School in Farmington Hills.”

The Southfield Sun, April 24, 2019

Why K-12 Recycling Education is Important

Recycling Program Perspective

Help to develop or support a (school) culture of positive attitudes surrounding sustainability.

- Recycling is a gateway into other environmental behaviors
- Recycling begins with a choice, decision, action
- Important to know when, where, why and how to recycle
- Create environmental awareness
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- Create behavior change



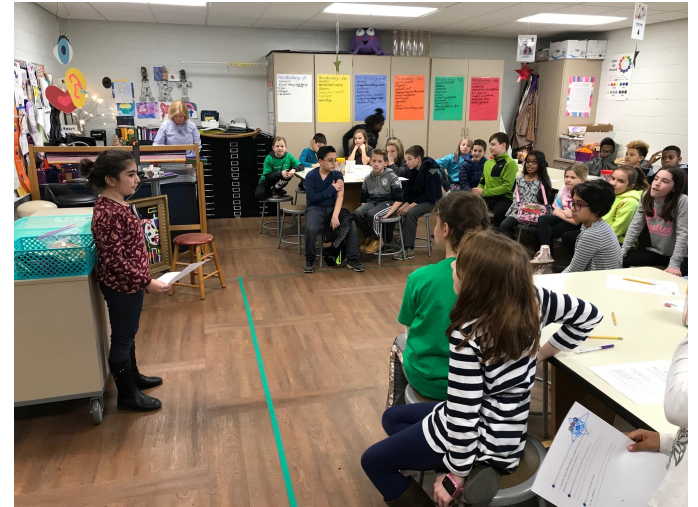
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- Where is “away” when we throw it?
- Human impact on the environment
- 3 Rs
- Recycling is a choice
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- Recycling isn’t always convenient
- Benefits of recycling - Environmental, Economic, Social
- How recycling works - what happens at the MRF



Hands-On Activities

- Where is away when we throw it?
- How long does it last?
- What natural resource is it made from?
- What recyclable is it made from?



Why K-12 Recycling Education is Important

School Perspective

- Students - productive members of society
- Communities are rich with volunteers and business partners
- “Random Acts of STEM”
- Consistency, Standard Alignment, Focus
- Teacher Knowledge & Background



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Endorsements/Comments/Quotes from Teachers

“The recycling tour is well-planned and **creates many learning opportunities** afterwards. My homeroom **focuses in on the plastic water bottle** issue and learns about their impact on the environment and oceans. Students **explore problem solving ideas**, share them in class, and some of them choose to make it their topic for their spring speech presentation.”

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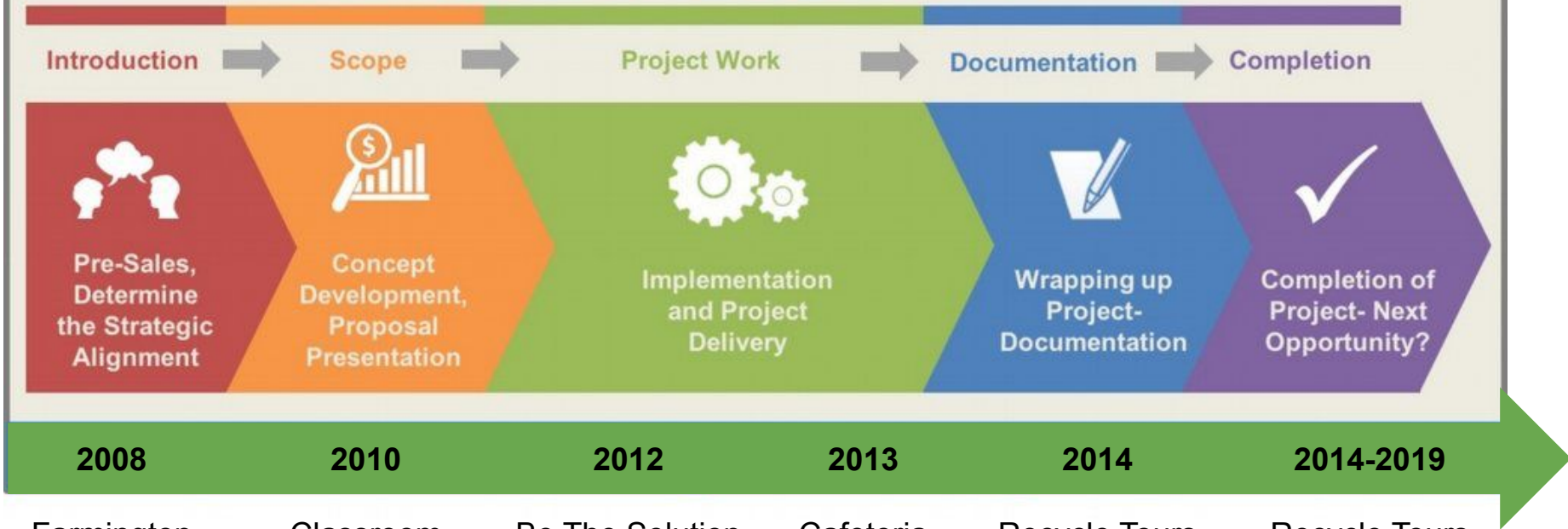
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- “Related to class discussions and community.”
- “Going through our recycling box (and a little trash). Also, showing what can be made from recycled items.”

