

Energy, Construction & Utilities

September 18, 2019





ENERGY, CONSTRUCTION, & UTILITIES (ECU) REGIONAL ADVISORY COMMUNITY

Carpenters Training Center Ontario 3250 E. Shelby Street, Ontario, CA 91764

Wednesday, September 18, 2018 | 8:15 am – 2:00 pm

8:15 am	Registration, Networking, Light Continental		
8:30 am	Welcome & Introductions: Lori Benson, Project Manager; Jason Cordova, Inland Empire Economic Development (IEEP); Jon Caffery, Regional Director Employer Engagement, ECU; Carpenters Training Center Welcome		
8:45 am	Tour of Carpenters Training Center Ontario		
10:00 am	Labor Market Presentation, Michael Goss, Center of Excellence, Director, Inland Empire		
10:30 am	Industry Skills Panel Moderator: Jason Cordova, IEEP, Vice President		
11:30 am	Panel Q & A - Ask the Experts		
12:00 pm	Buffet Lunch & Community College Program Updates		
12:45	Riv. Co. Office of Education (RCOE) Curriculum Review, John Bruestle, CTE Instructional Specialist		
1:00 pm	Pathway Building Breakout Groups by Community Colleges		
1:45 pm	Group Report-outs, as time permits		
2:00 pm	Closing of Main Advisory Session		
2 - 3 pm	BESP Consortium Meeting, Boardroom, Rebecca Elmore, Interim Director, CTE Projects/BESP RCOE Curriculum Review, See John Bruestle		

Thank you for attending. Please contact us with any questions.



Follow Us on Twitter:

Inland Empire Economic Partnership @IEEP_

Inland Empire/Desert Region Consortium @cte_iedrc

Advanced Manufacturing

ICT/Digital Media @DSNsmata1

Energy/Construction/utilities

@DSN_Alan

@jon_caffery

Business & Entrepreneurship

Healthcare

@krashkip

@InlandEmpireHealthDSN

For post-meeting communication, please join this LinkedIn Group: https://www.linkedin.com/groups/13612195

First Name	Last Name	Email	What Sector of ECU do you represent?
Anthony	Ababat	ababat@gmail.com	Construction
Charlotte	Allen	charlotte.allen@vvc.edu	Energy Construction Utilities
Jaime	Alonso	jalonso@gridalternatives.org	Energy Construction
David	Aman	david_aman@cry-rop.org	Other
Meriel	Anderson-McDade	meriel.anderson-mcdade@rcc.edu	Other
LAYNE	ARTHUR	larthur@balfourbeattyus.com	Construction
Ryan	Augustine	augurm@fusd.net	Construction
Beth	Bentley	babentley@collegeofthedesert.edu	Other
Shehzad	Bhojani	shehzad.bhojani@sbcss.net	Other
Jace	Biendara	jace.biendara@hesperiausd.org	Other
Bert	Bitanga	dbitanga@collegeofthedesert.edu	Construction Other
George	Brown	gjbrown@collegeofthedesert.edu	Energy Construction
Jennifer	Brown	jenniferbrown@myverticalattitude.com	Other
John	Bruestle	jbruestle@rcoe.us	Construction
Kerrie	Bryan	kbryan@eastvalley.org	Utilities
Prudence	Chase	pchase@collegeofthedesert.edu	Other
Sara	Crowder	scrowder@rcoe.us	Construction
Dalilah	Davaloz	ddavaloz@sbccd.cc.ca.org	Other
Rebecca	Elmore	reelmore@collegeofthedesert.edu	Other
Steven	Faris	sfaris@compton.edu	Energy
Linnie	Frank-Bailey	Linnie.Bailey@cnusd.k12.ca.us	Other
Hernan	Gallo-Cornejo	hernangallo@seiinc.org	Other
John	Garcia	jgarcia4@socalgas.com	Utilities
Ramiro	Garcia-Galicia	ray@galiciacommissioning.com	Energy
Ryan	Garrison	garrra@fusd.net	Construction
Glen	Graham	glen.graham@norcocollege.edu	Other
Raul	Guedea	lbenson@sbccd.cc.ca.us	Construction
Enrique	Gutierrez	egutierrez1@psusd.us	Construction Other
Tarif	Halabi	thalabi@valleycollege.edu	Energy
James	Hattar	james_hattar@cry-rop.org	Other
Jenny	Hughes	jhughes@msjc.edu	Other
Bryan	Lee	blee@calstart.org	Energy
Maria	Lopez	maria.lopez@paloverde.edu	Other
Christina	Ly	cly@goodwillsocal.org	Other
Lucia	Macias	lucia.macias@hesperiausd.org	Other
Dena	Mangini	dena.mangini@chaffey.edu	Other
Albert	Maniaol	amaniaol@sbccd.cc.ca.us	Other
Jeff	McCoy	jemccoy@rusd.k12.ca.us	Construction
Larry	McLaughlin	mclaughlinlarry96@gmail.com	Energy Construction Utilities

