

Facilitating Student Engagement with Technology

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Anything Going On In Your District?

A word cloud on a black background featuring various educational terms in different colors and orientations. The words include: Goal, Self-Regulation, Authentic, Student, NGSS, Facilitator, Habits, Assessment, Engagement, Formative, Teacher, Metacognition, CCS, Self-efficacy, Technology, Blended, MTSS, Strategies, CCR, and Self-reflection. The words are arranged in a dense, overlapping cluster, with some words appearing larger and more prominent than others.

Presenters...

- Fred Van Ranken – Director of Student Learning/Chemistry Teacher/Coach – Smoky Valley USD 400
- Laurie Denk – Vision_Tek Technology Teacher – Smoky Valley USD 400

Changing Traditional Roles in the Classroom

- Facilitator – a classroom leader who empowers students to drive their own learning processes. The facilitator guides the student to make the best thinking and learning choices while advocating for the student's highest level of work and comprehension. The facilitator creates an atmosphere of expectation and evaluation where the student feels connected to real world environments. The entire process is student centered in its content and direction.

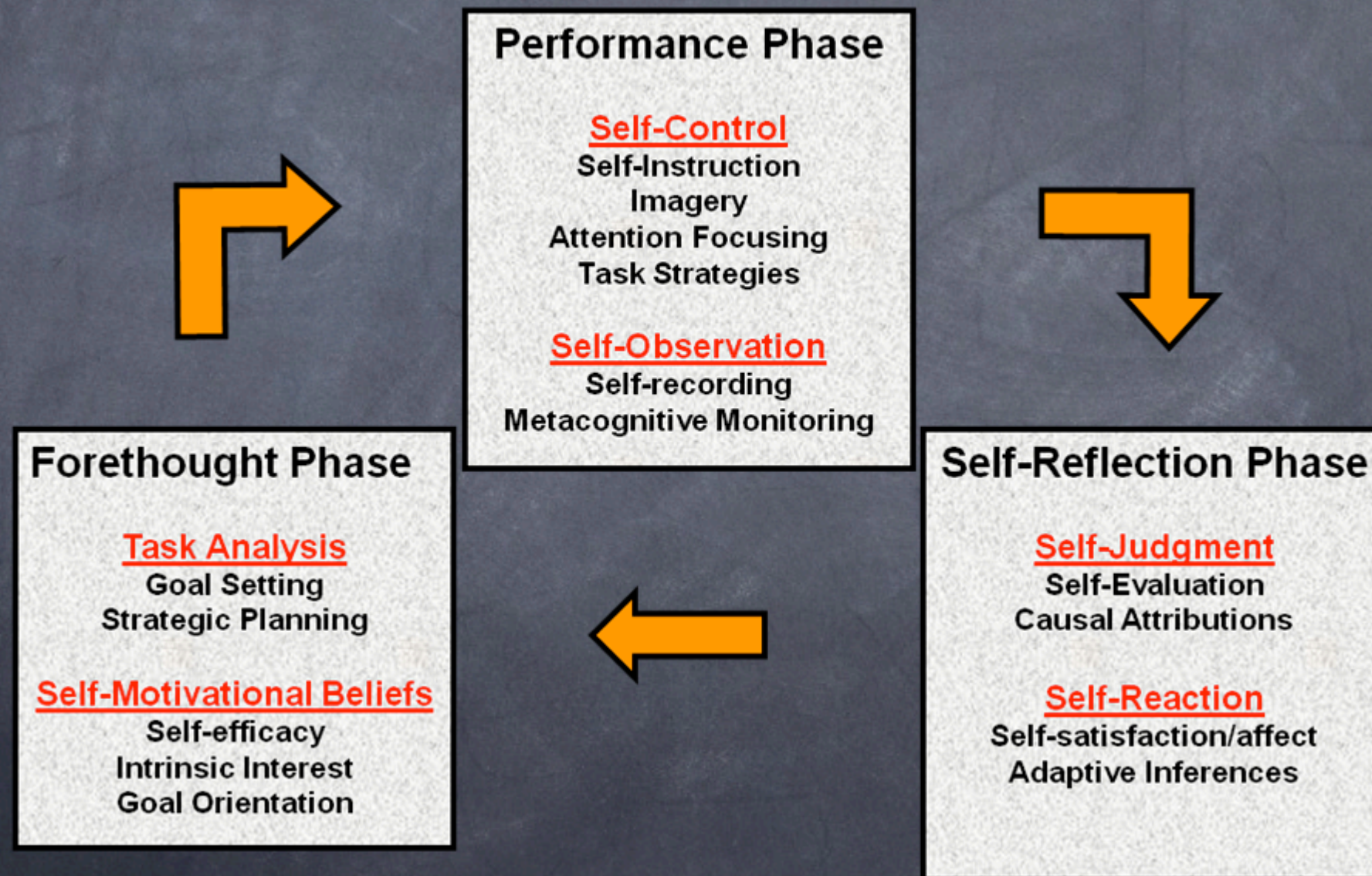
What is Self-Regulation?

