



Creek View Elementary
September 27, 2016
Presented by Crissy Wade
Project Based Learning Coach

About the PBL Coach

- ▶ 18th year in Education
- ▶ 16th year at Creek View
- ▶ Bachelors – Elementary Education w/Special Education Endorsement
- ▶ Masters – Technology in Education
- ▶ Taught grades 1, 3, 4, & 5

What does the PBL Coach do?

- Lead Staff Professional Development in technology integration, PBL, and Personalized Learning
- Co-teach with teachers to help integrate PBL in the classroom
- Collaborate with grade levels to use PBL to make curriculum more integrated across the curriculum as well as creating common assessments that align with PBL projects
- Collaborate with CST and classroom teachers to revise/improve Choice Boards (increase rigor/learning style options)
- Organize guest speakers for PBL units



Projects



“Mom, I have a project due tomorrow and I can’t find my instructions. Do we have any poster board? Do you know where my markers are?”

PROJECTS

Can be done
alone

About the
product

Teacher-
directed

All projects
have the same
goal

PROJECT-BASED LEARNING

Requires collaboration
and teacher guidance

About the process

Student-directed

Students make
choices that
determine the
outcome

IS IT A **PROJECT** OR IS IT
**PROJECT-BASED
LEARNING?**

| PROJECTS | PROJECT-BASED LEARNING |
|---------------------------------------|---|
| Products are submitted to the teacher | Products are presented to an authentic audience |
| Lack real-world relevance | Based in real-world experiences or problems |
| Occur after the "real" learning | Real learning occurs through the project |

IS IT A **PROJECT** OR IS IT
**PROJECT-BASED
LEARNING?**

Source:
Are You Using Project Based Learning?
By Susan Riley

Project Based Learning

Project Based Learning is a teaching method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to an authentic, engaging and complex question, problem, or challenge.

Source: Buck Institute for Education

1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 26



Project Design Elements

- **Key Knowledge, Understanding, and Success Skills** - The project is focused on student learning goals, including standards-based content and skills such as critical thinking/problem solving, collaboration, and self-management.
- **Challenging Problem or Question** - The project is framed by a meaningful problem to solve or a question to answer, at the appropriate level of challenge.
- **Sustained Inquiry** - Students engage in a rigorous, extended process of asking questions, finding resources, and applying information.
- **Authenticity** - The project features real-world context, tasks and tools, quality standards, or impact – or speaks to students' personal concerns, interests, and issues in their lives.
- **Student Voice & Choice** - Students make some decisions about the project, including how they work and what they create.
- **Reflection** - Students and teachers reflect on learning, the effectiveness of their inquiry and project activities, the quality of student work, obstacles and how to overcome them.
- **Critique & Revision** - Students give, receive, and use feedback to improve their process and products.
- **Public Product** - Students make their project work public by explaining, displaying and/or presenting it to people beyond the classroom.

Launch the Project

Event Entry

- ▶ Catches the interest
- ▶ Form of video, lively discussion, compelling scenario, guest speaker

Example Entry Events–
Ok Go Music Video
Honda – The Cog

Driving Question

- ▶ Open-ended
- ▶ Interesting
- ▶ Presents a challenge
- ▶ Drives exploration

What is the best machine design to move an object?

How can I create a machine to make an everyday task easier?

Build Knowledge, Understanding, and Skill to Answer the DQ



4th Grade Science Standards

S4P3. Students will demonstrate the relationship between the application of a force and the resulting change in position and motion on an object.