Audience Question

How many have approached and/or worked with schools and/or districts on a K-12 education program?



PROJECT LIFECYCLE



Farmington Public Schools Sustainability Committee

Classroom Recycle Bins

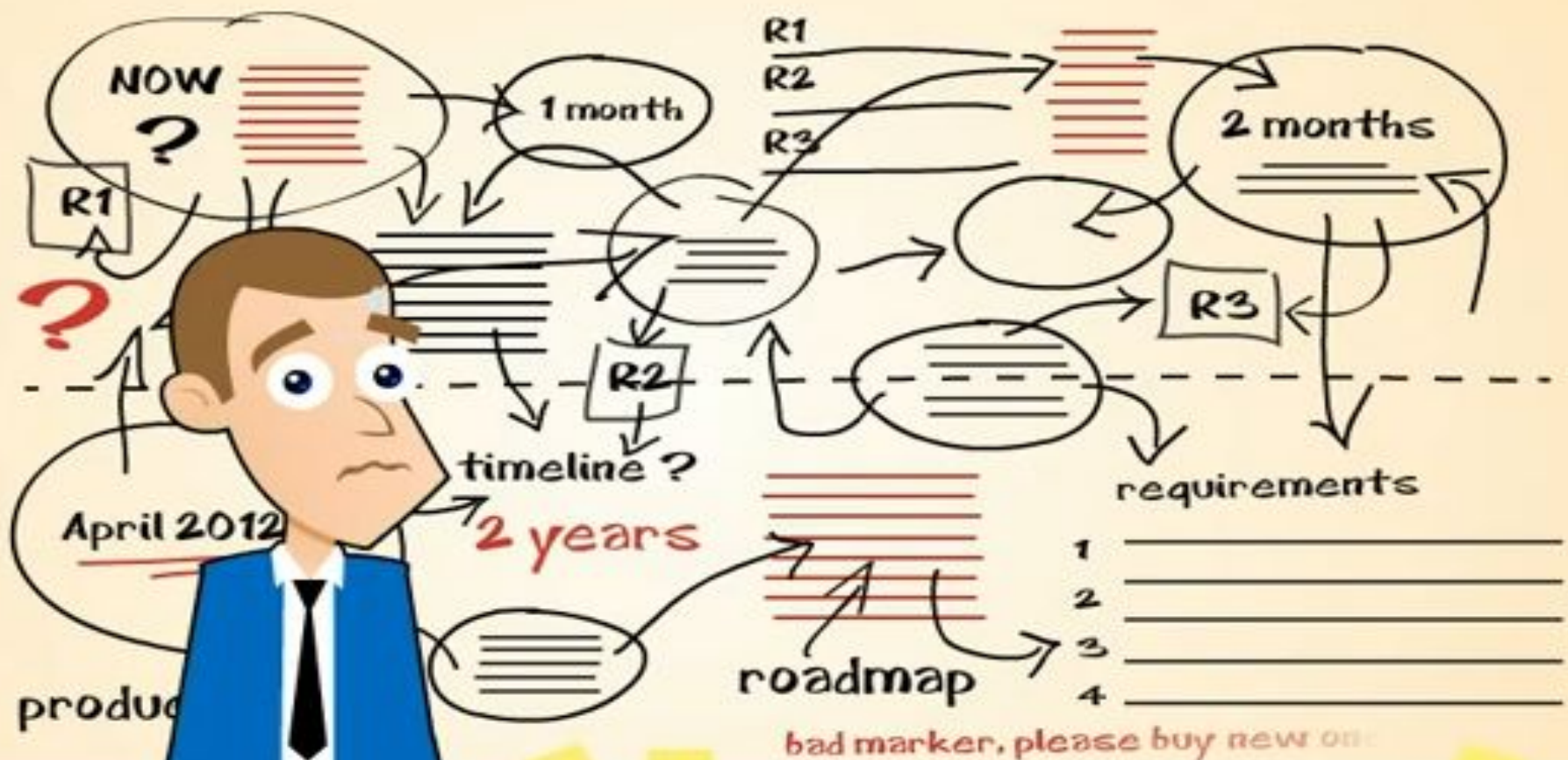
Be The Solution Trash Assessments

Cafeteria Recycle Bins & Signs

Recycle Tours Trash Assessments

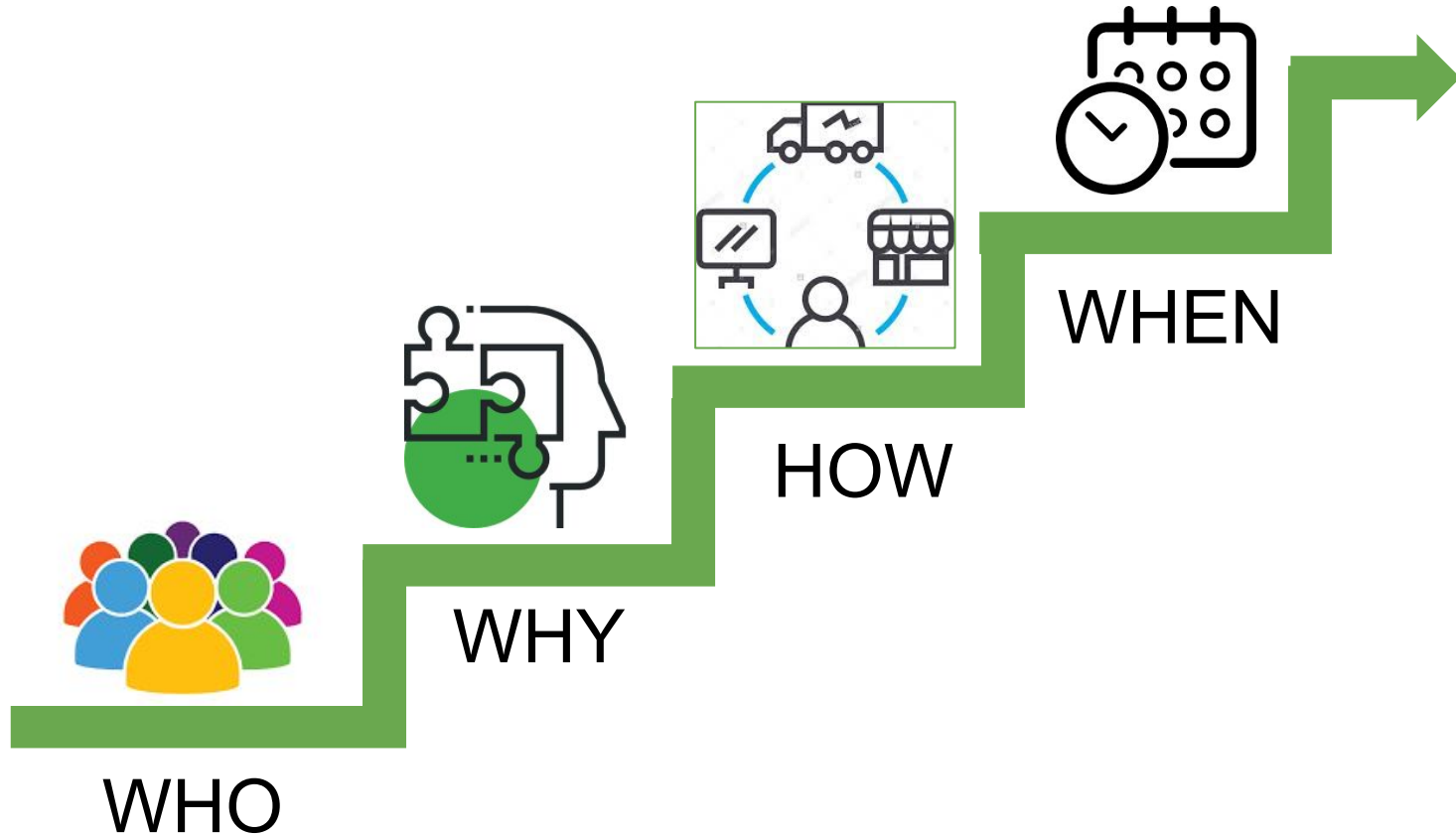
Recycle Tours Student presentations Food Share Tables





product

Components of Successful K-12 Recycling Program



WHO: Strategic Partners

1. Principal
2. Recycling Hauler and/or MRF
3. Operations & Nutrition department
4. Custodian
5. Noon aides
6. Curriculum Director
7. Teachers
8. Students



Q&A

WHY: Align Mission

1. Principal - Nurture healthy, conscientious students, \$, Green Schools
2. Recycling Hauler/MRF - \$, increase participation and reduce contamination
3. Operations & Nutrition Department - Reduce costs
4. Custodian - Paycheck and job satisfaction
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6. Curriculum Director - Literacy
7. Teachers - Foster problem solving skills
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HOW: Funding

Grant Options

- School Board
- Community Foundations
- PTA
- Rotary Community Grant
- Circle Grant
- EGLE (formerly DEQ)

Key Elements

- Mission
- Deliverables
- Measurement
- Partners



BUDGET:

9 FPS Elementary Schools

27 Buses

~675 students

Itemized Project Costs

Transportation \$4,000

Tours \$FREE

Cafeteria Assessments \$2,400

HOW: Make it Easy

1. Principal - Operations, HR, \$
2. Recycling Hauler/MRF - Acceptable materials, collection, educators
3. Operations & Nutrition Department - HR & Purchasers
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5. Noon aides - Primary touchpoint
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7. Teachers - Influencer, communicator, organizer
8. Students - Participants



