

# CDAT-STEM PBL



Mike Reilly

[michael.reilly@gcpsk12.org](mailto:michael.reilly@gcpsk12.org)

<http://CDAT.lanierhs.org>

# About CDAT



CDAT - Center for Design and Technology

STEM re-certified this year!

About 400 kids, anyone who wants to join us, no filter!

We expect 100% pass and almost 70% Exceeds on major testing

STEM futures include welders to advanced scientists

50% female, and race distribution to match school



CHOPPED

CHOPPED



CONTINUE **INGREDIENTS**

# The Final Teen Challenge

COCONUT CHIPS

SHIRLEY TEMPLE

QUAIL EGGS

CHOCOLATE  
WAFER CAKE

**CHOPPED**  
TEEN TOURNAMENT



food  
network



CONTINUE:

# The Final Teen Challenge







CONTINUE:

# The Final Teen Challenge





CONTINUE:

# The Final Teen Challenge

food  
network

# Shared and Respected Project Timeline



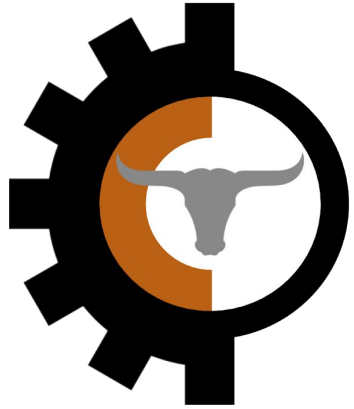
This is HUGE!

We teachers agree on a timeline and we stick to it, based on our interpretation of the EDP.

Admins: you cannot succeed with this if you have a rigid instructional calendar. Let's agree to cover topics per semester, and leave it at that.

Let's see this in graphic then applied form





## Center for Design and Technology

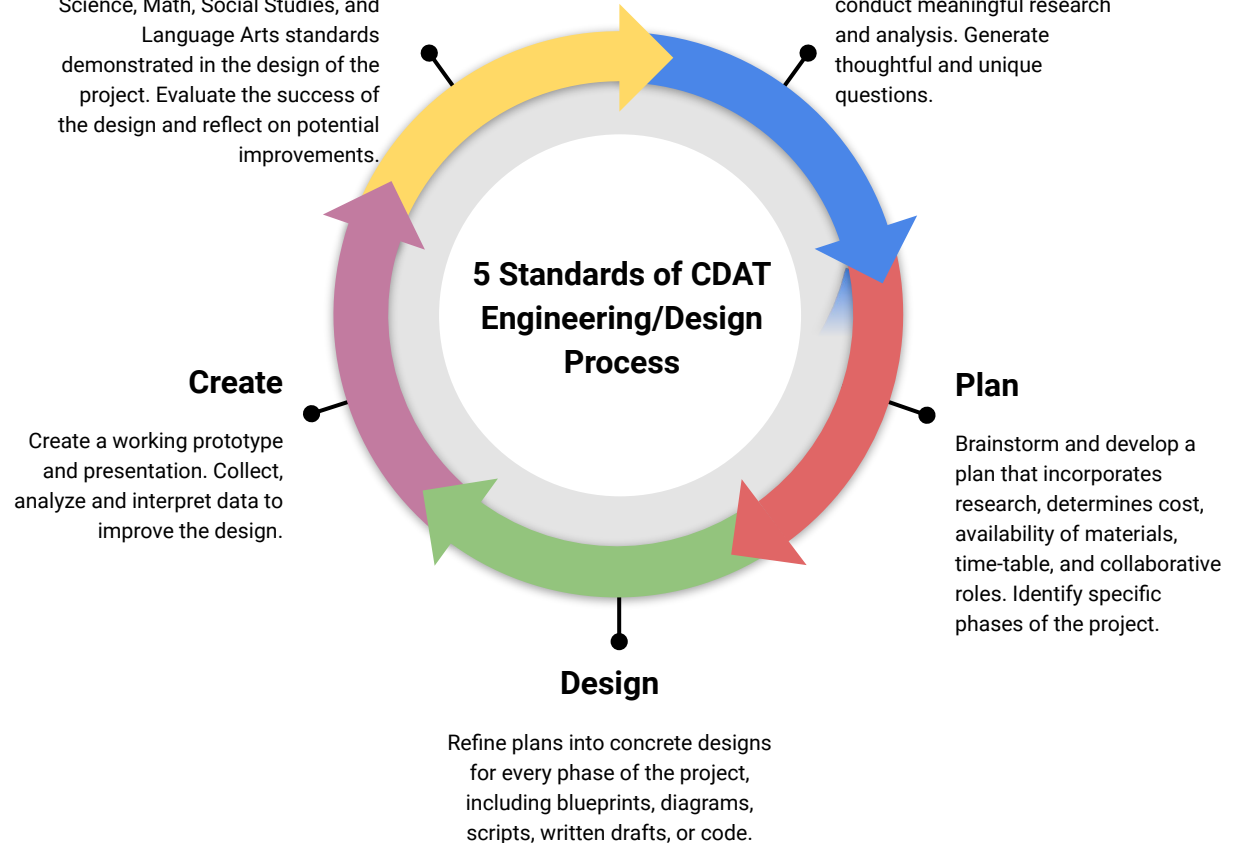
Lanier High School

### Evaluate/Reflect

Articulate the correlation of Science, Math, Social Studies, and Language Arts standards demonstrated in the design of the project. Evaluate the success of the design and reflect on potential improvements.