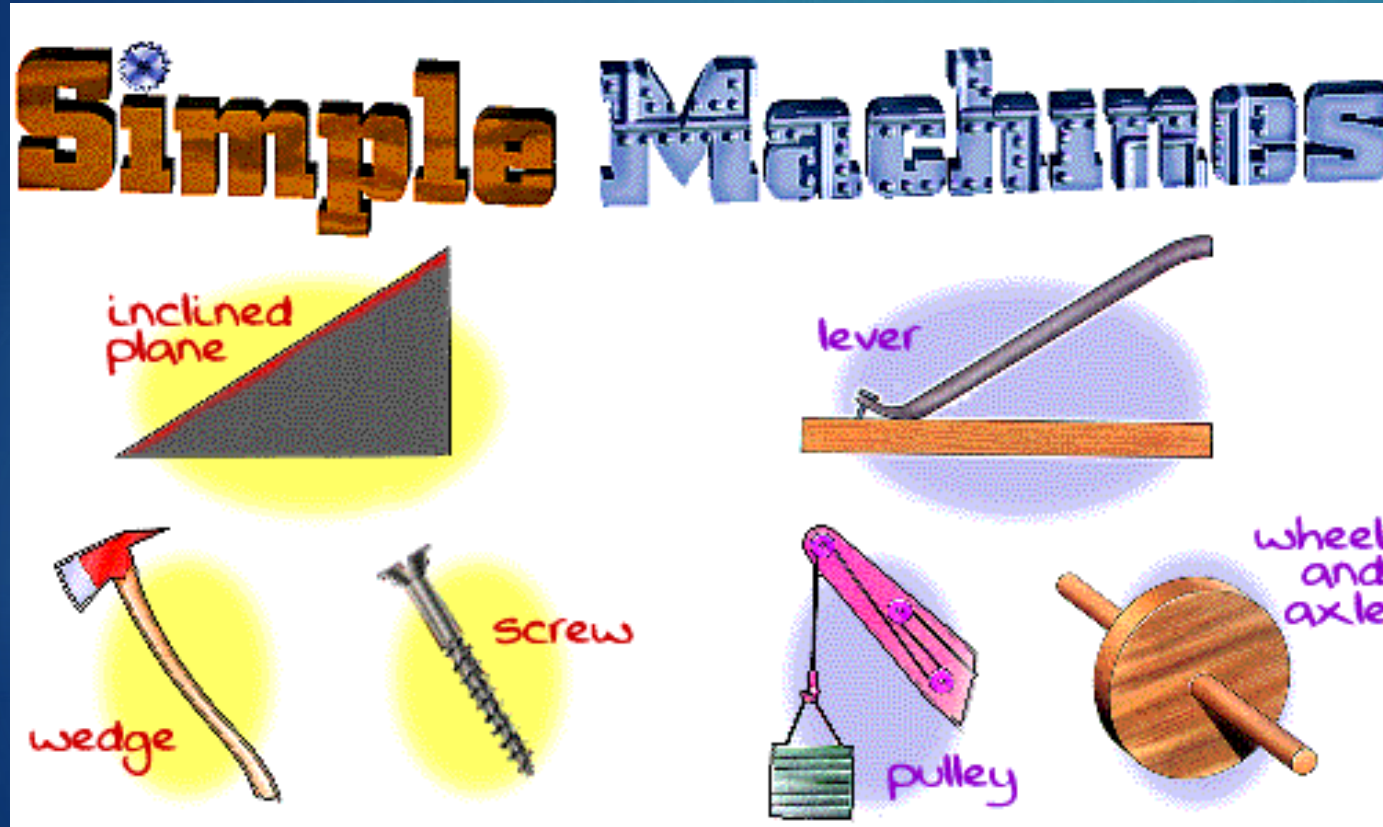
- ▶ a. Identify simple machines and explain their uses (lever, pulley, wedge, inclined plane, screw, wheel and axle).
- ▶ b. Using different size objects, observe how force affects speed and motion.
- ▶ c. Explain what happens to the speed or direction of an object when a greater force than the initial one is applied.
- ▶ d. Demonstrate the effect of gravitational force on the motion of an object.