PROJECT LIFECYCLE

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Scope

Project Work

Documentation

Completion



Pre-Sales,
Determine
the Strategic
Alignment



Concept
Development,
Proposal
Presentation



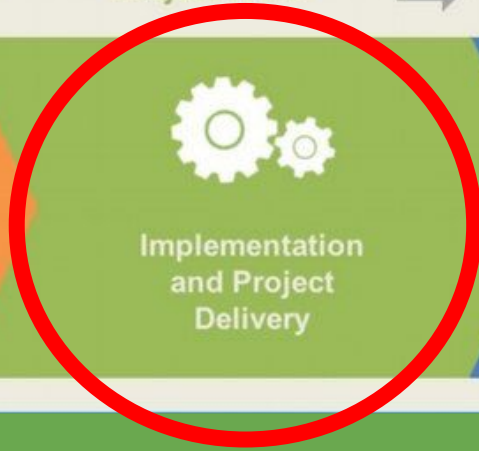
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Wrapping up
Project-
Documentation



Completion of
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Communication

Operations & Nutrition Department

- Recycling Hauler/MRF
- Custodians

Principals & Coordinators

- Curriculum Director
- Teachers
- Noon aides
- PTA
- Students and families



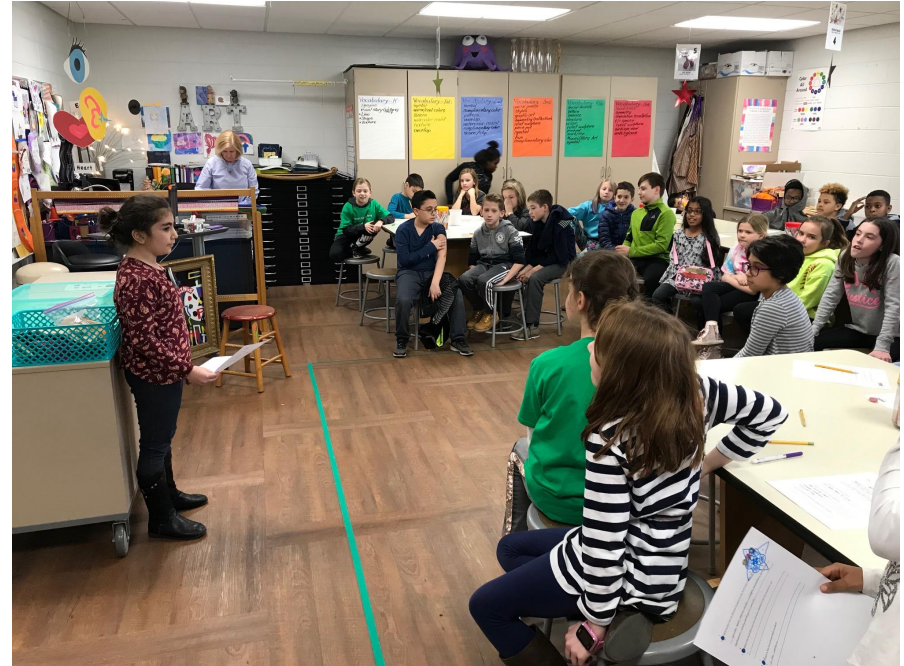
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Involve Me and I'll Understand

- Recycle Tours
- Post Tour Student Presentations
- Cafeteria Trash Sorts
- Post Sort K-5 Grade Work
- Student Lead Initiatives



