MYSTERY BAG CHALLENGE

• Pair-up in teams of 3-4 people
• Pick up a blue mystery bag for each team
• Using only the contents inside the bag, build the tallest structure you can
7th Grade Career Tech Exploration
Plan for Today

• 7G-CTE – How & Why We Started
• Project Evolution & Impact
• Replication Advice
• Q & A
What is 7G-CTE?

Click here if video does not play.
How and why we started
System Framework
Career Learning
2014-15

Career Awareness
Outdoor School

Career Exploration
“CTE” Programs of Study & “cte” classes

Career Preparation

Career Learning Experiences
What could we do at the middle grade level for all 7th graders (3,500 students)?
Evolution to 7G-CTE

• School Board directive to provide hands-on career learning opportunities for all 7th graders (3,500 students)

• Get buy-in from senior leadership
  • Took board members and senior leadership to a day of “making” at ADX

• Explored provider opportunities

• Researched logistics (buses, sub costs, nutrition services, IT)

• Discussed alignment to district CTE programs and Oregon Career Learning Standards

• Developed a 1-year budget

• Board approval for funding
Making it Happen

• Hire a full-time program coordinator

• Develop an RFP to identify providers

• Identify space

• Contract with Project and Space providers

• Develop pre/post activity curriculum for schools

• Coordinate logistics (buses, lunches, subs, volunteers)

• Identify and purchase materials, supplies, computers etc.

• Develop marketing materials

• Collaborate with schools to identify optimal dates

• Schedule providers and spaces to align to school interests
Scheduling

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Making it Happen

• Pre/post activities curriculum
  • Mystery Bag Challenge
  • Reflection Scrapbook
• Teacher packet
• Evaluation forms/sites for students, teachers, providers
• Safety protocols
• Strategies for working with various student populations
• Materials to introduce CTE programs at cluster high schools & Benson Tech
• Additional exploration options
7G-CTE Activities
Mystery Bag Challenge

Teams of 2-3 students build and test a structure using everyday common materials with a goal of reimagining the materials into new purposes.

Contents of each bag:
- 30 – 3x5 index cards
- 10 small paperclips
- 5 large paperclips
- 2 medium binder clips
- 3 small binder clips
- 1 sheet neon ½” dot
Students learned how to design, weld and grind a metal lamp to take home.

“We never get the chance to use power tools and it makes me feel powerful”

7th grade female student
Hedron Makerspace
Students learned how to use a vinyl cutter, 3D-printer, and laser printers to design name tags, logos, and headphone holders.
ImpactNW
Students have a choice of making a live action or stop motion animation video
Oregon Museum of Science & Industry

Students made a Rube Goldberg machine in a museum display case using hand and power tool, soldering irons, glue guns and LED lights
Students design and build a three-string guitar using scroll saws, band saws, drill presses and nail guns

“I like creating things, it makes me feel powerful”

7th grade student
The ReBuilding Center
24 Knots

Students each build a Tamiya tiger robot and take on engineering design challenges based on Next Generation Science Standards.
Young Audiences

Students explore mechanical engineering and woodworking through designing and building an “automaton” – a mechanical wooden sculpture that suggests a story through motion.
To Every Kid – Rescue Bot

Students build and customize their own wired remote controlled robot. They test their skill in either an obstacle course or enter the ring and battle with others.
To Every Kid – Audio Architect

Students build their own music making machine. They can use their body to make different sounds and experiment with electronics to change the sound the machine makes.
Pixel Arts

Students use Scratch, Pixlr, and Twine and each work on a PPS Chromebook to create a video game, and incorporate design and sound.
After 7G-CTE

Reflection Scrapbook

Hung in the cafeteria for sharing with all students
After 7G-CTE

Introduce High School CTE Programs
After 7G-CTE...

Student thank-you notes
Lessons Learned

• Mix of low – high tech providers
• Continuous Improvement – driven by teacher and student feedback
• Consultative approach to supporting providers
• A variety of rental spaces can work!
• Majority of students express a preference for a provider they’d like to work with – this results in higher levels of engagement
• High-impact corporate partners – Daimler Trucks North America
• Pre- and Post-Activities aligned to Career Related Learning Standards (communication, teamwork, problem solving, and personal management)
Lessons Learned

• Students want to take home what they’ve made

• Providers who understand student-driven hands-on learning can be hard to find

• Providers have a variety of background and experiences
  • Debrief and collaborate for continuous improvement

• Ensure students have the opportunity to develop design thinking skills, follow their curiosity and engage in self-directed problem solving
Costs to run 7G-CTE – Approximately $300K

• Contract with
  • 7G-CTE Providers
  • Spaces
• Substitute teachers
• Extended hours for teacher planning
• Transportation – school buses
• Lunches (as needed)
• 2 Chromebook Carts
• Mystery Bag Challenge parts
• Program Coordination
System Framework
Career Readiness

Career Awareness

Career Tech + Prep for HS

Career Tech Exploration

Outdoor School

Career Exploration

Career Preparation

College & Career Exploration Class

“CTE” Programs of Study & “kte” classes

Career Learning Experiences
Q & A
For More Information:

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