Mike Medina michael.medina@rcc.edu Construction Myrna Molina myrna_molina@cry-rop.org Other Long Nguyen long.nguyen@sce.com Utilities Bruce Noble bruce.noble@riohondo.edu Energy William O'Neil william.oneil@chaffey.edu Other Frank Pearson Frank.Pearson@rcc.edu Energy

rpratt@psusd.us Matthew Randall Mrandall@rcoe.us Construction

Markazan Romero markazan.romero@chaffey.edu Other Victoria victoria.santana@alvordschools.org Other Santana

Pratt

Rory

Sauer tsauer@sbccd.cc.ca.us Energy | Construction | Utilities Tracy

Other

Stephanie Schrum stephanie.schrum@sbcss.net Other

Walter Scott scrowder@rcoe.us Construction

Shiflett craig.shiflett@alvordschools.org Other Craig Soto Other Jackie jsoto@sbccd.cc.ca.us

Todd todd@neffcon.com Construction Stragier Manuel Tecson manuel.tecson@cjuhsd.net Construction Philip **Thomas** philip.thomas@cjuhsd.net Construction

Other Vanessa **Thomas** vanessa.thomas@chaffey.edu Dr. Jim Thomas jim.thomas@norcocollege.edu Other Samuel Valle svalle@sbccd.cc.ca.us Other Jesus Vela jesus.vela@rccd.edu Other Gloria Viloria gviloria@collegeofthedesert.edu Other Andrew Wahe awahe@valverde.edu Other

TOM WARNER twarner@rcoe.us Construction

Peggy Weber pweber@valleycollege.edu Other Crystal Whitley cwhitley@rcoe.us Other Nikki Utilities Williams nikki.williams@sce.com

Jon Caffery jcaffery@collegeofthedesert.edu

Susanne Mata smata@sbccd.cc.ca.us John Orta Jorta@ieep.com Annalisa Wurm Awurm@ieep.com Jason Cordova Jcordova@ieep.com Melisa Castro mcastro@ieep.com Jennifer Garcia Jgarcia@ieep.com

cwhitlinger@swcarpenters.org Charlene Whitlinger Construction **Jimmy** Elrod jelrod@swcarpenters.org Construction Mike LaBruno MLaBruno@swcarpenters.org Construction Jeff Scott Jscott@swcarpenters.org Construction

Michael Michael.Goss@chaffey.edu Center of Excellence Goss

September 18, 2019 SW Carpenters Training Center 3250 East Shelby Street | Ontario, CA 91764

For more information please contact:

Jon Caffery, Regional Director, Employer Engagement, ECU

jcaffery@collegeofthedesert.edu

Table of Contents

Background / Mission / Goal

Business Panelists Bios

Business Panel Q & A Minutes

Breakout Group Notes

Labor Market Statistics

Employability Skills Survey

Photos



- Background -

The Regional CTE Advisory Pilot Project is funded by the Inland Empire/Desert Region Consortium's Strong Workforce Program. This project answers growing interest and requests to provide a "regional advisory format", accessible to all community colleges, ROP's, and K-12's in our great, diverse region, while also meeting Perkins and other grant requirements. In partnering with CRY-ROP, a dynamic advisory format has been developed. In collaboration with Inland Empire Economic Partnership (IEEP), Regional CTE Advisory Communities are being established, with meetings facilitated throughout the Region. This format allows for a purposeful gathering of educators and industry advisors, sharing their knowledge and expertise on a regional basis, without over-taxing industry advisors with multiple meetings throughout the year.

- Mission -

The mission of this project is to promote student success and to innovate for jobs and To gather community the economy. stakeholders sparking innovative, invigorating conversation between educators and industry professionals. Educators discover the latest business and entrepreneurial trends, industry demands, employment skills needed. and training practices. Industry partners gain understanding regarding the importance of their expertise and advisement, in areas such as: updating curriculum, new coursework and desired certificates, equipment and programs needed in classrooms. Thus, benefitting community stakeholders, students, individuals, and businesses.