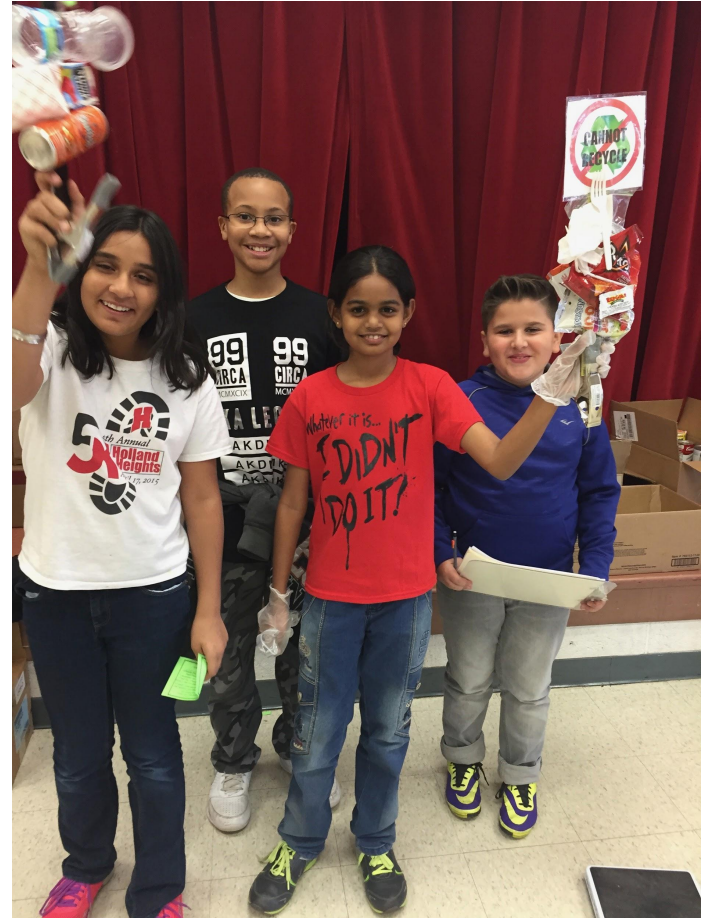
Student Engagement

Green Teams

- Valuable connection with peers
- Leadership experience
- Community building

Cafeteria Trash Sorts

- Involves entire school
- Encourages independent thought
- Reduces confusion and contamination
- Empowers kid specific solutions
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Results

Power and Warner Upper Elementary

- 2 week Trash Assessment
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Key to Success

- Hands on custodian
- Strong Green Team and leadership



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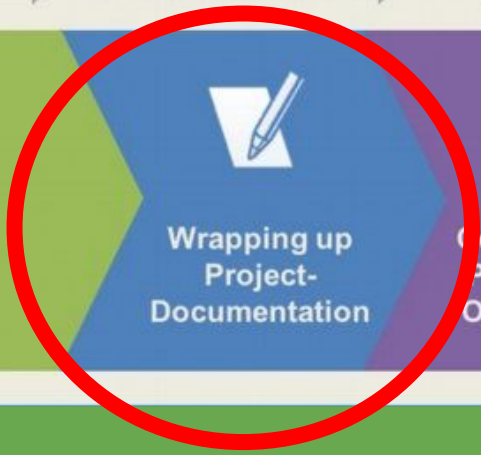
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Recap and Celebrate

Report results to all strategic partners

- Grade specific worksheets
- Newsletters
- Emails
- Posters



Lessons Learned

- Motivations are different
- Identify champions
- Identify best means of communication
- Self-funded programs are sustainable

Challenges

- Time
- Consistency
- Funding
- Common goals
- Communication



TAKEAWAYS

- Hands-on is important
- Identify key school stakeholders
- Work with community partner(s)
- Create a personal environmental connection
 - Leverage social norms
 - Create social diffusion

What are some of *your*...

- Takeaways?
- Lessons learned?
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Thank You!

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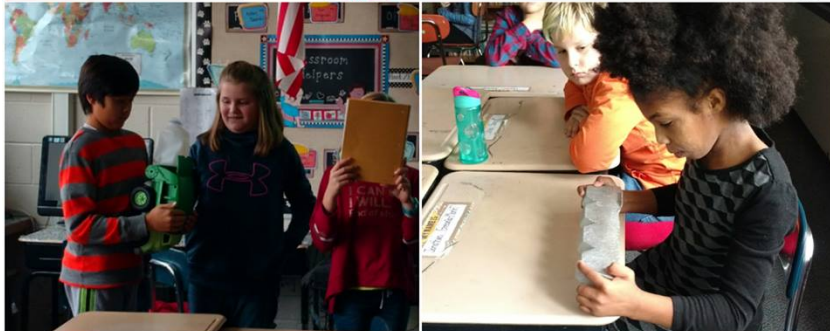
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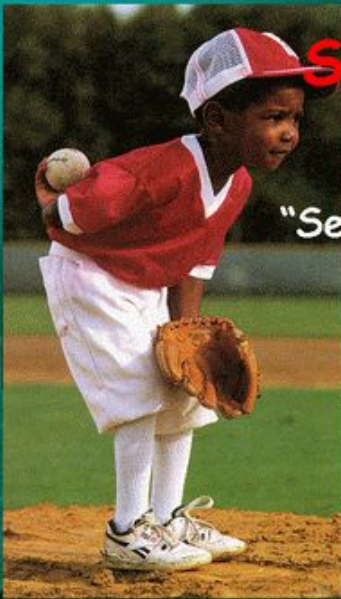
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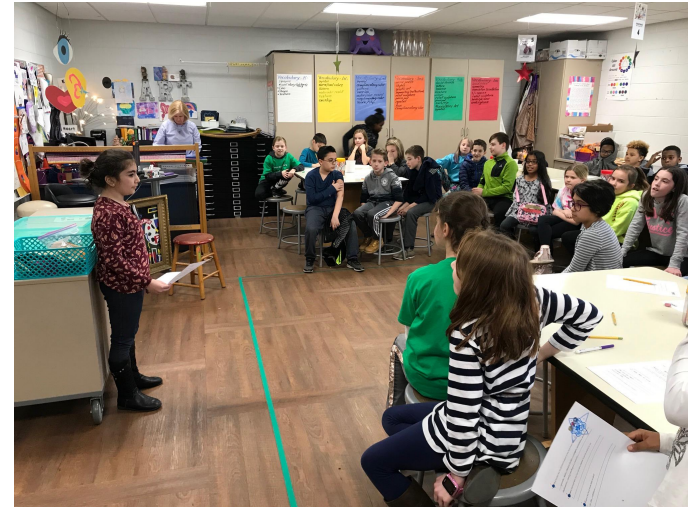
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Project Work

