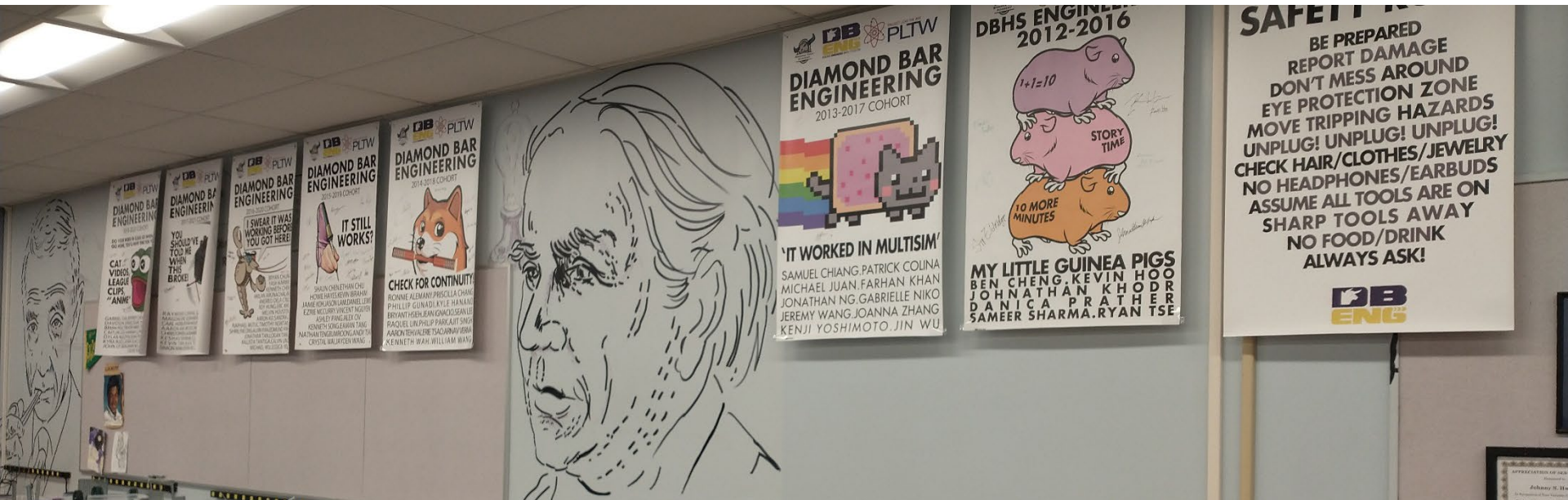


# Back to School Night Engineering Program Presentation



Johnny Hwang

Introduction to Design, Digital Electronics, Principles of Engineering, Engineering Design and Development, AP Biology, Introduction to Robotics



# Agenda

- Introduction
- Tips for success: *Class Website, Online Textbook, Parent Portal, Communication*
- Homework



