



# Inspiring Teachers for Engaged Learners (InTEL)

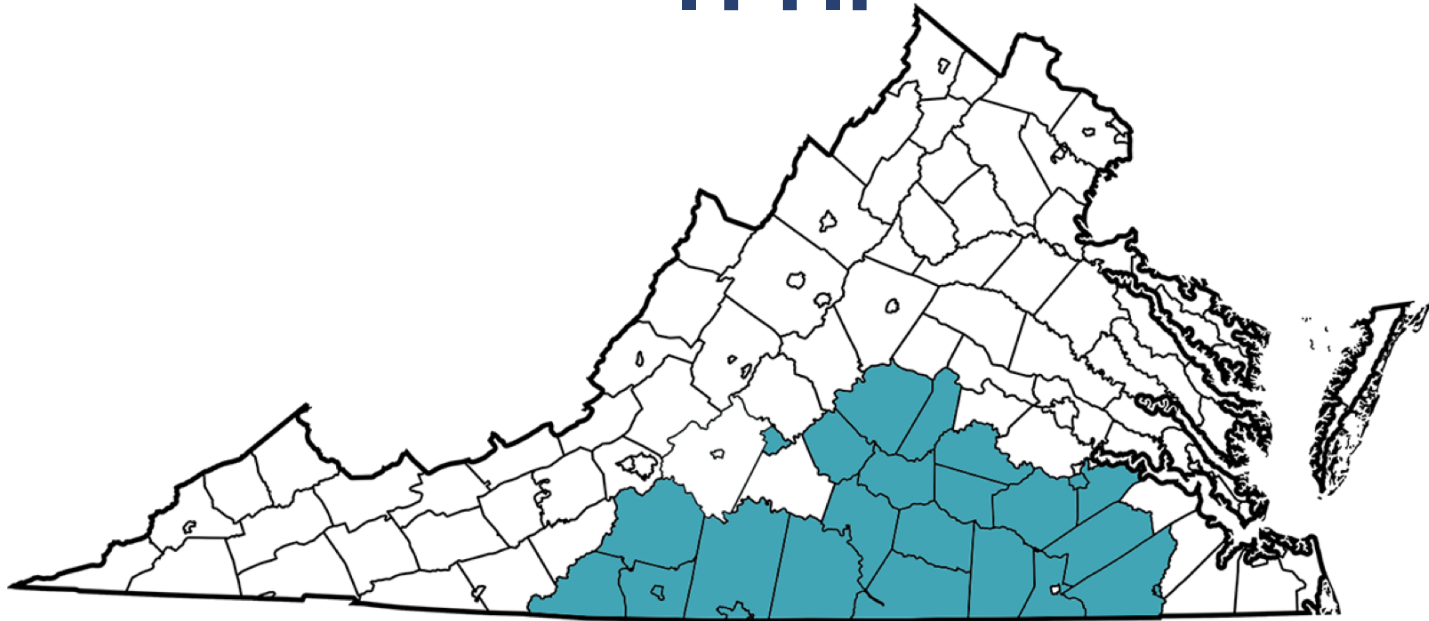
*Program Update  
June 20, 2018*

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# Inspiring Teachers for Engaged Learners (InTEL)

## ITTIP



Southside Virginia Regional Technology Consortium (SVRTC) - 25 school divisions from regions 1, 2, 6, & 8



## Participant Demographics

- Seven Rural School Divisions:  
*Amelia, Appomattox, Buckingham,  
Cumberland, Halifax, Nottoway, and  
Prince Edward*
- 19 Teachers
- Grades 3-8; various content areas



# **“How can I make my classroom more engaging for students?”**

**Global Collaborations**

**5Cs**

**Alternative Assessments**

**Technology**

**Problem-Based Learning**





## Professional Development Design



- 1) 5 - Days of Summer PD
- 2) Fall Book Study (5 sessions)
- 3) Year-long Implementation  
*Google Classroom (homebase),  
Observations/Classroom Visits,  
ePortfolio (Seesaw)*



# Inspiring Teachers for Engaged Learners (InTEL)

## Summer PD

First two days. . . .