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Pre-Sales,
Determine
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Concept
Development,
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Implementation
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Delivery



Wrapping up
Project-
Documentation



Completion of
Project- Next
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2008

2010

2012

2013

2014

2014-2019

Farmington
Public Schools
Sustainability
Committee

Classroom
Recycle Bins

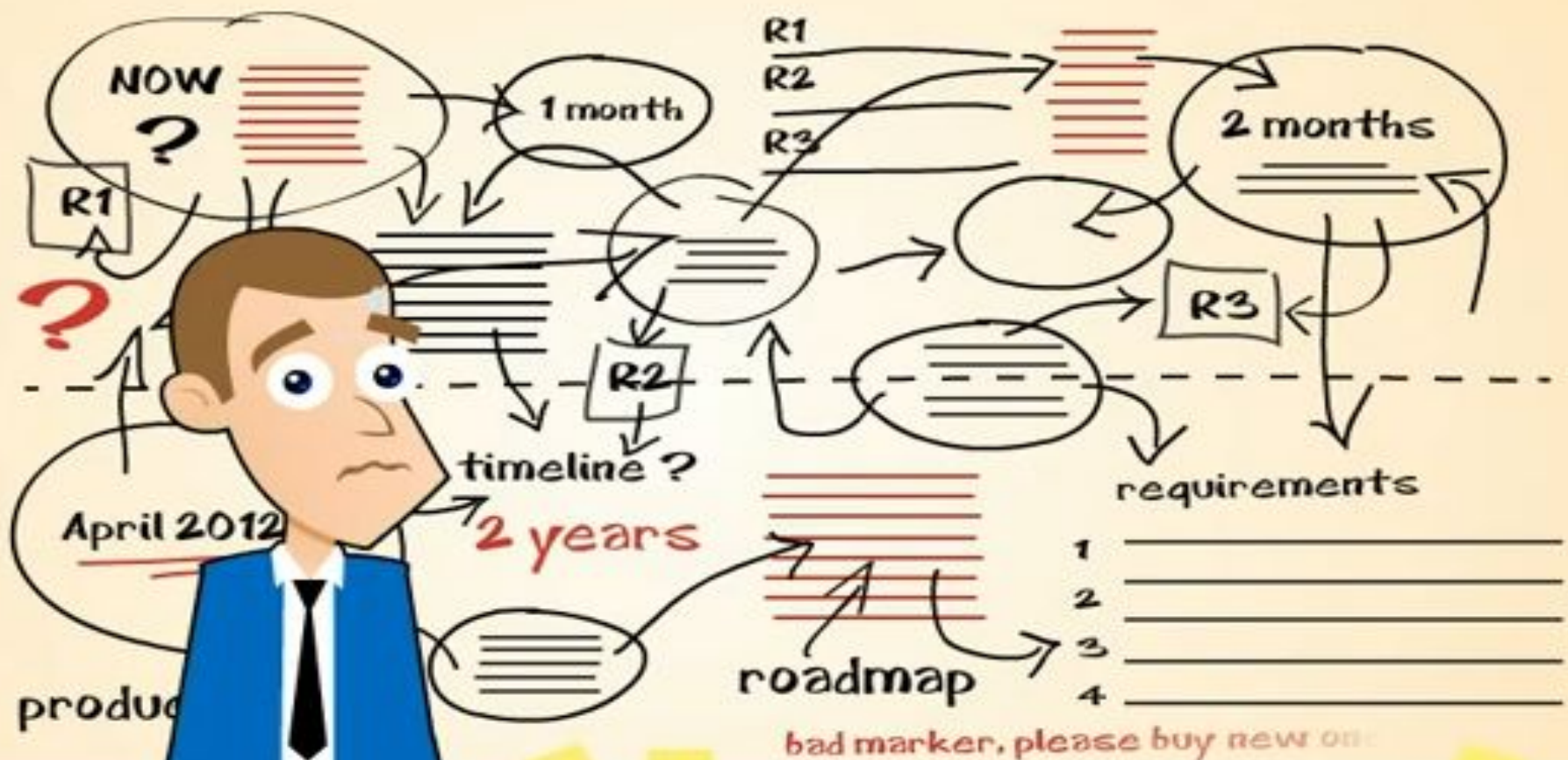
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Cafeteria
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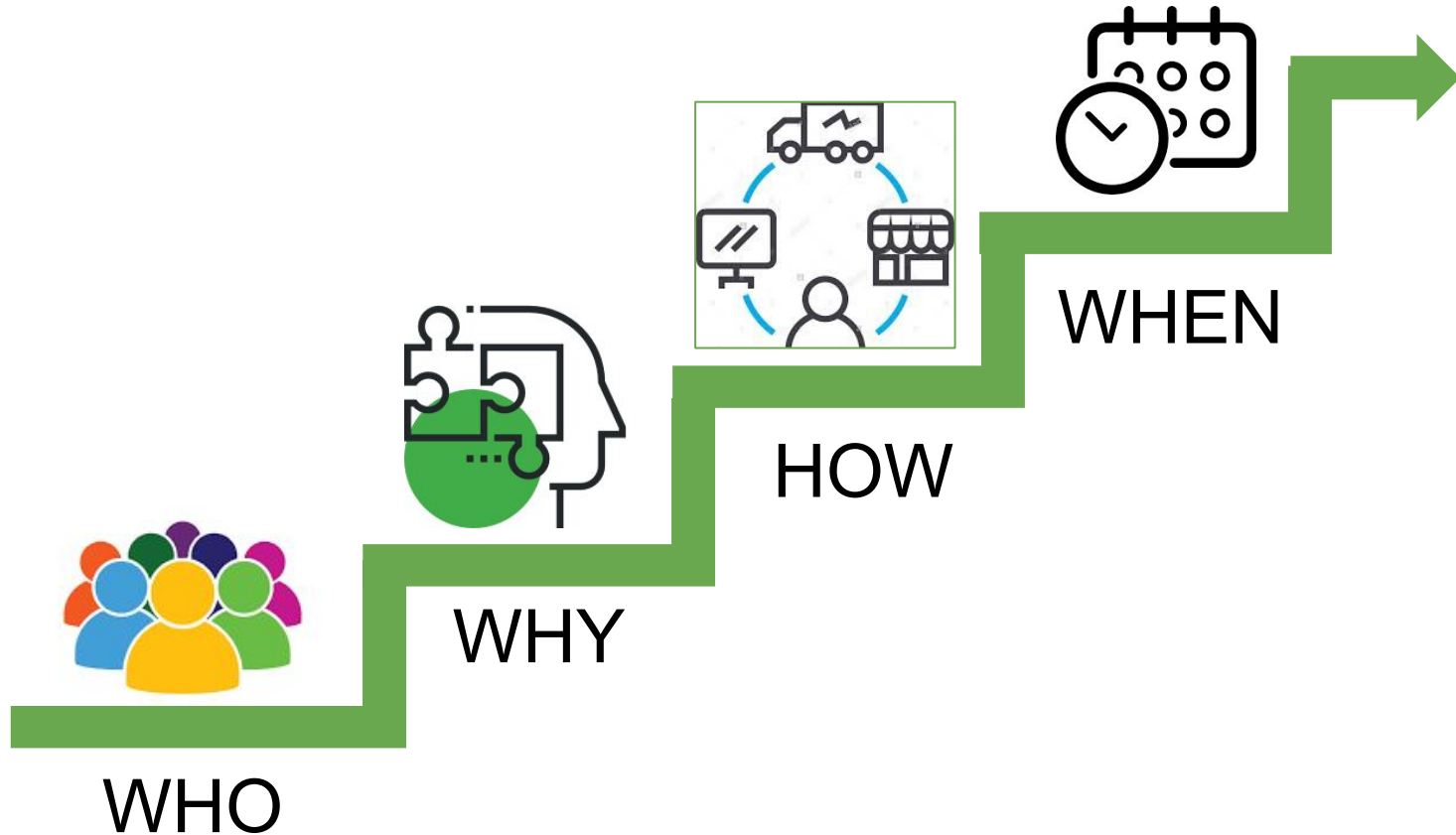
Recycle Tours
Student
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Food Share Tables





