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Transforming the World of Work

Agile in the Classroom: How Agile Can Better Prepare Students for the Demands of the 21st Century Workplace

Bret Thayer | January 2018

@bathayer

Teachers Who Scrum

AgileinTheClassroom.com

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Topics

1. The Millennial Question
2. Job Skills That Employers Want
3. National and Local Visions of 21st Century Skills
4. The Problem With Traditional Classrooms
5. Technology in the Classroom: Hit or Miss?
6. What Does Agile Look Like in the Classroom?
7. How Can the Agile Community Support This Process?

"Greatness can't be imposed; it has to come from within. But it does live within all of us."

-Jeff Sutherland

Scrum: The Art of Doing Twice the Work in Half the Time

The Millennial Question

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How has social media and the abundance of technology impacted today's youth?

1. Tech savvy?
2. Confident?
3. Entitled?
4. Unrealistic?
5. Hard to manage?

"Addiction destroys relationships, will cost time, will cost money, and will make your life worse."
-Simon Sinek

Job Skills Employers Want

Today's Team Environment

- Denver Post: In Demand Job Skills (9 Sept 16)
- Harvard's Advanced Leadership Initiative (2014)
  - Critical Thinking
  - Problem Solving
  - Creativity & Innovation
  - Collaboration
  - Question Formulation
  - Global Awareness
  - Communication Skills
  - Technical Skills

"Communication works for those who work at it."

-John Powell

National & Local Visions of 21st Century Skills

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National Visions:

ISTE®
International Society for Technology in Education

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Local Visions

"So as a parent, you should be asking that question: Is my child-whether 5 years old or 15 - learning in a way that is different than I did. If they are learning in about the same way, something is wrong."

-Jason Glass

Jefferson County Public Schools Superintendent

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The Problem With Traditional Classrooms

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Traditional Classrooms

- Lecture
- Practice
- Test
- Repeat

"Working effectively as part of a team is incredibly important for output quality, morale, and retention."

-Edmond Lau
Quora Engineer

Technology in the Classroom: Hit or Miss?

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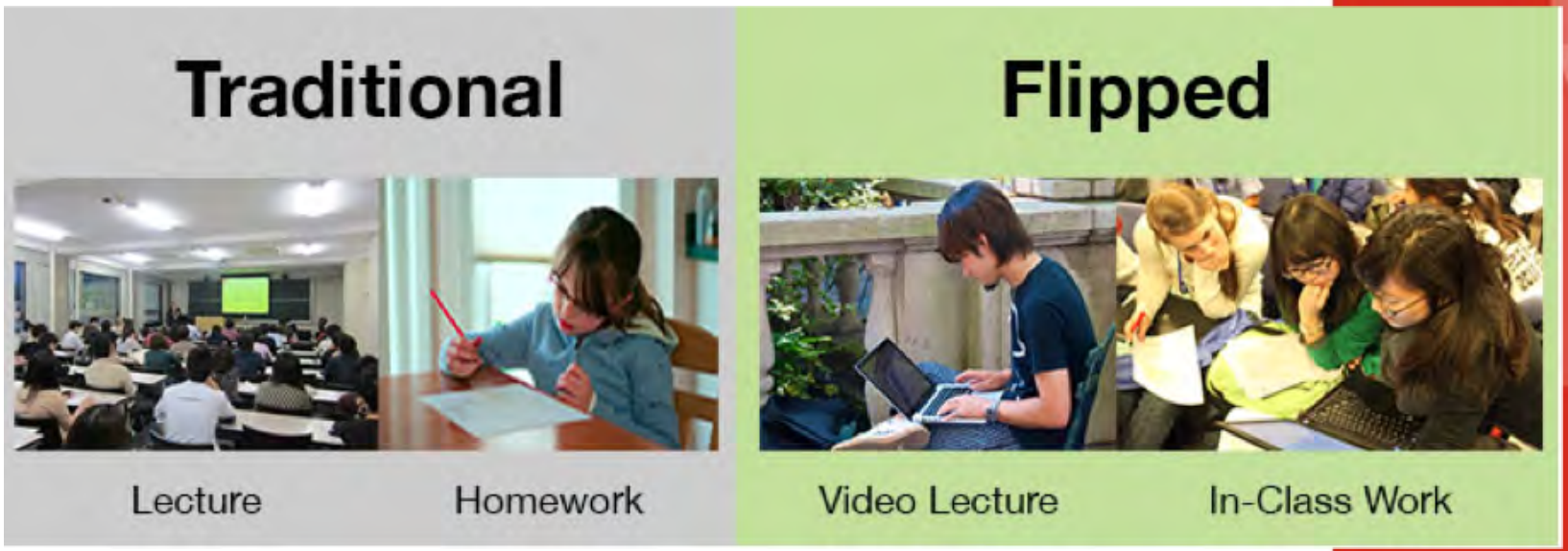
How are schools using technology?



