Rockets! Forces and Motion

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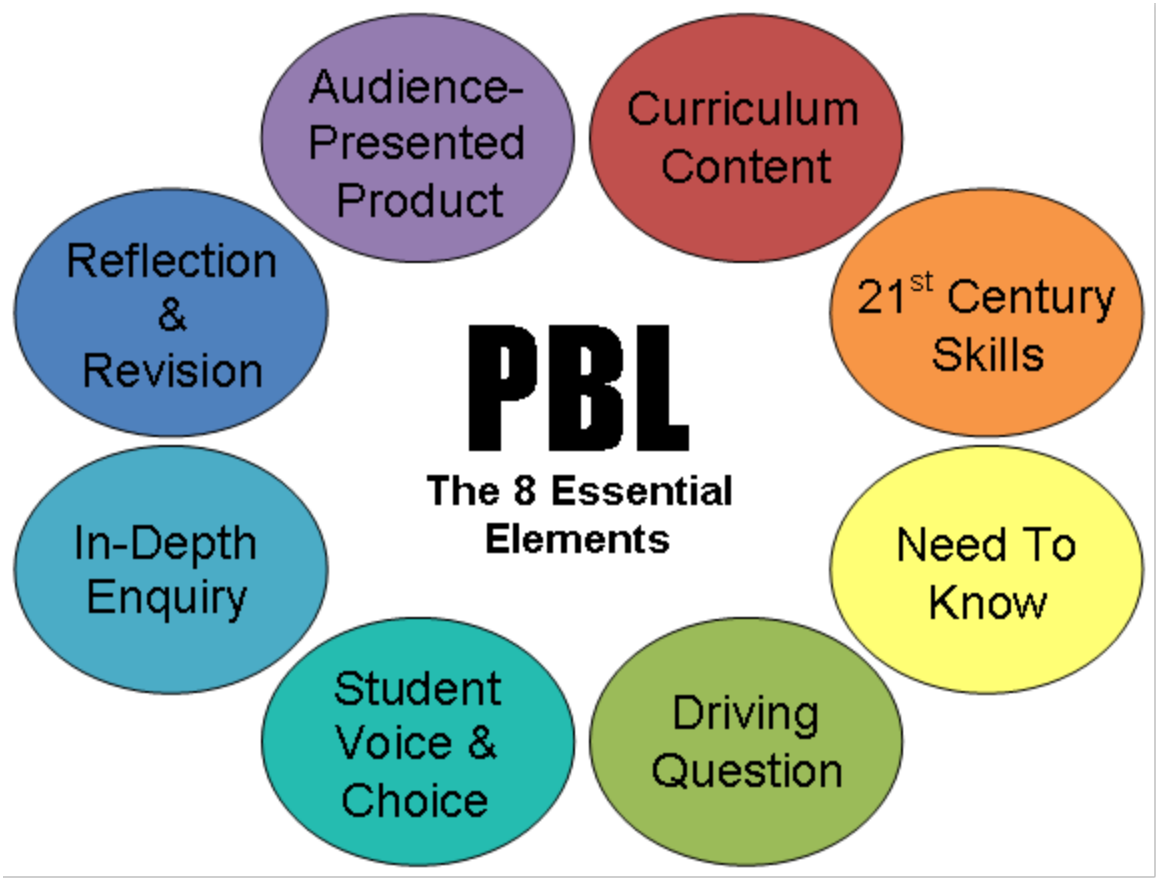
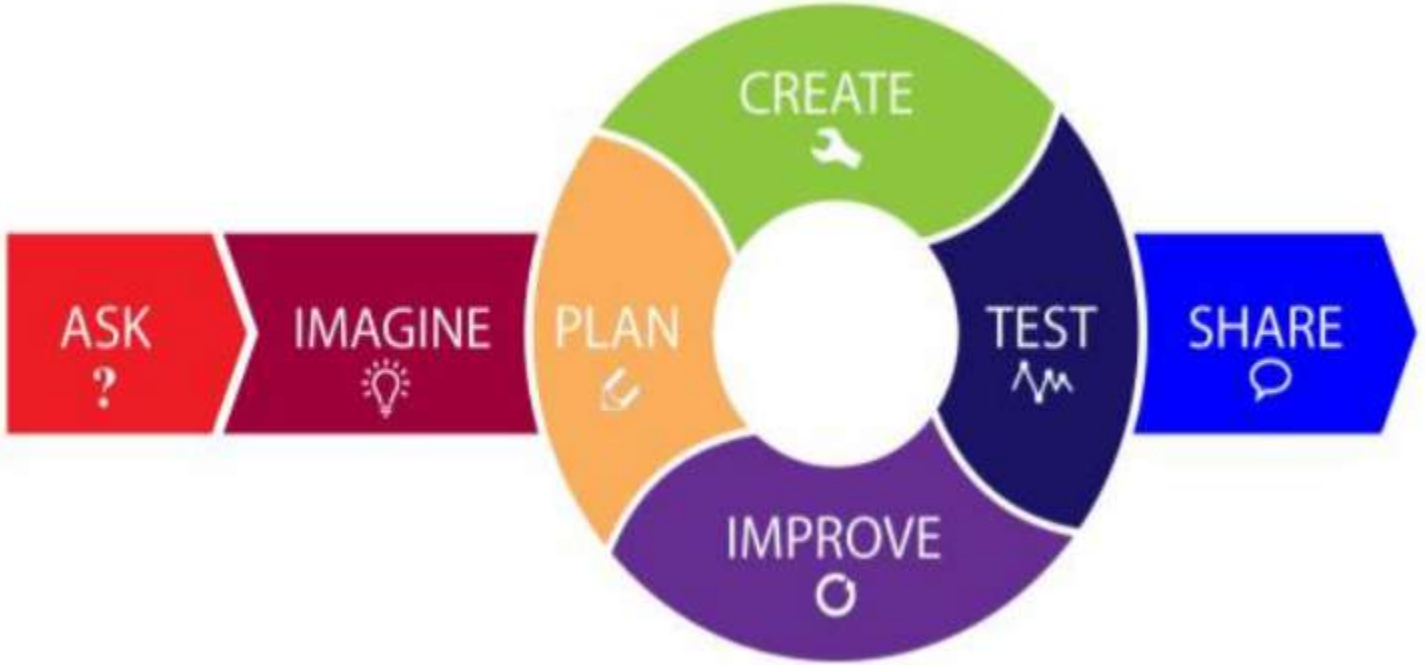