bad marker, please buy new one

Components of Successful K-12 Recycling Program



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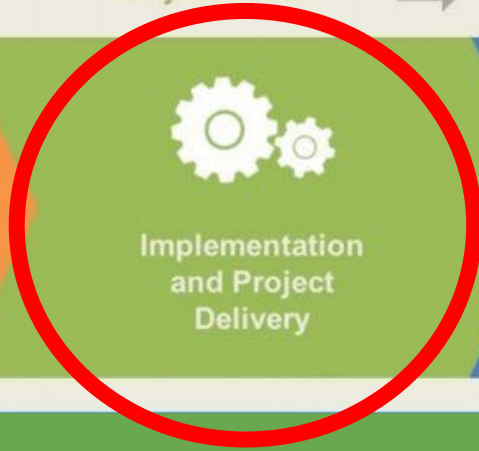
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Operations & Nutrition Department

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Principals & Coordinators

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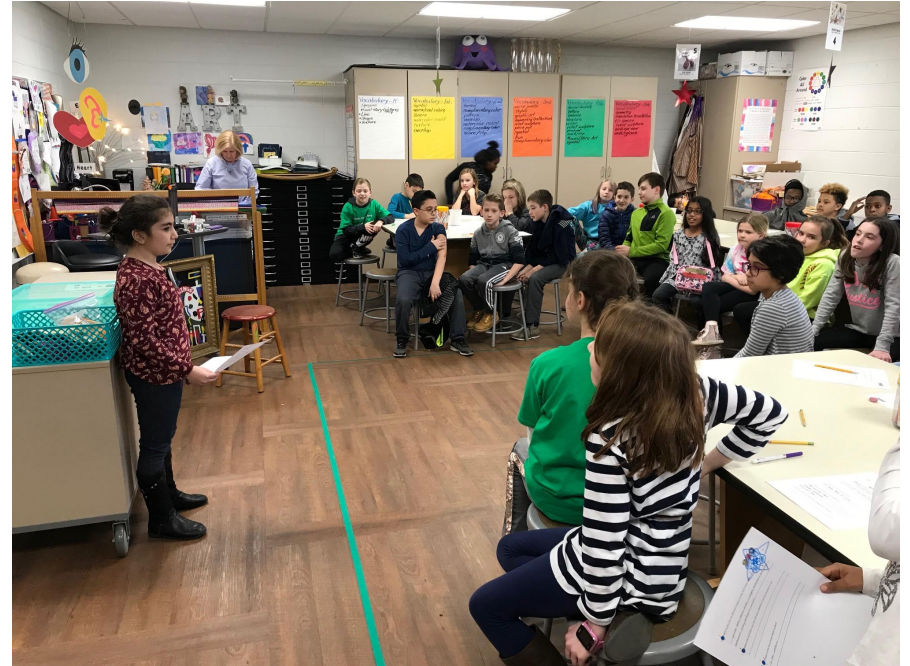
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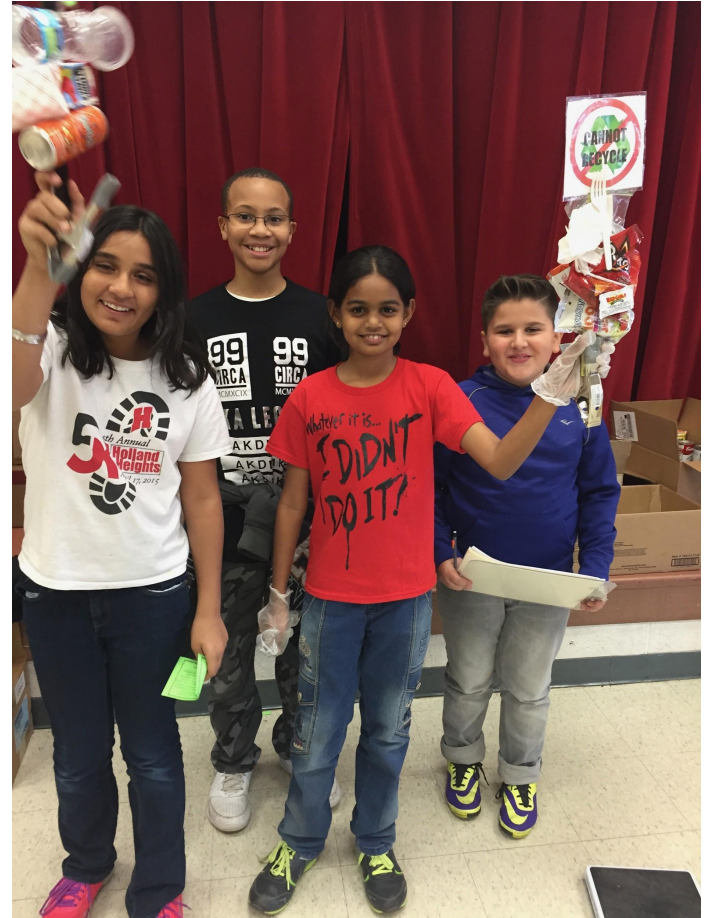
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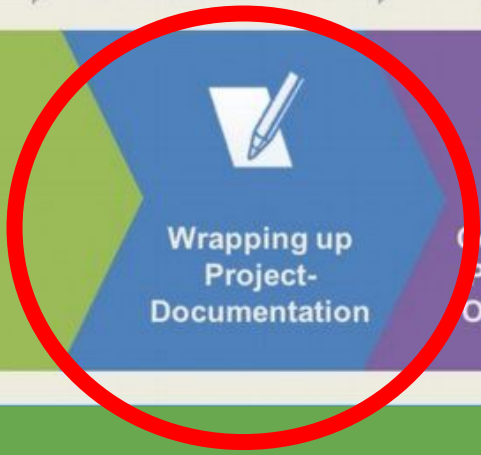
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