littleBits



Skype/ Google  
Hangout



Newsela



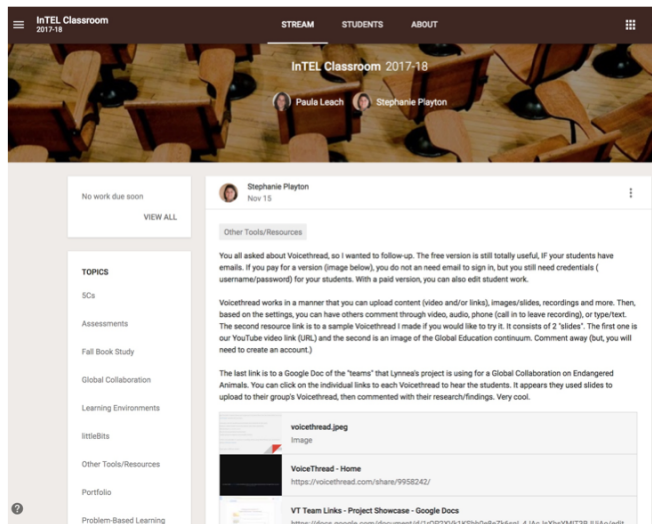
# Inspiring Teachers for Engaged Learners (InTEL)

## Summer PD

### Seesaw

First two days. . . .

### Google Classroom



Recyclables (cup, tubes) = free

Four rubber bands = \$4

Four pipe cleaners = \$12

Servo and accessories = \$275

Mounting board = \$300

Makey makey = \$250

Power = \$150

Battery and cable = \$400

Total cost is \$1391

We would like 10 cows in exchange for  
protection using Casualty-free Catapult



# Inspiring Teachers for Engaged Learners (InTEL)

## Summer PD

Problem-Based Learning (Intro)

First two days. . . .



Checklist

| Presentation of Requirements/Parameters  | Complete |
|--|----------|
| Did you use at least 3 littleBits to create your trap (not including power Bits)? What bits did you use (i.e. power, input, output, wire)?                               |          |
| Did you stay within the budget (\$5,000)? How much did you spend? How much did you have left?  |          |
| Did you document each part of the engineering design process and submit to Seesaw?   |          |
| Were you able to complete all the tasks within the time limit of 40 minutes?   |          |
| Were you able to present your process, functions (how can it be used to keep your family member safe), and budget of your burglar trap within a two-minute presentation? |          |

Comments:

**Team Rubrics**  
([Alice Keeler "Add-Ons"](#))

## Alternative Assessments

### Peer Assessments

Peer Evaluation: Specialization in Ancient Civilizations

This form will be submitted for at least one of each presentations from the three civilizations.

**\* Required**

My name is: \*

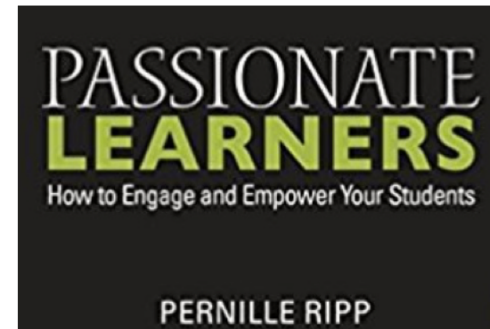
Your answer

What Team Are You Evaluating? \*

Choose

What Civilization Are They From? \*

☐ Ancient Greece  
☐ Ancient Rome  
☐ Empire of Mali

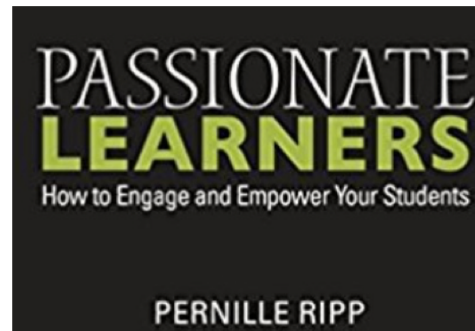
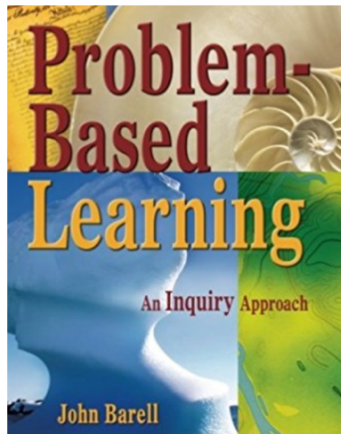