<u>- Goal – </u>

The overarching goal of this project is to enhance career education and to meet the demands of the economy and the labor market. To evaluate, strengthen, and revise curriculum to ensure alignment from education to employment. To prepare a highly-skilled workforce, meeting today's new and ever-changing industry needs. More students will possess valuable skills, earn meaningful certificates, and participate in internship opportunities, leading to living-wage employment in their chosen field of study.



Industry Advisors (Panelists)

Please Meet Our Esteemed Panel of Industry Experts:



John Garcia, Workforce Readiness Program Manager Southern California Gas Co.

John has a Masters' Degree in Psychology from California State University at Long Beach and has been involved in Workforce Development in some capacity for over 30 years. He has been with Southern California Gas Company for 16 years working in Human Resources. Prior to the Gas Company John was the Skills Training Manager at Goodwill Industries of Southern California running a variety of vocational training programs through their private postsecondary vocational school. He has a passion for education and matching individual skill sets with Industry needs.



Kerry Bryan, HR/Risk & Safety Manager East Valley Water District

East Valley Water District Human Resources and Risk & Safety Manager Kerrie Bryan embraces changes in the ever-evolving workforce to recruit and retain world-class District employees.

Establishing the District's Human Resources Department 7 years ago, Bryan took notice and responded to generational shifts in the labor force by developing programs that foster professional development across all

position levels, encourage employee engagement through bottom-up management, and recognize staff for going above and beyond their line of work.

By creating a purpose-driven organization that cultivates leadership, East Valley Water District has been awarded the Inland Empire Top Workplace Award by The Press Enterprise for the past four consecutive years. In 2016, The California Special Districts Association recognized the District with the Innovative Program/Project Award for its innovative succession planning efforts.

Kerrie Bryan is a human resources expert with over 15 years of experience in both the public and private sector. She has a bachelor's degree in Business Management with a minor in Human Resources Management from California State Polytechnic University, Pomona.



Jaime Alonso, Executive Director GRID Alternatives

Jaime is the Executive Director for GRID Alternatives, Inland Empire (Riverside, CA). GRID Alternatives is a non-profit organization that provides significant savings to low-income families, job training opportunities, and cleaner air through installation of solar systems on homes, multifamily residences, and mission-aligned commercial facilities. Prior to GRID, Jaime was the CEO of DP Strategies Group, a political consulting and marketing firm in Washington, D.C., and practiced law. He received his Juris Doctorate from Brooklyn Law School, and graduated from the University of California, Los Angeles with a bachelor's in political science. At GRID, Jaime oversees all construction, project management, outreach and workforce development staff.



Layne Arthur, LEED AP BD+C, Vice President, Business Unit Leader - Balfour Beatty

Layne is in his 20th year as Vice President with Balfour Beatty, managing the Inland Empire from their Riverside office. He has been in the construction industry for over 35 years after receiving bachelor degrees in Business Administration & Marketing from Anderson University in 1979. Mr. Arthur enjoys giving back to the community through numerous board positions during his career and currently serves on the Riverside County Workforce Development Board as Chair of the East Region Committee as well as on the Executive Committee and was recently announced as a new private sector member of the Board of Directors for the Community

College Facilities Coalition. Layne is a full-time desert residence in Rancho Mirage, CA with his wonderful wife Julie and their boxer, Brutus. They were fortunate to become grandparents in March 2019 with the birth of Emme to their son Shawn and his wife Trystan...so San Diego has become a frequent visit ever since!



Jimmy Elrod, Deputy Political Director Southwest Regional Council of Carpenters

Jimmy Elrod is the Deputy Political Director for the Southwest Regional Council of Carpenters. He has been a Union Carpenter for 17 years of which 14 were spent building bridges, water treatment facilities, power plants and much more. He proudly represents the roughly 55,000 highly skilled and professional union carpenters building the structures, big and small, within the communities of the Southwest.



Bryan Lee, Associate Project Manager CALSTART

Bryan is an Associate Project Manager at CALSTART, working on consulting projects that advance the clean transportation industry. He specializes in zero emission transit buses and electric and hydrogen infrastructure. Before joining CALSTART, Bryan worked at College of the Desert and started an internship for students in the Building and Energy Systems Professional program. Bryan is also an adjunct instructor at College of the Desert.