### Begin - Investigate

Identify a problem and conduct meaningful research and analysis. Generate thoughtful and unique questions.



# AGILE Principles



AGILE is a set of principles to guide the development of a project.

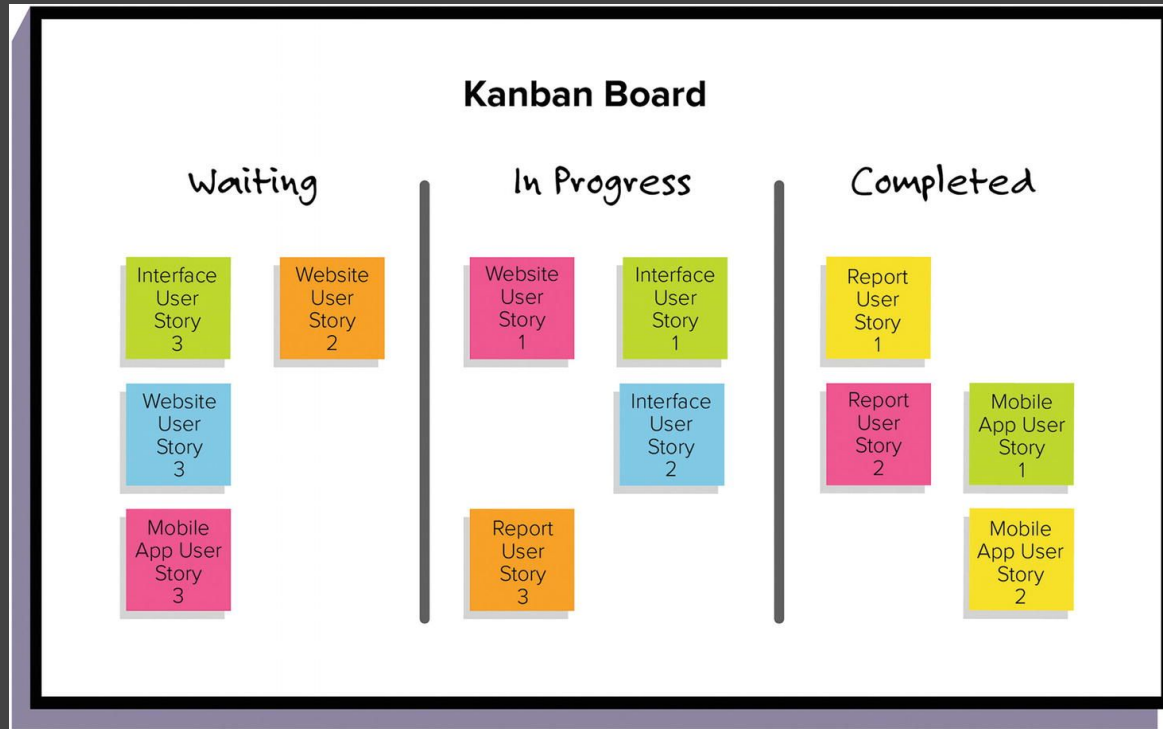
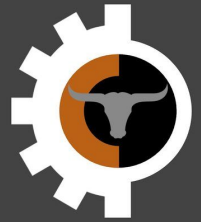
Two main methods of applying these principles are Kanban and SCRUM

In short, they are both a way to break down a project into “deliverables”

Our kids do a combination of them.

<https://www.atlassian.com/agile/kanban/kanban-vs-scrum>

# Kanban Example





# Start with a Bang!

- Buck Institute resources - <https://www.pblworks.org>
- What's the motivating question? It helps to start with something good, like a business partner or challenge that is REAL to them
- Lt. Gov Policy Director Mike Dudgeon





# How would YOU do a project “chopped” style?

Let’s pretend you have to do this!

**Brainstorm** it up, get weird but within your skillset. If you do NOT have the skill, don’t choose that type of project.

Keep it simple, but focus on the standards. HOW will you address the standards as the CORE of your project?

*Some documents we made on Brainstorming are available. This is great for the EDP Journal.*



# How would YOU do a project “chopped” style?



Let's see this in the chat, maybe have some folks speak about it:

- What type of product will you make? Movie, device, software, song?
- How will you address the core academic standards?



# Example of Timeline

**STEP 1: Investigate the Problem (Tuesday 9/3)**

**STEP 2: Plan (Thursday 9/5)**

**STEP 3: Design (Thursday 9/12)**

**STEP 4: Create (Initial Tuesday 9/17; Draft Tuesday 9/24)**

**STEP 5: Evaluate/Reflect/Present (Tuesday 10/1)**



# Grading - we don't share/agree!

- Grading is individual to a subject teacher. For the same project:
- Kids might make an excellent tech project, A+ !!!
- Kids might not cover the science at all, F
- Kids might do a mediocre job on math, a C
- *We just agree on timeline*

# End with a Bang!

- Incentive to finish!
- Georgia Power, GaTech, Local Engineers judge!
- Field trip to local waste treatment plant to see biogas generation.