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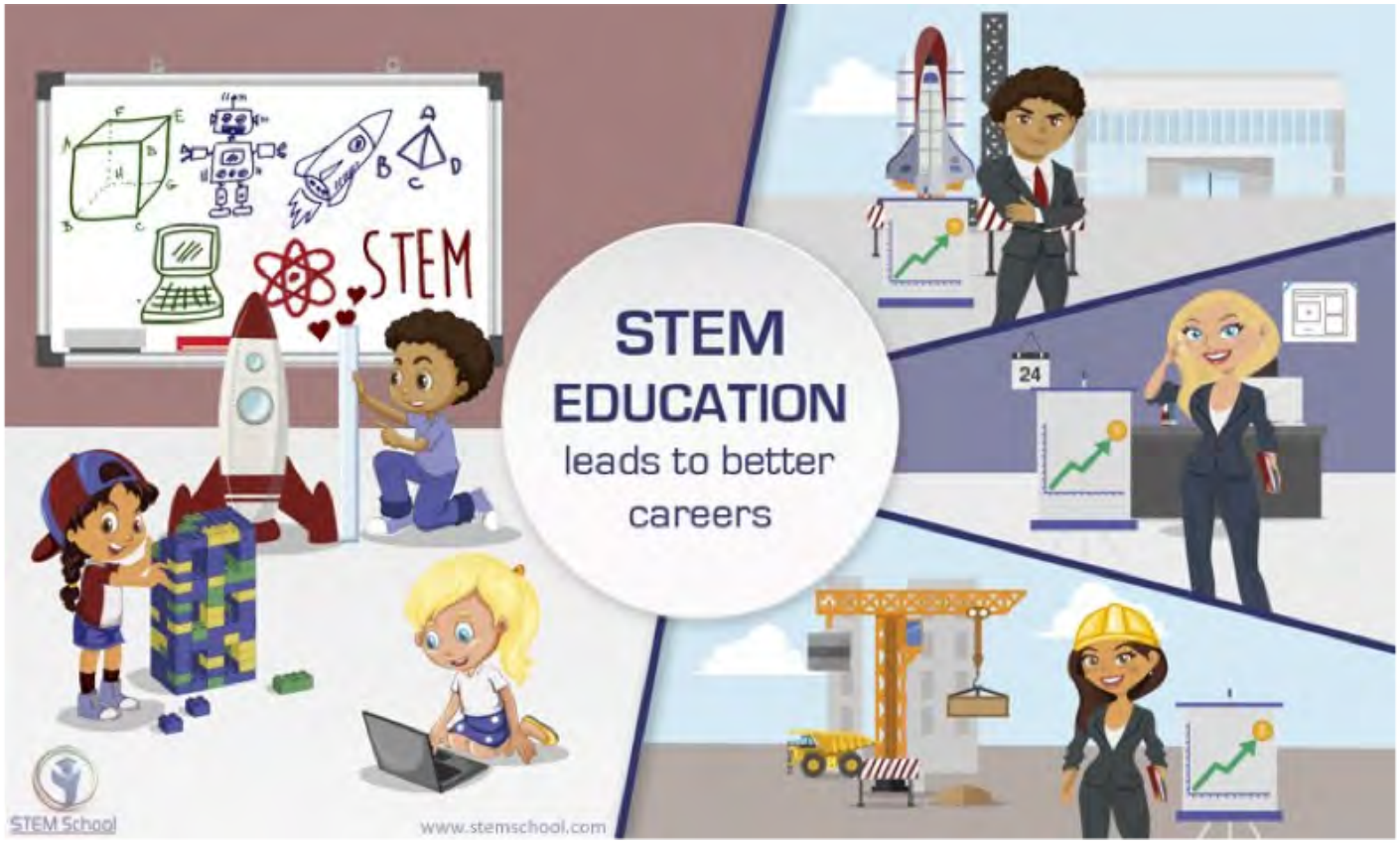

STEM
Science · Technology · Engineering · Math

→ content knowledge

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apps in education

What Does Agile Look Like In the Classroom?