**Self-Assessments**  
([in book](#))



# Inspiring Teachers for Engaged Learners (InTEL)

## *Between Sessions*



Flattening Classrooms,  
Engaging Minds  
*Move to Global Collaboration  
One Step at a Time*



Julie Lindsay Vicki A. Davis

[Read Chapters 1-3:](#) Do Assignments in Seesaw



[Read Chapters 1 & 2:](#) Do Assignments in Seesaw





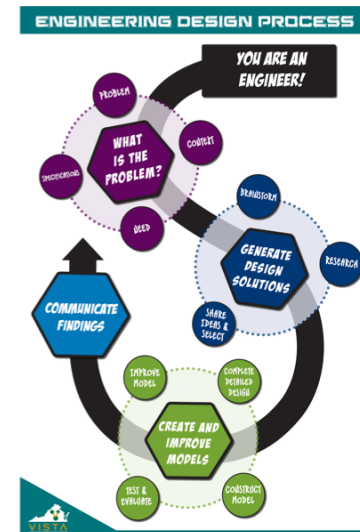
# Inspiring Teachers for Engaged Learners (InTEL)

## Summer PD

Last three days. . . .

Engineering Design Process  
( VISTA)

Problem-Based Learning  
(book and VISTA)



Virginia Initiative for Science Teaching and Achievement (VISTA)



# Inspiring Teachers for Engaged Learners (InTEL)

## Summer PD

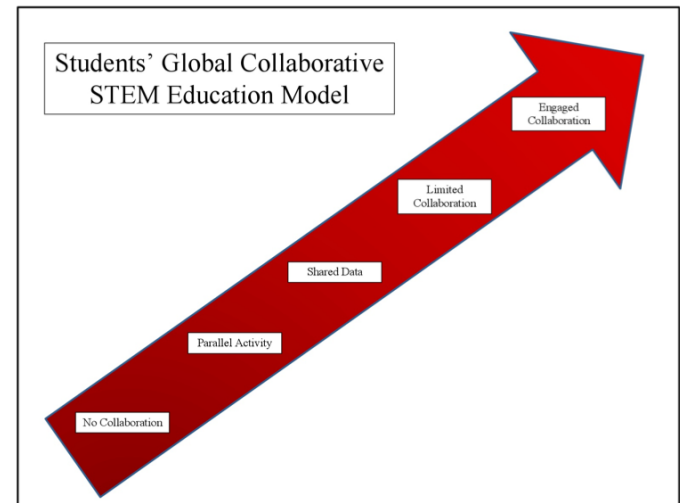
Last three days. . . .

FIGURE 1

### Global science education continuum (Cook et al.)

|                  |   |                   |   |             |   |                       |   |                       |   |                     |
|------------------|---|-------------------|---|-------------|---|-----------------------|---|-----------------------|---|---------------------|
| Global Awareness | → | Parallel Activity | → | Shared Data | → | Limited Communication | → | Engaged Collaboration | → | Global Contribution |
|------------------|---|-------------------|---|-------------|---|-----------------------|---|-----------------------|---|---------------------|

Global science education continuum (Cook et al., 2015, p. 35)



Global Education/Competencies Matrix



# Inspiring Teachers for Engaged Learners (InTEL)

## Summer PD

Last three days. . . .

**5Cs**  
([Profile of a Virginia Graduate](#))

**Alternative Assessment**

### STEM Tools Exploration

Dot & Dash

Ollie

Google Expedition

Circuit Stickers

Finch Robot

littleBits Code Kit

3Doodler





# Inspiring Teachers for Engaged Learners (InTEL)

## Summer PD Wrap-Up

Topic: Student Engagement

Theme: Incorporating PBL, technology, and global collaboration can increase the engagement of students in the classroom

Scenario: You are a teacher in a rural school division. Recently, your school has been encouraging teachers to create lessons that enable to students to focus on collaboration, creativity, critical thinking, communication, and citizenship in the hopes of helping students become more active and engaged in their learning.

Problem Question: **How can I make my classroom more engaging for students?**

Student Role: You are a teacher researching and using new techniques in your classroom focused on PBL, technology, and global collaboration.

Culminating Activity: You will share your portfolio you have created throughout the school year showing where you were, what you have done, where you are going in order to move your classroom to be more engaging for students and using the 5Cs.