Raul Guedea, Apprenticeship Coordinator
Associated General Contractors Apprenticeship Trust

Raul has worked as an Apprenticeship Program Coordinator with the AGC since 2001. Prior to being in this position, Raul proudly served in the United States Marine Corps. AGC is firmly committed to increasing the number of skilled construction workers and producing our industry's future workforce by providing the highest level of training and education to registered apprentices.



Jeff Scott, Union Carpenter / Out-reach specialist

United Brotherhood of Carpenters & Joiners of America

Currently working with the UBC's Career Connections program as an out-reach specialist to build quality preapprenticeship programs for local school districts and community college districts in the southwest

Industry Panel Q&A

Regional Advisory – Energy, Construction, & Utilities – Minutes 09/18/19

Moderator: Annalisa Wurm, Inland Empire Economic Partnership

Question 1: What types of training, education, or community college credentials are desirable for entry-level positions in your field?

John Garcia: We need somebody who has basic tool use knowledge. We have had a lot of success training people. HVAC is something we are looking for. We need to teach people how to think. Troubleshooting is a big part of the job. We have to remember it's a customer service industry.

Jimmy Elrod: There seems to be a lack of vocational training now compared to the past. Many students are lacking basic construction skills. Soft skills are major. Having a passion for what you do and being coachable. Be willing to go that extra mile. Be prepared. Show up ready and on time.

Layne Arthur: There isn't any specific training we need. We are working with many different trades. If they are willing to learn and work hard there is a good chance we would take them on. There is a lot of work out there and not a lot of heartbeats.

Kerrie Bryan: Operations side and Water treatment side. For both we require a high school diploma or above. The application process is very competitive. A certification in Microsoft suite is a major plus.

Jeff Scott: Work ethic and soft skills are a must. Having some fundamental skills and knowledge of what the position is asking of them. Training in digital blueprint reading and document training through the community college would be helpful.

Jaime Alonso: There are three things to consider. Construction, design, and marketing/sales. The ability to work in extreme heat is a plus. Entry level wise we don't have major requirements. On the design side we would want high school diploma or above. Sales/ Marketing same thing.

Raul Guedea: Realistically we are looking for high school graduates. We provide the training they will need. We welcome those wanting to join our apprenticeship program.

Bryan Lee: There has been a big shift in the transportation industry into natural gas and energy. People who would do well in this field will need skills in alternative fuels, electronics, batteries and welding. People with diesel mechanics can also be easily reskilled into these cleaner fuel sources.

Question 2: Please expand on industry-recognized certification: what third-party credentials are valued?

John Garcia: HVAC is what we are really looking for. Anything beyond that isn't really necessary.

Jimmy Elrod: Any certificate is valued, previous carpenters training

Layne Arthur: 80-85% of our employees are on a job site. The ultimate candidate would have a construction/management degree, pre-apprenticeship, OSHA training. Veterans are a good fit as well.

Kerrie Bryan: One year of operator training (hours).

Jeff Scott: OSHA training, any first-aid or CPR training. They don't need a certification from a college but it would give them a leg up.

Jaime Alonso: OSHA 10 training, North American Board Certified Energy Practitioners.

Raul Guedea: MITC, OSHA 10, CPR, the more knowledge and experience you have the better.

Bryan Lee: Transit Agency/ASE Certificate, combined with electrician license, EPA 608 and 609, High Voltage and Hazardous Waste.

Question 3: What does your hiring process look like?

John Garcia: Applicants are going to need a lot of patience. It can be a lengthy process. Have to be able to do basic math. CALGAS.com is where to apply. There are three tests that you have to pass as well. They have to be prepared. Drug free environment with drug screens.

Layne Arthur: Communication is number one. The initial interview is the first impression. You need to have soft skills. We want go-getters with positive attitudes.

Kerrie Bryan: We have an online application portal. Always submit a cover letter and resume. The ability to communicate effectively face to face with others. Have a positive attitude. First impressions are key.

Question 4: What interpersonal skills are most important in your industry?

Bryan Lee: Adaptability, it's a quick changing industry. You must be willing to continue learning.

Question 5: What foundational/technical skills are necessary for entry level positions within your industry?

John Garcia: Need to be willing to work outdoors in most conditions. Its 24 hours and all weather conditions

Kerrie Bryan: They need to have had at least a part time job. You need to be able to know how to report to someone and how to work in a team. Multitasking is a must.

Jeff Scott: Basic mode of transportation is a must. Need to have a driver's license and insurance. Have a plan to get where you want to be and know the steps you need to get there. You have to come prepared to work. Tool familiarity is a must. Must recertify every 6 months (free).

