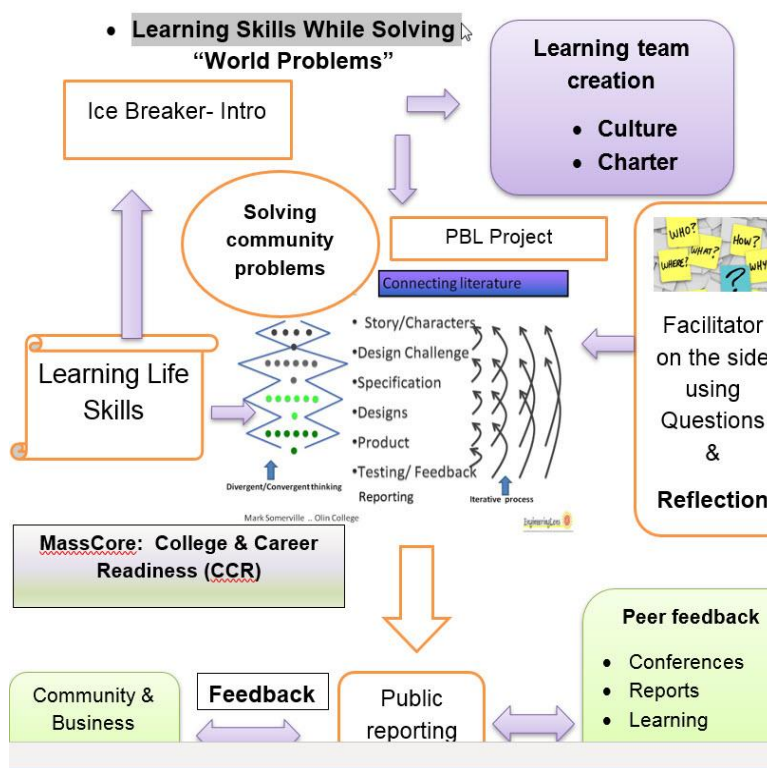




Pre-employment Learning Handbook



Uniqueness:

- Team culture
- Ownership mindset
- Engineering mindset
- Growth mindset
- Life-skills
- Holistic approach
- Process thinking
- Problem solving
- AI Understanding

Bill Wolfson

Project Academy Inc.

10/9/2019

Pre-employment Learning Handbook



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Title page: Pre-employment Learning Handbook



Why Engineering:

- Engineering is **ACADEMIC GLUE** – it binds complex math and science concepts to real-world experiences and leads to learning that sticks with students
- Engineering is **CREATIVITY** – it brings out the best ideas from the students
- Engineering is **GROUP WORK** –students learn to communicate and work together while they learn math and science
- Engineering is **EVERYWHERE** –students learn that engineers have designed, created or modified nearly everything they touch, wear, see and hear in their daily lives

1.1 Background:

Our pre-employment program is designed to give young adults, who dropped out of school or have graduated HS but have little career direction, the life skills and attitude training to become a successful part of the community. The program is designed to include the community and business partners to ensure success for the individual. Needs of the young adult will be assessed; such as transportation, family commitments, legal and others to make the training possible and successful.

We look for young adults that have:

- o a positive Attitude:
 - a good Aptitudes **for doing certain** kinds of things easily and quickly.

Our approach is to train young adults to be productive and great employees with skills that make them valuable in most service or industrial jobs.



Pre-employment Learning Handbook

These new employees have the life-skills that companies need to be successful in addition to the technical skills to do the job. The program is over a 16-week period and provides a holistic environment to the student.

1.2 Business Needs:

Businesses are reporting that a major need for their success are employees with life skills such as; interpersonal skills, communication skills, teamwork, critical thinking, decision making and problem solving. Our program intends to work with local community & businesses to ensure that we provide these skills in addition to a positive attitude and seeing problems as opportunities.

1.3 About us:

Project Academy is a 501 (C)3 non-profit corp. whose purpose is to serve the community by successfully preparing entry level people & high school students to be productive in the work environment, education & society organizations. Our students see themselves as owners of their own business with a positive attitude, caring for the customers with continuous improvement and looking to learn and get better at what they do.