Level 2 Questions:

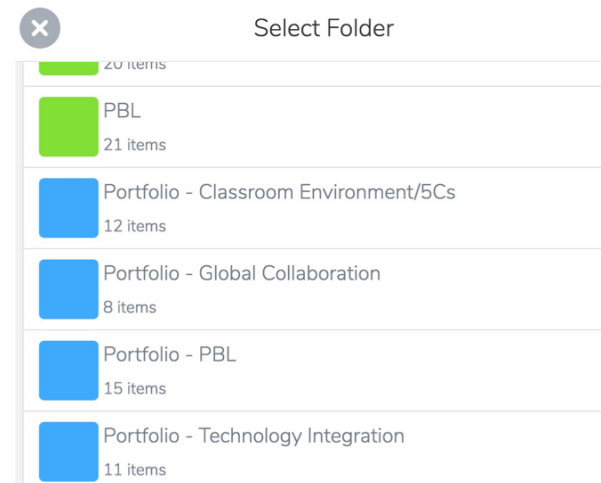
- 1) How can I organize a PBL unit in my classroom?
  - a) Assessments
  - b) Exploration (labs, hands-on)
- 2) How can littleBits be used?
- 3) Global Collaboration?

Topics to be Covered:

- How to use littleBits
- How to use technology tools (Seesaw, Google Suite)
- What is PBL?
- What is Global Collaboration?
- Performance-based Assessments

### Teacher “Challenge”

ePortfolio  
([Seesaw](#))





## Outcomes From The Summer

- Interviews
- Pre/Post Survey
- Observations



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Virginia Commonwealth University



## Outcomes From The Summer

**Goal 1: Develop and implement high-quality professional activities through the integration of problem-based learning practices and alternative assessments.**

*EQ1: How does participation in the InTEL program relate to teachers' pedagogical and content knowledge in the 5Cs and alternative assessments?*

*Data: Teacher survey, focus group, program observation*

*EQ4: What evidence is there that students of participating teachers demonstrate growth in the 5Cs?*

*Data: Student portfolio, focus group*

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Virginia Commonwealth University



## Outcomes From The Summer

- **5Cs (EQ1)**
  - **Pre-Post Test**
    - All items were significant **except**
      - *“Work in pairs or small groups to complete a task together?”*
      - *“Create joint products using contributions from each student?”*
  - **Interviews**
    - Helped them with their understanding of the **“five Cs” and alternative assessment**, and they discussed how they anticipated using what they learned in their classrooms in the upcoming academic year
    - **Collaboration was modeled** by their frequent group work with other participants.
    - They would also be more likely to **promote collaboration with colleagues** at their school in the upcoming year

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Virginia Commonwealth University



# Inspiring Teachers for Engaged Learners (InTEL)

## Outcomes From The Summer

*"Collaboration was pretty much everything  
that we did."*



*"I think that so much of  
what we've learned in  
this class will help to  
open those doors or at  
least be a way that I can  
present to my coworkers  
you know, hey we  
maybe we aren't ready  
to work together but here  
are some other ideas of  
ways that you can reach  
out."*



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Virginia Commonwealth University



## Inspiring Teachers for Engaged Learners (InTEL)

# Outcomes From The Summer

*“That was all we did the first June session. I think they managed us a little bit and said, go here's your project, here's your plan, think creatively, work together and come up with something. **And that's what the kids at school are going to be doing.**”*

*“One aspect of it is for the third graders to use the littleBit kits to create an invention that would help them solve a problem while camping. So that's critical thinking, that's creative, that is **not multiple choice and short answer.** They're having to think about it, come up with it.”*

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Virginia Commonwealth University



## Inspiring Teachers for Engaged Learners (InTEL)

# Outcomes From The Summer

*"I had really thought about citizenship like local community citizenship before I had not really considered the impacts that it would have if they don't have that global piece too and how much more marketable they would be if they are able to have this kind of conversation and they're able to communicate...just being able to have them do that and then assess how they're doing all in one piece that will help them further down the line too. I think is huge."*

*"I think for me that's my greatest takeaway. I love all the tools that we get to play with and take home and all that. But I feel like in our counties again it's that we're so isolated. We don't think to reach out. We don't have those connections. So, it's been nice to kind of talk to other people and see, oh you are very similar or you're doing something that we didn't think to do, or we've thought about that how are you doing it."*