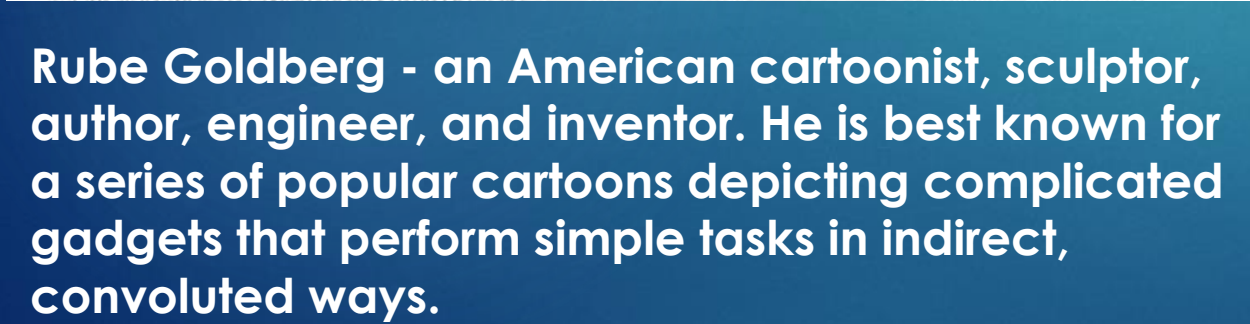
Content Connections

- ▶ Math
- ▶ Persuasive Writing
- ▶ History – Inventions
- ▶ Economics
- ▶ Cause & Effect

Build Knowledge, Understanding, and Skill to Answer the DQ



100



Real-Life/Technology Integration

Bring Rube into the Classroom!

Schedule a Skype lesson with one of our Rube Goldberg experts. Choose a lesson:



The Art of Rube Goldberg: The Book, The Cartoonist, The Man – with Jennifer George

Talk with Jennifer George, Rube's Granddaughter and author of the best-selling book, *The Art of Rube Goldberg*. Jennifer discusses her grandfather's cartoons and little-known facts about the man she knew as Papa Rube. A great way to introduce Rube Goldberg to the classroom when studying STEM and STEAM curricula.

To Skype with Jennifer, please email janine@rubegoldberg.com with your available dates and times.



RUBE WORKS: THE OFFICIAL RUBE GOLDBERG INVENTION GAME

Develop and Revise Products to answer the DQ

Voice and Choice

- ▶ Given choice of what type of product
- ▶ Process of developing their solution
- ▶ How time is used
- ▶ Factor in age level and PBL experience

Critique and Revision

- ▶ Continuously GIVE and RECEIVE feedback on quality of work
- ▶ Involves revisions
- ▶ Involves additional inquiry

21st Century Competencies

- ▶ Problem Solving
- ▶ Critical Thinking
- ▶ Collaboration & Communication
- ▶ Creativity/Innovation



Present Products that Answer DQ

Public Audience

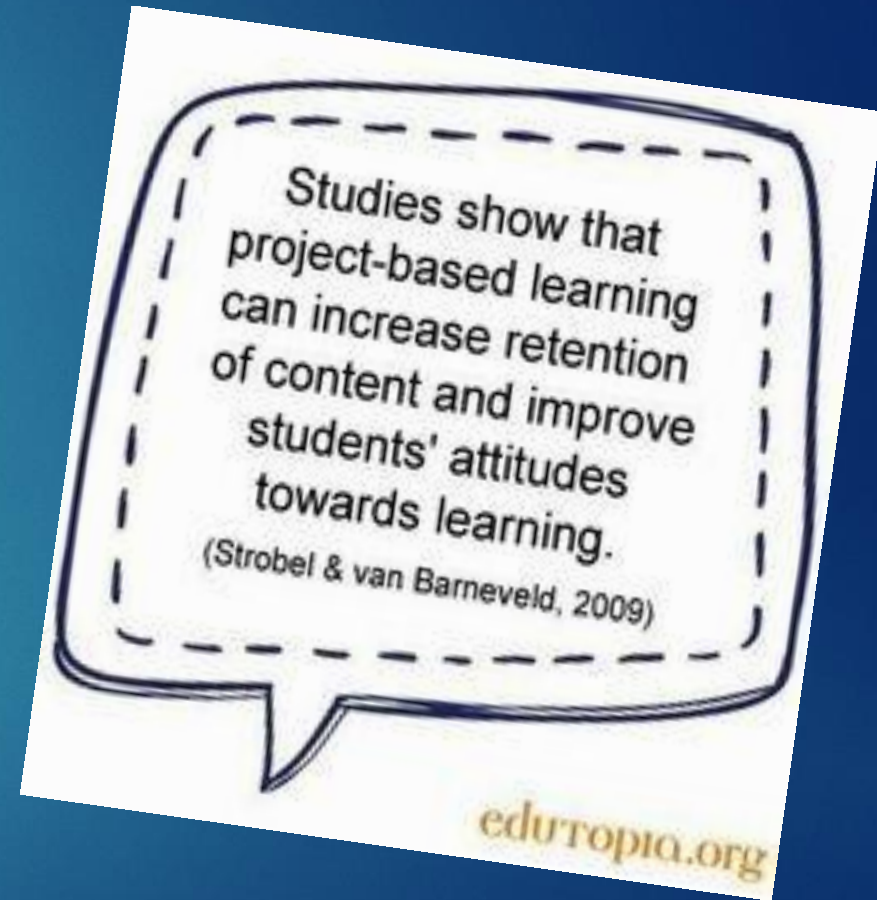
- ▶ Showcase products beyond the classroom
- ▶ Parents, peers, community members
- ▶ Motivation to create high-quality products