Jaime Alonso: Safe use of power tools, ability to lift 50 lbs. Clean driving record. Knowledge of electrical codes

Raul Guedea: Foundational skills. It is hard work. Know what you're getting into.

Bryan Lee: Electrical skills are major. You need to be able to read blueprints and wiring schematics. Hands on experience with battery assembly. Continued learning is a must.

<u>Question 6</u>: What skills/ knowledge is being required of new employees to address the latest trends in technology, equipment, regulations, laws, etc.? <u>Question 7</u>: What skills have become obsolete in your industry due to changes in technology, equipment, regulations, laws, etc.?

Jimmy Elrod: Need to be able to fall back on the old technologies. You need to adapt and evolve. VR technology is also starting to show up in the field.

Welding/VR Welder, sketch up, Bluebeam is a great tool,

Layne Arthur: Technological skills are paramount and a minimum requirement these days. Everything is now on an I-pad; Digital Docs; Bluebeam.

Raul Guedea: Drone technology is being used quite a bit now, no more walking the job sight.

Jeff Scott: Old safety equipment is being phased out. Safety is always evolving: new harnesses, dust containment, power tools with their own containment systems, phase out old table saws.

Question 8: What new technology and/or equipment should we be incorporating into our courses?

Bryan Lee: There is a moving trend towards electrification for transportation. 2029 all busses will be 0 emission

(Question 9/10 no time)

Question 11: Does your company offer internships? If so, what are the technical/ non-technical skills needed? Also, what type of work do interns participate in?

John Garcia: We offer internships in our professional positions such as IT and management. Entry level we don't really offer internships.

Layne Arthur: We are always looking for interns.

Kerrie Bryan: We have a volunteer program that works like an intern program. Once we move into our waste water treatment program we will be implementing internships.

Jaime Alonso: Year-long internship program that last from September to September each year.

Raul Guedea: We offer apprenticeship programs. They are paid and its free education and experience.

Panelist Q & A:

John Garcia: The future is renewable natural gas, but the jobs themselves will not change that much.

How hard is it to obtain a waste water certification?

Kerri Bryan: They have to have a full year of internship or operating hours. They would need to have experience to obtain those certifications

Raul Guedea: In public works there is a big push for certified journeyman in California.

Audience questions-

Is there a trend to have electrical wires? Some areas it may work, but not in California. Moving to high voltage overhead charging.

Obtaining certification, how difficult is it for a water treatment facility operators and distribution operators? One year of training.

What's the highest inverter size in the field? Trend is moving to remoted inverters, troubleshooting done by monitoring remotely.

What tools should we be introducing to classrooms? And what to avoid? Milwaukee, Bosch, DeWalt, whoever is most economical should be used. Table saws, circuits, trends are shaping into retractable for safety purposes. Experiencing the onsite tour laser tape measurers were displayed. Is this being enforced? We don't want to depend on the new technology for tape measurers. We heavily rely on a traditional tape measurer.

Operational engineers using excavators, etc. within the apprenticeship programs.

Breakout Group Notes

Regional CTE Advisory Community – Energy, Construction & Utilities (ECU)

Group Questions for ECU Pathway Development

San Bernardino Valley College and Victor Valley College

Question 1:

Educators, what programs are being offered on your campus?

- San Bernardino Valley College has an accelerated electronic tech program that specializes in automation, mechatronics, SCADA and general electrician skills, in addition to Welding Technology.
- Victor Valley College has a solar program.

Question 2:

Educators, what technology and programs are being used in the classroom?

 San Bernardino Valley College has computer simulation software, SCADA trainers, mechatronics and automation process control. They also have HVAC, Panasonic solar panels, optimizers and battery chargers.

Question 3:

Educators, what new courses/technology do you see in your departments in the next few years?

• San Bernardino Valley College stated that there are constant updates to software and technologies. Everything is going by way of automation.

Industry, what new technology do you see coming? Recommendations for the classroom?

• No one from industry were present that this breakout session.

Question 4:

What advice can be given to ROP and high school teachers that would help them better prepare students for transition to community college?

- Math for trades and overall general math, use of technical calculators and converting units.
- Workforce readiness and soft skills are also important for students.

What advice can be given to community college faculty that would help them better prepare students for transition to work/career?

Question 5:

Industry: What are some of the biggest skills gaps that you have identified with the incoming students population?

• No one from industry were present that this breakout session.

Other questions and important conversation as needed.