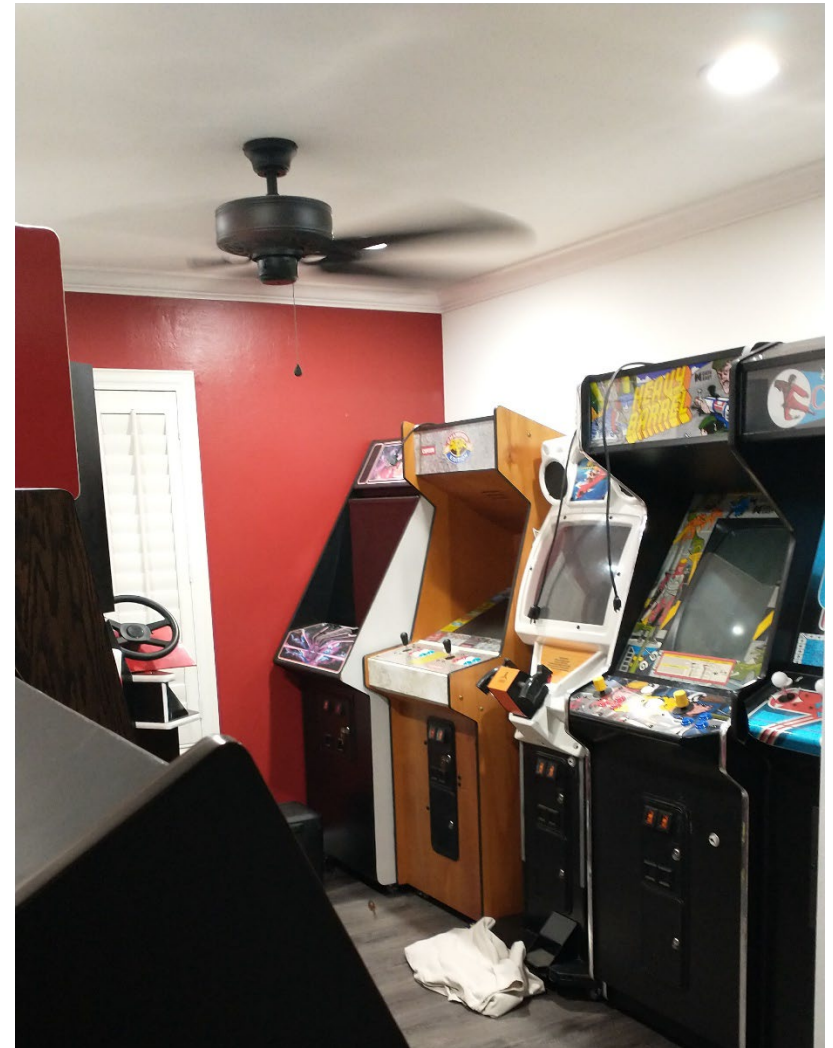
# Introduction

- 25<sup>rd</sup> year at DBHS
- B.S. in Biology, M.A. in Educational Technology
- Industrial & Technical Education certified
- Past & Present Classes taught:
  - AP Biology, Honors Biology
  - Chemistry
  - AP Environmental Science
  - Introduction to Robotics
  - Introduction to Engineering Design
  - Principles of Engineering
  - Digital Electronics
  - Engineering Design and Development



# Introduction

- Self taught electronics hobbyist
- Restoring 80's arcade machines
- Tinkering with computers and engineering ever since I was young





# Introduction



Project Lead the Way (PLTW) is the leading engineering, computer science, and biomedical engineering curriculum provider whose purpose is to introduce engineering and develop homegrown engineers



# Introduction

What PLTW courses do we offer at DBHS?

1

- Introduction to Design

2

- Principles of Engineering

3

- Digital Electronics

4

- Engineering Design & Development



# Introduction

Why complete the DB engineering pathway?

1<sup>st</sup> Year class fulfills the UC “f” Visual Performing Arts requirement

- 2<sup>nd</sup> Year, 3<sup>rd</sup> Year, 4<sup>th</sup> Year classes are UC Honors classes
- College Admission Preference
- Scholarships
- Brahma Tech Diploma (All PLTW classes count)
- PLTW California Student Scholar Recognition (At least 3 classes)
- AP & PLTW Scholar Recognition
- Learn industry standard software

# Introduction

Why complete the DB engineering pathway?

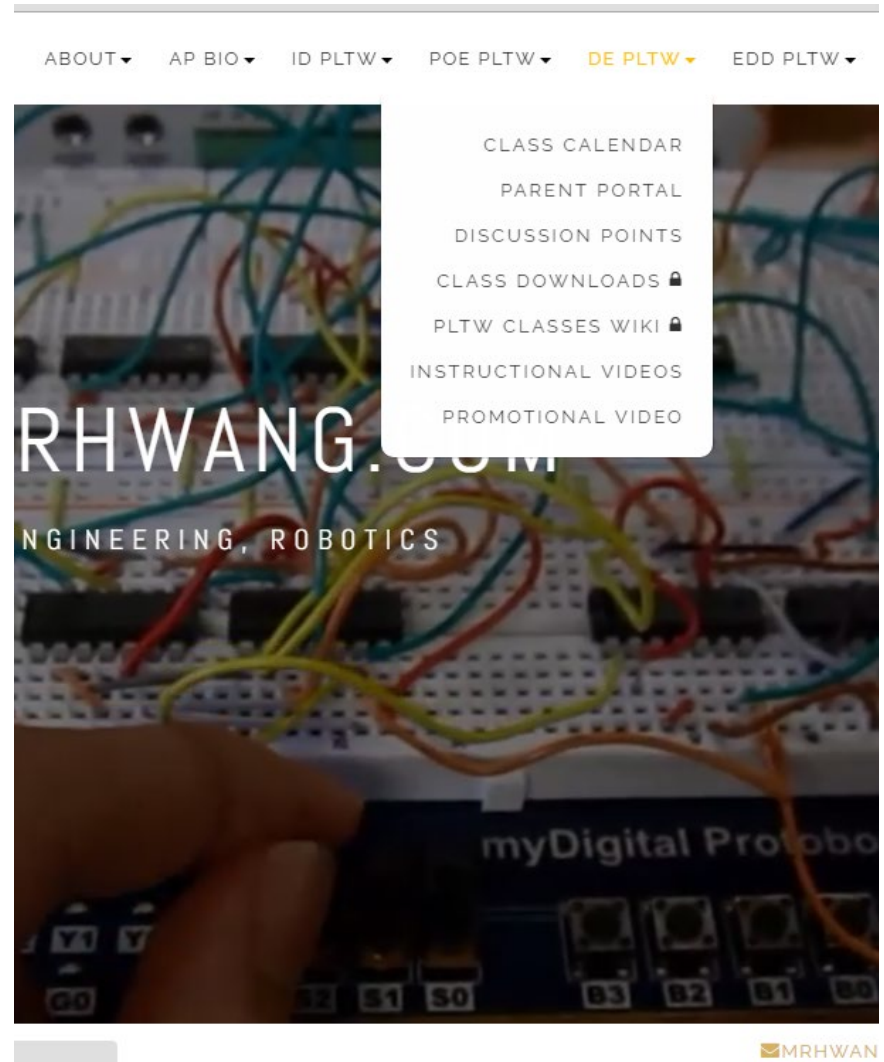






# Tips for Success

- Use of the class website  
[www.mrhwang.com](http://www.mrhwang.com)
- Access the class calendar, study tools, assignments for download etc.