Example: Plant Quencher

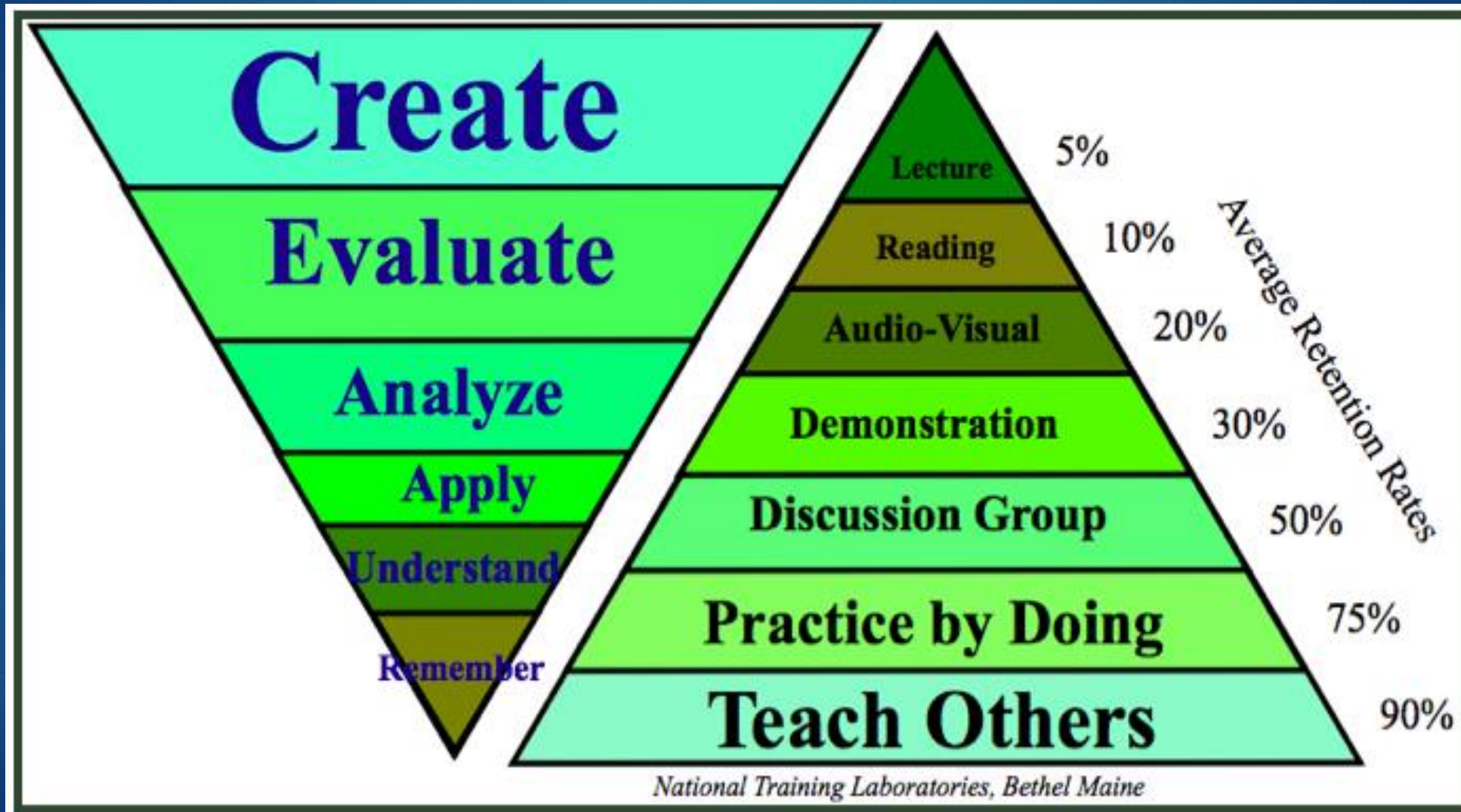


Why Project Based Learning?

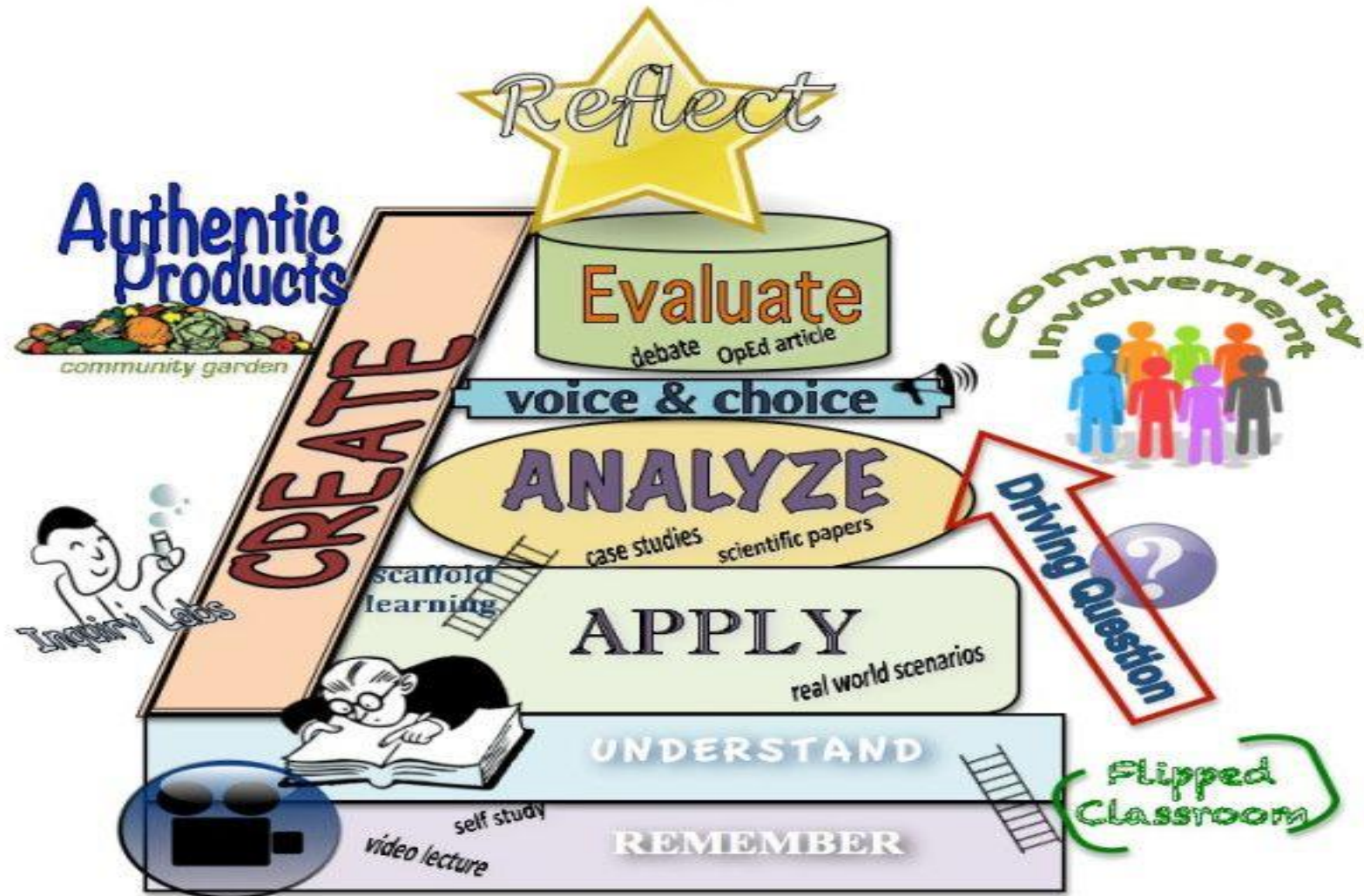
- Makes school more engaging for students
- Improves Learning
- Builds success skills for college, career, and life
- Helps address standards
- Provides opportunities for students to use technology
- Makes teaching more enjoyable
- Connects students and schools with communities and the real world