Self-regulated learning has been defined as self-generated thoughts, feelings, actions that are planned and cyclically adapted in order to help students attain their goals. A basic premise of this concept is that self-regulated students are ACTIVE in their learning and thus frequently use, modify, and change their STRATEGIES following poor performance in school.

Cleary, Timothy J. *A customized self-regulation instructional program for classroom teachers at Kansas USD 397 and 400*. 2011.

SRL Cycle

Cycle of Self-Regulatory Thought and Action



Tools/Strategies...Old and New

Focusing on:

- Goal-setting
- Planning
- Strategy use
- Metacognitive Monitoring
- Performance Reflection making adaptive inferences



Forthought...planning...some reflection

(UA) Unit Analysis – Preparation for my next test

Goals for the Unit

- WRITE YOUR GOAL FOR THE GRADE ON THE NEXT EXAM. _____ %
- Do you have access to the learning goals for this unit? Circle one (Yes or No).
- IF NO, when do you plan to get them OR how do you obtain them? _____

What assignments do you have for this chapter that you know will be on the next exam (write those below if your teacher has not done so).

Assignment	When Assigned	Date Completed	Grade
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

What is the format of the exam...M/C, matching, problems, short answer, essay (write this below):

Date of the exam (estimate if you do not know the exact date). _____

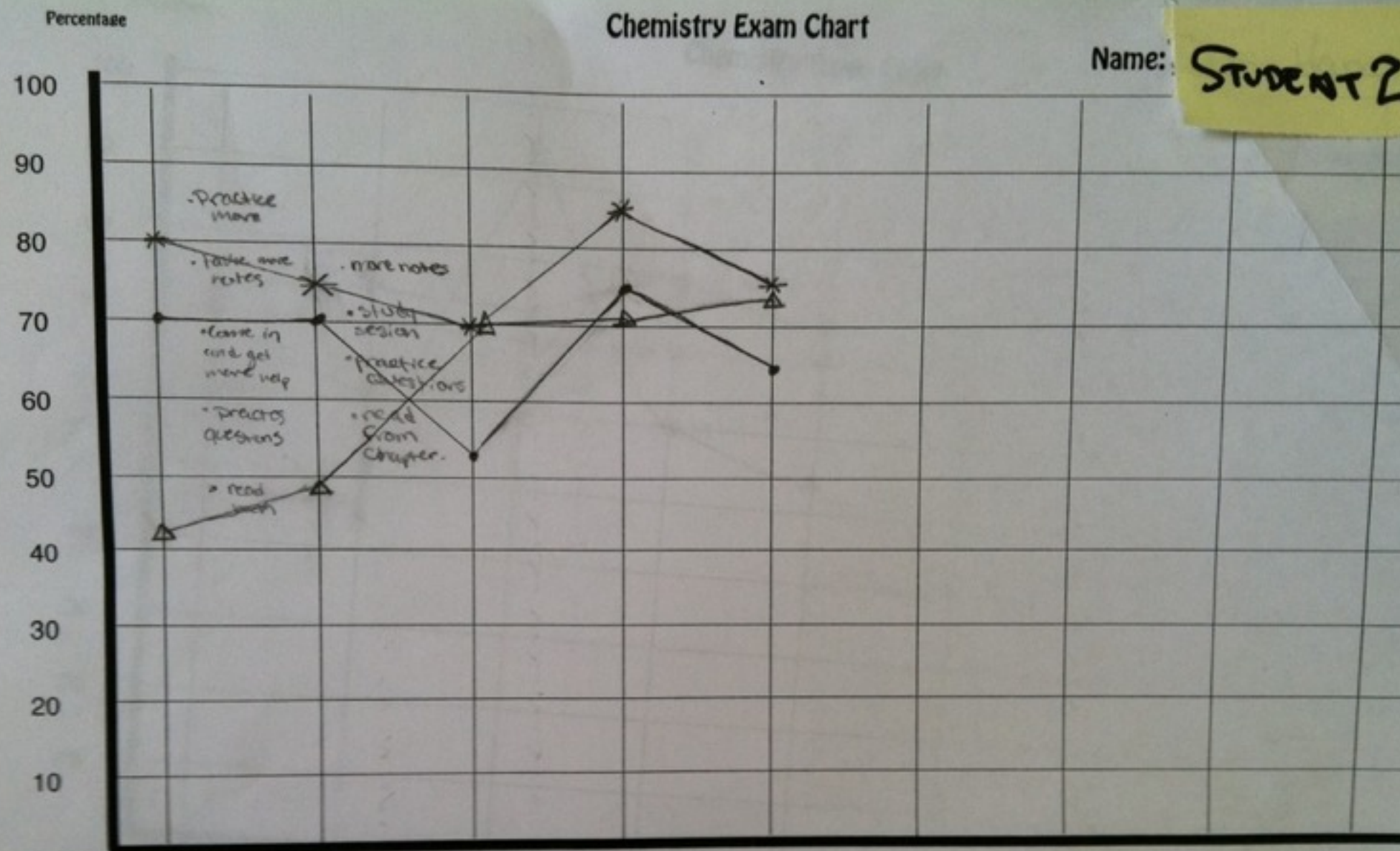
Trends from pervious tests

What was the format of the last test? Do I know of anything different on the upcoming one? If so, indicate as such below:

Did I have any trouble with the last test? What was the problem?

Things that I am currently having trouble learning

Goal Setting-Planning



Test	Chapter 10	Chapter 11	Chapter 12	Chapter 13	Chapter 14	Chapter 15	Chapter 16	Chapter 17	Chapter 18
GOAL	80	75	70	85	75				
Predicted score	70	70	53	75	65				
Actual Score	42	49	70	71	74				

Directions: You are to place three data points per exam and connect the data points among exams as we proceed throughout the remainder of the course. Use a different color and symbol for each area. Those three points are (as listed in the chart above are: GOAL for the exam, prediction prior to taking the exam, and actual

Performance Reflection

Name: STUDENT 1
Chemistry
Solution Chemistry Unit
May 16, 2011

1. What is the main reason you got the grade that got on the Gas Law Exam?

Well, I got a 74%, but I'm happy with that score. I worked hard to understand vocab and the math. My grade could have been better if I remembered Sig figs, and didn't switch around the formulas.