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Sprint Execution in the Classroom

Teacher pre planning
For next sprint

Project planning
Whole Class

Daily Stand Up
Individual Teams

Sprint Review
Whole Class

Retrospective
Individual Teams
&
Whole Class

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Teacher *Pre-Planning*

- What group projects would work well?
- What access to technology do my students have?
- What learning outcomes do I need to assess?
- How long will I give my students to work on this project?

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Project (Sprint) Planning

- Explaining the parameters of the project
- Negotiate the DoD with students
- Teacher-story cards*
- Students-task cards

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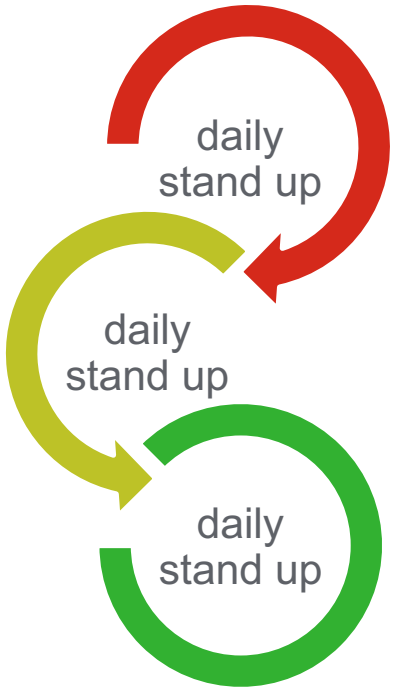
The Importance of Reflection



Sprint Review

Retrospective

Create a culture where 'failure' is celebrated as evidence of learning

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Learning through communication, collaboration, problem solving

Team reflection

Individual reflection

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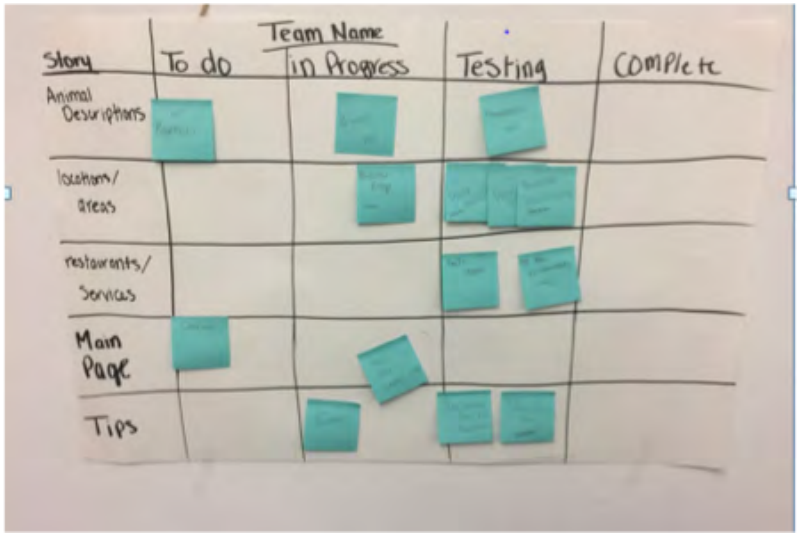
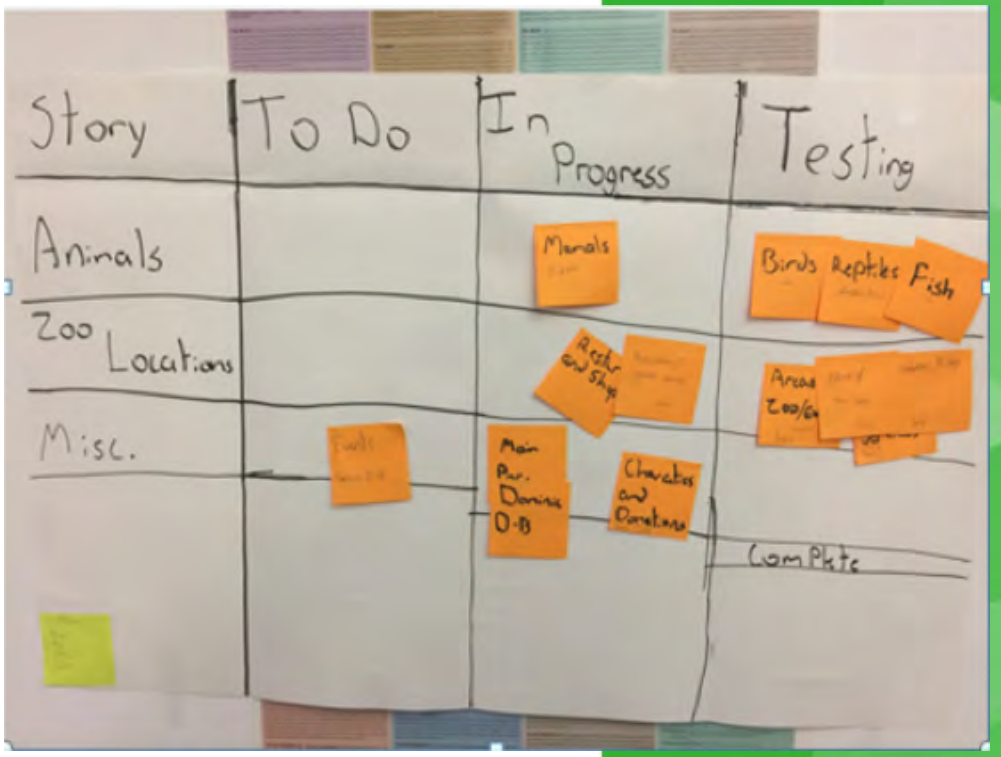
Scrum Board Examples