Why PBL?



PBL, The Flip, & Bloom's



How does PBL align with Creek View goals?

Final 9-28-2015



STRATEGIC PLAN SY 2015/16 – SY 2017/18

Long-Term Outcomes

#1 Students will demonstrate an increased use of **Critical Thinking Skills** across all content areas

#2 Integration of **Technology Instruction** by staff and students in all subject areas

#3 Increase **Academic Achievement** in the lowest 25% of students in all content areas

Focus Area #1

HOTS=
Higher Order Thinking Skills
Increase HOTS across all content areas.

Short-Term Goals

Increase teacher knowledge and use of HOTS strategies.

Expand teacher knowledge and use of PBL in order to increase student engagement in real world experiences.

Students will demonstrate an increase in DOK categories in assessments and projects.

Improve student accountability and responsibility through academic choices.

Strategic Initiatives

- Provide professional development for the implementation of Critical Thinking techniques, Project Based Learning and Technology Integration.
- Implement a plan to improve student ownership through student incorporated goal setting & conferences.
- Develop consistent school wide professional learning communities for horizontal teams, vertical teams and special areas to create interdisciplinary projects and common assessments.

Focus Area #2

Instructional Technology

Integration of Instructional Technology by the staff and students in all subject areas

Short-Term Goals

Increase the number of staff development and collaboration opportunities in Technology Integration.

Increase the application of technology to enhance learning.

Increase stakeholder proficiency and engagement with technology.

Strategic Initiatives

- Integrate technology into our school curriculum and lesson plans.
- Launch and utilize a school central site for Technology information and communication.
- Increase opportunities for stakeholders to become proficient in utilizing technology.
- Develop and implement a plan for educating stakeholders on Technology.

Focus Area #3

Instructional Strategies

Utilizing strategies and activities to increase student achievement

Short-Term Goals

Reduce the number of students reading below grade level.

Improve students' computation and problem solving skills.

Increase teachers' use of data to drive differentiated instruction and to plan and adjust instruction.

Increase teacher proficiency in writing instruction.

Strategic Initiatives

- Implement literacy strategies that will allow students to read, write and receive feedback that enhances learning.
- Implement programs designed to close achievement gaps and accelerate for personalize learning.
- Integrate and utilize technology software tools for individualized learning in comprehension, fluency and computation.

Buck Institute for Education

PBL 101 3-Day Workshop

July 27-29, 2016

PROJECT TITLE: Invention Convention! ✓
Grade 3RD

PROJECT IDEA Students will create inventions that will ~~solve~~ solve real world problems. Inventors will display their products at a convention to launch their business ideas.

DQ: How do inventions solve real world problems?