- Not many high schools and industry representatives were present at the breakout sessions.
- The entire table were in agreement that the breakout sessions should be conducted by industry sector and not by community college.
- Tour of the facility should have been done after the breakout session and not in the beginning causing most of the people to leave the advisory after lunch.

Group Questions for ECU Pathway Development

Palo Verde College

Question 1:

Educators, what programs are being offered on your campus?

- Palo Verde College: Building Technology program provides students with a basic background in the management of construction projects, in addition to Welding Technology.
- Riverside City College: Welding Tech Program with certificates on Pipe Welding, TIG Welding, Stick Welding(SMAW) and Wire Welding (FCAQ, GMAW).
- College of the Desert: Building & Energy Systems Professional program.

Question 2:

Educators, what technology and programs are being used in the classroom?

• Palo Verde College: 1 classroom/shop combo, 1 instructor teaching all carpentry, millwork, electrical, building trades, blueprint,...

Industry, Partners, what technology and programs are being used in your industry?

• No industry partners at breakout.

Question 3:

Educators, what new courses/technology do you see in your departments in the next few years?

- Palo Verde College: new computer numerical controlled router (CNC) purchased
- Palo Verde College: Develop carpentry/cabinetry certificate

Industry, what new courses/technology do you see coming? Recommendations for the classroom?

• No industry partners at breakout.

Question 4:

What advice can be given to ROP and high school teachers that would help them better prepare students for transition to community college?

 Develop soft skills, strengthen communication skills and introduce professional communication skills.

Regional CTE Advisory Community – Energy, Construction & Utilities

Group Questions for ECU Pathway Development Chaffey College

What technology are you currently using?

- PLC
- Programmable Controller
- Sketch-up
- Videos related to the subject and soft skills
- Electrical Circuits

What advice would you give to ROP and high school teachers that would help them better prepare students for transition to community college?

- Prepare students for the industry environment and what the jobs entail.
- Email etiquette
- How to write a proper email
- How to write a cover letter
- Communication skills
- Materials handling
- Basic blueprints
- Leadership skills
- Industrial electrical side that leads to mechatronics and networking
- Project-based building

What can colleges do for High School Students?

• Present to students on the pathways to Chaffey.

Trends:

Micro-grids to ensure service during power outages

What programs are being offered on your campus?

High School:

- Building and Construction
- NCCER
- OSHA 10 Certification

Chaffey:

- Industrial Mechanic Certificates
- Credit and non-credit courses
- HVAC
- Industrial Maintenance
- Welding
- AS degree in mechatronics
- Basic blueprint
- Materials handling

What technology are you currently using?

- PLC
- Programmable Controller
- Sketch-up
- Videos related to the subject and soft skills
- Electrical Circuits
- Industrial electrical side that leads to mechatronics and networking
- Robotics

What advice would you give to ROP and high school teachers that would help them better prepare students for transition to community college?

- Prepare students for the industry environment and what the jobs entail.
- Email etiquette
- How to write a proper email
- How to write a cover letter
- Communication skills
- Leadership skills
- Project-based building

What can colleges do for High School Students?

• Present to students on the pathways to Chaffey.

Trends:

• Micro-grids to ensure service during power outages

Recommended websites:

• Road trip Nation

Group Question for ECU Pathway Development

Breakout Group/Norco College

Question 1 & 2

Question #3

Electrician specialties: Don't have the labor to support those trainings, "automotive training" systems

• Trained outside of that area

Fuel cells: hydrogen fuel cells

- Bloom box YouTube video
- Hydrogen economy

Question #4

Main Skills (measurements and basics)

- Simple things that they take for granted
 - -unaware of: horizontal/clock-wise counter
 - -don't use calculators
 - -writing skills (coherent skills, penmanship)

- -eligible to read their own writing (Construction based class is not necessarily applicable)
- Skill sets being taught are different
- Academic skills somewhere else, construction is construction (#'s)
- Teaching fundamental math already, there is no time to teach writing
- No time to teach them the basic skills
 - -how to give them physical skills, no soft skills
- We need pathways with educators
 - -have math, science, and reading teachers with construction industry
- Teachers don't have time
- Teach math applications before
- Division between core classes
 - -don't facilitate those needs, 33% to college (pushed to college), not every kid will go
- Define college broadly
- Need to finish High School the go to
 - -military/navy
 - -internship (college option)
 - -something else
- Help broadening tie to knowledge of college

Skills Survey and Labor Market Data pdf files:



Photos

https://photos.app.goo.gl/UAcUGWyTNCpr5dNL9