2. What do you think that you need to do to improve your grade on the next test?

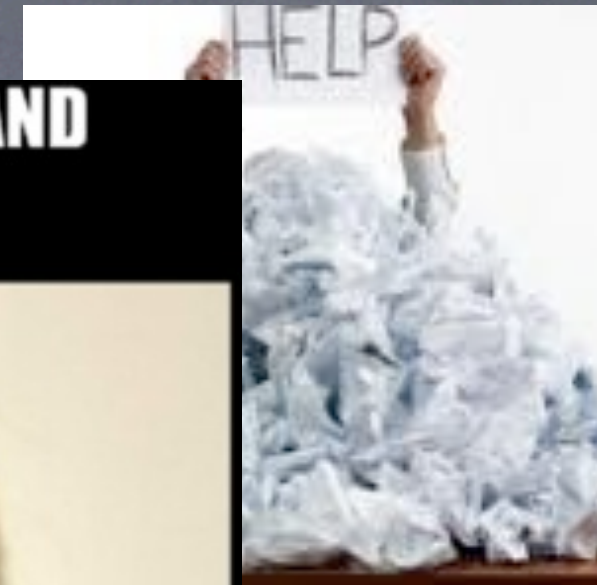
I think I need to do a better job at doing more practice problems before the test, so I understand the formulas better.

Problems...

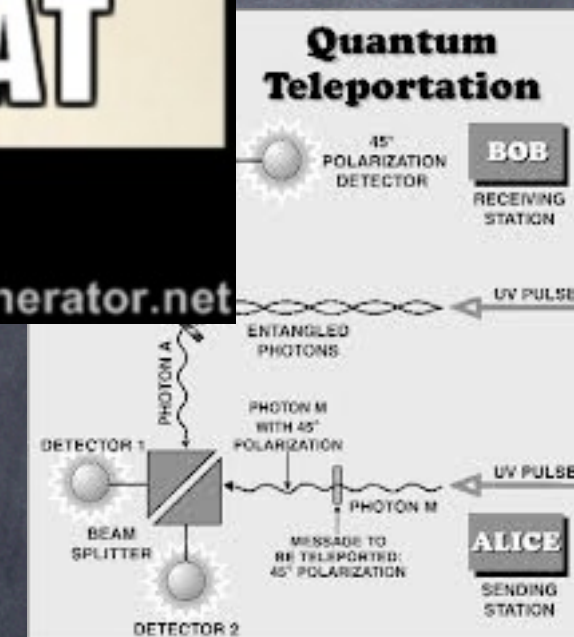
- All of these

- Never had a chance to want the

- Easy to forget them...

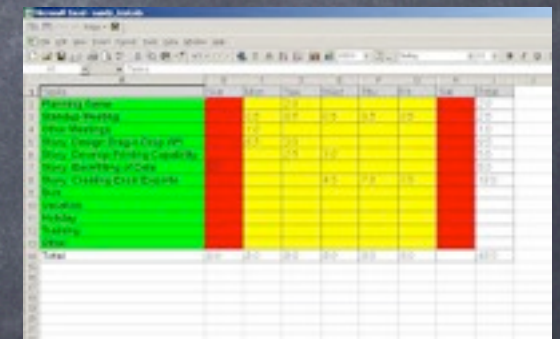


/they needed/



Solutions...

- Wiki-dispense information
- DropBox-dispense AND share information
- Applications already in use (Numbers, Excel, Word, etc.)
- Media-producing tools (Screen capture, Doodlecast Pro, etc.)



CURRENT EXAMPLES USING OUR TECHNOLOGY

- UA in DropBox
- Wiki-aligned to units taught
- Goal-setting, planning, and reflection with "Numbers"
- Science Notebooks...THE OLD FASHIONED WAY...
- POGIL...collaboration...
- GoogleForms, GoogleDocs, Moodle, etc.

Movie Production

COMBINED GAS LAW

A sample of oxygen gas at 67.62 kPa, 240.0 K, and 76.6 L experiences an increase in temperature to 267.4 K and an increase in pressure to 99.76 kPa. What is the new volume of that gas (assume $n = \text{constant}$)?