CONTENT (SS) SS.3.E.1 Productive resources
SS.3.E.2 Goods and services
SS.3.E.3 Interdependence and trade
SS.3.E.4 Cost and benefits

Special Area Science Included (ELA) ELA.3.W.1 Opinion/Persuasive Writing
(MATH) M.3.OA.8 Two-Step Word Problems

Major Products- Inventions, Persuasive Writing, Business Logos, Advertisement, Single Presentation.

Making Students will have an Invention Convention to display their products.



Ready, set, WEATHER!

First Grade

Project Idea: Students will explore weather and weather patterns. They will learn to use different kinds of weather tools. With this knowledge they will create public service announcements for severe weather procedures.

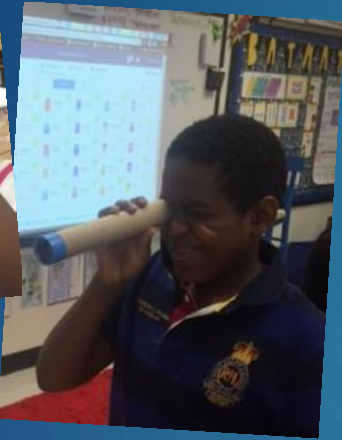
DQ: How does weather impact us? As meteorologists, how can we prepare others for different kinds of weather?

Content: (Science) Observe, measure, and communicate weather data. S1.E1, S1.E2 (Speaking and listening) Collaborative conversations and presentation. SE.15.L.1 (reading) Reading informational texts. SE.1.R.11-SE.1.R.10 (math) Comparing numbers N81.3

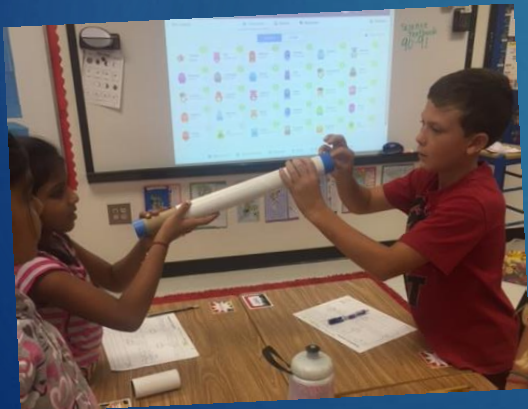
Making a Public Product: Students will share public service announcements with community members and family.

4th Grade PBL Unit: The Final Frontier

Driving Question: How can we as astronomers, create a visual journey through the stars?



Constellation Myths



Building Telescopes

Constellation
Music
Compositions



YOU MUST INCLUDE

-Title (1 pt.)

-At least 4 vocabulary words (underline and highlight) (12 pts.)

| | | | | | | |
|--------|---------|-------|--------------|-------|---------------|----------|
| Rotate | Revolve | Moon | Solar system | Comet | Sun | Galaxy |
| Axis | Orbit | Phase | Planet | Star | Constellation | Universe |

- 6-10 complete sentences (18 pts.)

- 5 or more facts (10 pts.)

- Attach your graphic organizer/planning page (4pts.)

Total points ____/45

Writing Connection

Kindergarten PBL Unit: Our Town

Driving Question: How do community members help me?

Guest Speakers

- Doctor
- Firefighter
- Vet
- Baker



Community Helper Day



Green Screen Videos



1st Semester Units

| Grade Level | Unit Title |
|-------------|------------------------------|
| K | Our Town |
| 1 | Ready, Set, Weather |
| 2 | Georgia's Heroes |
| 3 | Invention Convention |
| 4 | The Final Frontier |
| 5 | Shake, Rattle, and Roll |
| Tag | Inspiring Inventors |
| ESOL | What's new for you? |
| Specials | Connection with Grade Levels |

MUSIC – (4th Grade)
Compose music to
Constellation Stories

ART – (1st Grade)
Students create a
mixed media
landscape depicting
a weather event

PE – (3rd Grade)
“Show me the
Money” Game

PBL 2nd Semester

- ▶ RFF Days – Grade Levels plan for units
- ▶ 2nd Unit
- ▶ PBL Night





Thank you for attending CVES
Coffee Chats and learning about
Project Based Learning!

www.cvespbl.weebly.com