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Virginia Commonwealth University



## Inspiring Teachers for Engaged Learners (InTEL)

# Outcomes From The Summer

*"It has definitely increased the knowledge base and opened up more ideas as far as the alternative assessment. I work with fourth graders. You always need something that's going to keep them engaged when you're assessing them. So, I'm going away with ideas and I definitely think I could try to implement it."*

*"They showed us an online rubric tool that seems better than any I've seen before. I know that there are others out there but that will prove to be beneficial for my school... It was a rubric maker that was synced into Google Docs so you could assign it to each student. It was amazing."*

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Virginia Commonwealth University





## Inspiring Teachers for Engaged Learners (InTEL)

# Outcomes From The Summer

**Goal 2: Introduce teachers to technologies that can be integrated into the classroom to engage students in their learning and promote deeper understanding of content.**

*EQ2: To what extent do participating teachers demonstrate increased awareness of new technology and incorporate into classroom instruction?*

*Data: Teacher survey, focus group, program observation*

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Virginia Commonwealth University



## Outcomes From The Summer

- **Technology (EQ2)**
  - **Pre-Post Test**
    - All items were significant
  - **Interviews**
    - The new technologies learned in the program **felt applicable to their work**
    - Good experiences with learning how to use the **littleBits technology**
    - Learning about technologies and **how to implement** them in their classrooms
      - it was important to remember that their students may not be able to access them at home

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## Inspiring Teachers for Engaged Learners (InTEL)

# Outcomes From The Summer



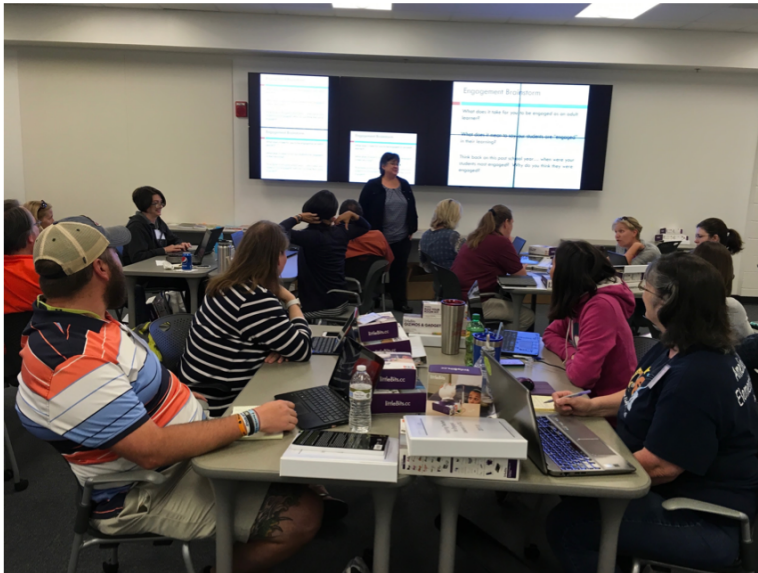
*"You hear the complaints that the students are so focused on them and they're not able to communicate. But the technology is not going away. So, we need to find a way to bring the communication and the technology together and I think that's been most of everything that we've talked about since we've been here, how to use that. We can use Skype, use your iPad and talk to a different classroom."*

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## Inspiring Teachers for Engaged Learners (InTEL)

# Outcomes From The Summer



*“The tools that they’ve introduced in the Skype that we talked to today and things like that, things that we maybe are already familiar with how to take it to the next level. But I really like kind of feeling like we’re on the forefront of this class of what’s coming. Like something we had today I emailed to my principal and my guidance counselor because I was like, hey have you seen this yet, do you know this is coming?”*

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## Inspiring Teachers for Engaged Learners (InTEL)

# Outcomes From The Summer

*“They're going to take to it very quickly and very naturally and it's not going to be like a lot, you have three things to click together and then once they see that they have to turn the pieces the right way everything has to snap, turn it on. That's all they're going to need, it's going to be five minutes of setup and then just problem solving with them after that.”*

*“(littleBits) is problem solving as to how to get it to stay to do what you want it to do based beyond what the book tells you that is just fascinating. The door is going to open as to what all this electricity that they don't see the inside of here, it is in front of you. You know and you can put these together what's going to happen.”*

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## Outcomes From The Summer

**Goal 3: Develop and implement professional development on the need and strategies to incorporate Global Learning into the classroom.**

EQ3: To what extent do participating teachers demonstrate progress along the Global Learning continuum and implement those strategies in their own classrooms?