Given:

$$P_1 = 67.62 \text{ kPa}$$

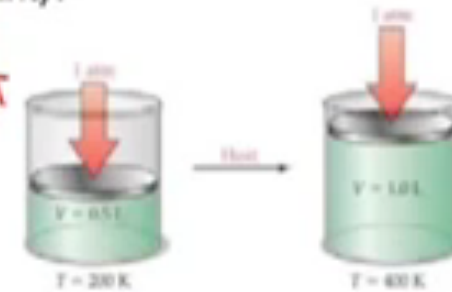
$$T_1 = 240 \text{ K}$$

$$V_1 = 76.6 \text{ L}$$

$$P_2 = 99.76 \text{ kPa}$$

$$T_2 = 267.4 \text{ K}$$

$$V_2 = ?$$



BEQ:

$$\frac{P_1 V_1}{T_1} = \frac{P_2 V_2}{T_2} \Rightarrow V_2 = \frac{P_1 V_1 T_2}{P_2 T_1} = \frac{67.62 \text{ kPa} \cdot 76.6 \text{ L} \cdot 267.4 \text{ K}}{240 \text{ K} \cdot 99.76 \text{ kPa}}$$
$$V_2 = 57.8 \text{ L}$$

Individualizing Content & Direction of Learning

- Process of projects can teach MORE than simply the content of the project.
- Learning how to plan and create independent “work flow” MUST be taught.
- Create a “work plan” process that you facilitate and hold students accountable.

The Process

- Show the kids the buffet – Get them excited about what they can do.
- Raise the bar: What they can do if they work hard?
- Help them begin the hunt and teach them to plan.
- Teach them the recipe of success: planning + great resources (evaluated by them) + time management and goal setting + hard work and passion + self regulation and reflection = NERD SUCCESS

The Planning Process



Vision_Tek Individual Project

Project/Plan – This is your WORK FLOW plan. What are you going to do, how are you going to do it? When will you work on it and at what pace?

Your Name: STUDENT #1

Date: 11/12/2012

Name of my Project: _____ Walk on By – Art/Digital Creation _____ (This plan is worth 50 points)

In three-four sentences, explain what new information you wish to pursue through this project

I will be fusing multiple media work into one project. I will be using stop motion techniques as well as exploring film angel and shot changes. I want to merge art and film into one musical video production.

Facilitating The Learning Process

- Goal Setting – 1) Rules 2) Modeling 3) Accountability
- Learning to FIND and EVALUATE resources
- Weekly Conferencing and Accountability
- Work Flow – What HAPPENS if I get behind?
Don't use my time well?

What I Evaluate

Requirements for Your Showcase:

1. **Description of Project** – This description should include your learning goal. What did you plan to do. Was this the end result?
2. **Mastery of Technology Used** – It is your job to describe what tools (both tutorials and applications, software and its use. You should demonstrate aspects of your learning. What worked for you. What didn't work. What resources were the best? Your job is to provide a learning overview.
3. **Project Plan Review** – What did you learn about planning a BIG project. Did you follow the plan? Did you need to adjust your plan in any way? If yes, what did you do and why?
4. **Project Results** – Showcase your project.
5. **OVERVIEW OF ENTIRE PROJECT** – What did you learn through the learning process. *For example, I learned that if I don't storyboard I miss vital shots. OR...I learned that lighting is essential to great pictures.* How important was problem-solving to your project's success? What would you do differently if you could re-do your project? What was the biggest successful moment in your project?