PBL
The 8 Essential Elements
Audience-Presented Product
Curriculum Content
21st Century Skills
Need To Know
Driving Question
Student Voice & Choice
In-Depth Enquiry
Reflection & Revision

FOCUS ON SIGNIFICANT CONTENT

DEVELOP 21ST CENTURY SKILLS



In Depth Inquiry

Driving Question

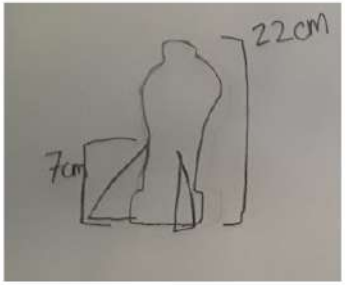
How can we create a rocket that goes the highest and lands safely?

Establish Need to Knows

- Student led
  - Speed, velocity, distance
  - What the rocket was made of
  - What materials they could use
  - How we would take the data

Encourage Voice and Choice

Launch Day #1



Distance; 3 meters

Time; 1.5 seconds

Speed to Reach the Bottom; 2.5 meters per second

Speed to Reach the Top; 4.29 meters per second

Launch Reflection; The parachute worked very well along with the wings, but we need less water and a bigger bottle

Collection and interpretation of data

- Grant money was used to purchase Pocket Labs.
- Pocket Lab device, paired with a phone allowed for easy and accurate Collection of data.
- Students were provided with graphs Like this to interpret and use for calculations.

Revision and Reflection

Public Audience

Challenges and improvements for this semester

- Groups were too large (4 students)
  - Groups of 2-3 would work better
- Could plan for more time to revisit Need to Knows to promote more inquiry.
- Encourage more creativity in rocket design and recovery systems.
- Students need more structure for group work time
  - Give students a daily goal
- Change final report to _____?_____

Thank you!
Questions?