# Tips for Success

- Our online textbook can be accessed through [my.pltw.org](https://my.pltw.org)
- Some of our software can be accessed or installed at home e.g. NI Multisim, Autodesk Fusion360, Google Docs etc.

The screenshot displays the PLTW online textbook interface. On the left is a dark sidebar menu titled 'My Library' containing a list of lessons and activities. The main content area on the right has a teal header with the PLTW logo and the text 'Unit Landing'. Below this, the title 'Design as a Process' is visible. A 'Distance Learning Support' box provides instructions for accessing flexible paths. A 'GOALS' section lists three objectives: applying a design process, contributing to efforts, and developing a model. A 'MATERIALS' section is partially visible at the bottom.

**My Library**

Introduction to Engineering Design

Lesson 1.1 Design Basics

- Activity 1.1.1 Design as a Process
  - Sweet Improvement
- Activity 1.1.2 Iterate and Redesign
- Activity 1.1.3 Concept Sketching
- Activity 1.1.4 Targeting Success Using Data
- Project 1.1.5 Design a Game
  - Project Reflection
- Lesson 1.2 Visualization and Solid Modeling
- Lesson 1.3 CAD Fundamentals
- Lesson 1.4 Product

<https://pltw.read.inkling.com/read/>

Unit Landing

PLTW

Activity

## Design as a Process

**Distance Learning Support**

If you are doing this activity outside of class, jump to the flexible path [DL: Act as a Designer](#).

**GOALS**

- Apply a design process to a problem.
- Contribute to the efforts of others.
- Develop a model to represent a problem.

**MATERIALS**

# Tips for Success

StuNum	Last Name	First Name	Middle Name	Perm ID Num
43503	Brahma Jr.	Billy		305498
Parent/Guardian			Primary Phone	Fa
Mr. Billy Brahma Sr.				

6- Biology AP- Fall 8/17/2015 - 12/18/2015  Hwang,J [jhwang@wvusd.k12.ca.us](mailto:jhwang@wvusd.k12.ca.us)

☐ Show only missing assignments

#	Description	Type	Category	Score	# Correct	%	S
1	Safety Test	Summative	Tests	282.86 / 300	33 / 35	94.29%	
2	Chpt 1 Homework Packet (16)	Formative	Assignments	200 / 200	20 / 20	100.00%	
3	Chpt 1 & Stats Test Multiple Choice	Summative	Tests	260 / 300	39 / 45	86.67%	
4	Chpt 1 & Stats Test Essay	Summative	Tests	300 / 300	10 / 10	100.00%	
5	Chpt 2 & 3 Homework Packet (12)	Formative	Assignments	177.78 / 200	16 / 18	88.89%	

Make sure homework is always completed 100%

# Tips for Success

## Pet 5 Introduction to Engineering

If any row is garbled, click on the refresh button.

ID Number	Total	Percentage	8/18/14	8/25/14	9/2/14
309582	27	93%	12	12	3
240995	21	72%	14	7	0
310719	16	55%	11	4	1
316550	22	76%	15	5	2
231777	14	48%	9	5	0
231944	25	86%	15	10	0
308150	18	62%	13	5	0
251341	28	97%	17	11	0
251074	17	59%	10	6	1
251612	26	90%	16	9	1
Weekly Averages =			12.9	9.0	0.7
High Total=			29		

- Check discussion points weekly
- Students need to answer questions at a 70% clip to get full credit

# Tips for Success

## Per 4 Introduction to Engineering De

If any row is garbled, click on the refresh button.

ID Number	Total	Percentage	1/4/16	1/11/16	1/18/16	1/25/16
319847	90	100%	5	5	5	5
304797	70	78%	5	0	0	5
231775	90	100%	5	5	5	5
319171	90	100%	5	5	5	5
305066	85	94%	5	5	5	5
313261	90	100%	5	5	5	5
307856	90	100%	5	5	5	5

- Check participation points weekly
- Students should not be below 100%



# Tips for Success

- Communication is the key

Email: *jhwang@wvusd.org*

Phone: **909-594-1405 x33201**

# Homework

- Make sure Aeries email is updated
- Watch the promotional video for the class your student is enrolled in
- Email me a message saying that you did the BTSN homework with *your student's name & class in the subject line* to earn extra credit for your student.