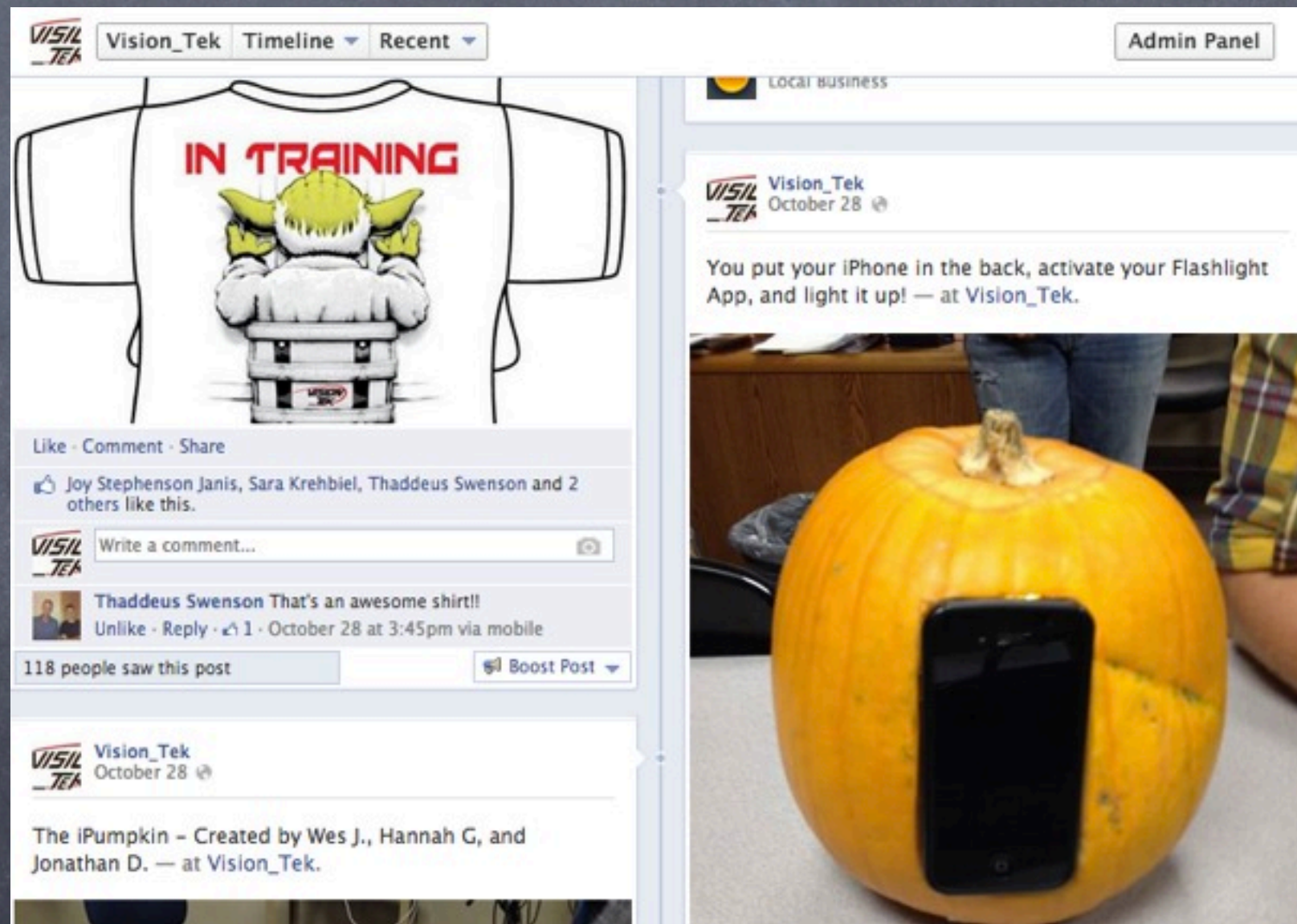
You will be expected to speak/talk during your presentation; however, you are allowed to use technology tools: Keynote, application use, screen capture, etc. Remember you are teaching us and *SHOWCASING* four weeks of work and learning. I want you to show us *WHAT* you learned as much as you show us your project.

Reflection and The Learning Process



Raising the Bar of Expectation

- Presenting to a real audience – uStreamTV and more!
- Social Media – Get your Parents on board
 - Facebook
 - Remind101



Successes...Oh, Yes!

- Vision_Tek YouTube Channel
- Competitions
- Program Successes – We LOVE to SHARE!
- Vision_Tek Digi-Con each spring
- THIS year – Film Festival

Technology Tools for the Process Itself

- Dropbox – It's a Must
- Wikis – Sharing of Information/Lessons/More
- Remind101
- YouTube – Other Web Media – Go Big, Go Public!
- Gamification – Make Them LEVEL UP!

What These Resources from Fred & Laurie

<http://tinyurl.com/facilitating-resources>