*Data:* Teacher survey, focus group, program observation

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Virginia Commonwealth University



## Outcomes From The Summer

- **Global Learning (EQ3)**
  - **Pre-Post Test**
    - All items were significant
  - **Interviews**
    - Reinforced the importance of **emphasizing global implementations** for classroom learning
    - Set the stage for why it was so **important to promote global learning** for students in the rural counties represented by InTEL participants
    - Allow students to anticipate the **broader impact** of what they learned
    - Would help students **think differently about their own circumstances**.
    - Helped them understand ways to **promote a sense of global learning** for their students.

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Virginia Commonwealth University



## Outcomes From The Summer

*"I think the global aspect because I didn't even realize it was there.  
It's out there it's already established and you can use it. There are some things  
you don't have to completely reinvent the wheel if you want to do it there are things  
that are already set up that you can just slide right into that are ready."*

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## Inspiring Teachers for Engaged Learners (InTEL)

# Outcomes From The Summer

*"We watched a video about how students in the U.S. use Skype to look at a village in Kenya where the sewer pipe had burst and was running into their drinking water. And I thought as we were watching that I have children at school we all do, no water, dirt floors, no bed these type things. There's our poor and there's that poor. And so I think it's important for them to know like I've got it bad, but I don't have it this bad. Or at least be able to commiserate with that."*

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## Outcomes From The Summer

- **General Feedback - Positives**

- Most aligned with the evaluation questions explored in this report.
  - positive feedback unaligned with the focus of this evaluation
    - **Small size of group**
    - **Timing and structure** of the program
    - Were able to build a **strong group dynamic** that made them feel comfortable to collaborate and try new things, *"It's like just hanging out with a bunch of my friends playing but not that stress. There is an expectation but it's not that pressure. I like the laid-back atmosphere."*
    - Teachers felt they were at the same level of understanding as the other participants, which not only **facilitated connections but also promoted learning together**.

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Virginia Commonwealth University



## Fall Book Study

### Flattening Classrooms, Engaging Minds

*Move to Global Collaboration  
One Step at a Time*



Julie Lindsay Vicki A. Davis

### “Steps to Global Collaborations”

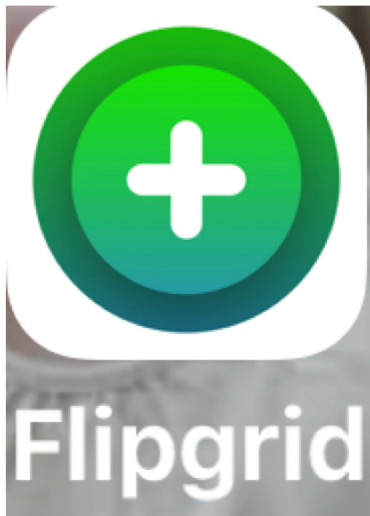
1. Connection
2. Communication
3. Citizenship
4. Contribution and Collaboration
5. Choice
6. Creation
7. Celebration



## Fall Book Study



# Poll Everywhere





## Fall Book Study





## Global Collaborations

Projects By Jen: <http://projectsbyjen.com/> (Ongoing)

- Our Really Exciting Online Project ([OREO](#))
- [Holiday Card Exchange](#) (Dec)

Global Read Aloud: <https://theglobalreadaloud.com/> (Oct - Nov)

- The Wild Robot [Padlet board](#)
- The Wild Robot [Edublog](#)

World MOON Project: <http://worldmoonproject.org/> (Aug - Nov & Jan - Apr)

Mystery Skype: <https://education.microsoft.com/skype-in-the-classroom/mystery-skype> (Ongoing)

- “Mystery” location
- “Mystery” number



## Global Collaborations

Skype (Ongoing)

- A scientist: <https://www.skypeascientist.com/>
- An author

Other “experts” Flat Classrooms: <http://www.flatconnections.com/> (Ongoing)

- Endangered Animals: <http://endangeredanimals17-1.wikispaces.com/>



## More Information

ITTIP Website: [www.ittip.org](http://www.ittip.org)

-STEM Programs  
-InTEL

## Questions?