- Tracking student progress
- Holding teams & individuals accountable*

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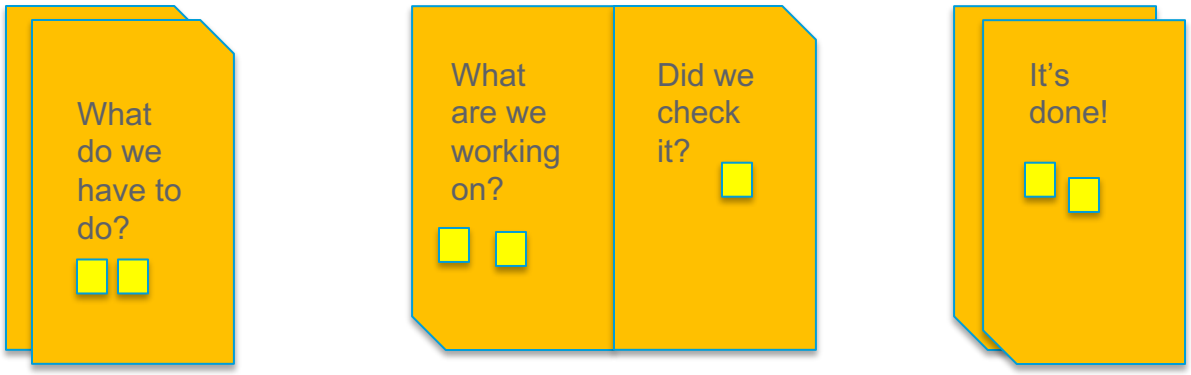
A Simplified Scrum Board

This scrum board was developed for middle school students in Virginia. Using simple manila folders, they eliminated the story column. The task cards they used were 1½" x 2" sticky notes.



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The Retrospective

→ One of the most important aspects of student growth is to have students
reflect on the process
and to suggest improvements
for the next sprint.

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Teacher Pre-planning (Backlog Refinement)

Prepare students for next sprint:

- What worked well? What do I want to change? Keep?
- Were the projects up to my standards, goals, DoD?
- Operational, systemic concerns?

Role of the Teacher

Gcej "r gtuqp"
j qnf u"uq"o wej "
r qy gt"y kvj kp"
vj go ugnxgu"vj cv"
pggf u"vq"dg"ngv"
qwv0"Uqo gvko gu"
vj g{"lwuv"pggf "c"
nkvng"pwf i g."c"nkvng"
f ktgevkqp."c"nkvng"
uwr r qtv."c"nkvng"
eqcej kpi ."cpf "vj g"
i tgcvguv"vj kpi u"
ecp"j cr r gp0
/Rgvg"Ecttqm"

How Can the Agile Community Help?

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Spread the Word

- Support existing Agile in School Projects
- Suggest using Agile in classrooms
  - STEM
  - PBL
  - Computer Science classrooms
- Observe and help facilitate Agile in schools

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How to Talk to Your Schools

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Share Your Expertise

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@bathayer #AgileinTheClassroom

Be part of our quarterly newsletter to teachers who are trained in Agile: “From the Experts”

“That absolute alignment of purpose and trust is something that creates greatness.”

-Jeff Sutherland

Questions?

Thank you for attending

Bret Thayer | January 2018

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