1.4 Our beliefs(tenants).

1. People will change careers equally as jobs in their life-time.
2. Life-skills are transferable between careers/jobs
3. Think of yourself as in your own business. ... Your boss is your customer. Build your brand.
4. Problems are opportunities ... “the bigger the problem the bigger the opportunity”. Vinod Khosla
5. Use the engineering mind-set to focus on all the activities surrounding your work.
6. Most young adults have the capability and desire to do the right thing but need the correct environment to dream

1.5 Our Mission Statement: To have our students see the benefits of using life-skills and a team learning culture that successful connects with business and society organizations. For our employees, we will create a



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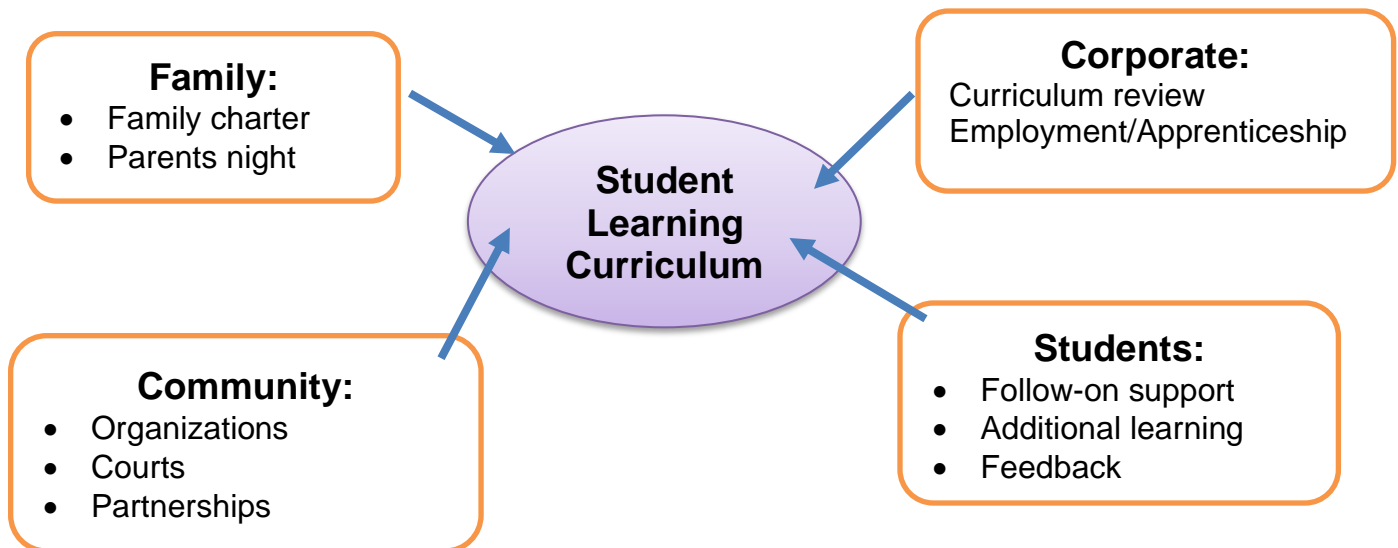
positive environment for their growth. Our purpose is to make our community a better place for us being there.

"I didn't value experience as much as character, creativity, and common sense, which I suppose was related to my having started Bridgewater two years out of school myself, and things out is more important than having specific knowledge of how to do something" ... Dalio, Ray. Principles: Life and Work my belief that having an ability to figure

Student take away (Outcomes):

- Acquire self-awareness and apply self-management skills to achieve personal well-being and effectiveness
- Act with integrity and make responsible decisions that uphold moral principles
- Acquire social awareness and apply interpersonal skills to build and maintain positive relationships based on mutual respect
- Be resilient and have the ability to turn challenges into opportunities
- Be an outstanding employee for the company and grow in opportunities

Holistic Approach: ...help create the dreams for our students



Pre-employment Learning Handbook

Training plan
Jobs ... tie in with companies
Logistics:
Tie in with court system
Family & community
Follow-up services
Life-long learning
Problems are opportunities
People involved/own their learning
Mentors, Tie into other organizations
Building your brand ... Your work identity

7-Da Vince principles ... The Seven Da Vincian Principles are:

Curiosita—An insatiably curious approach to life and an unrelenting quest for continuous learning.

Dimostrazione—A commitment to test knowledge through experience, persistence, and a willingness to learn from mistakes.

Sensazione—The continual refinement of the senses, especially sight, as the means to enliven experience.

Sfumato (literally "Going up in Smoke")—A willingness to embrace ambiguity, paradox, and uncertainty.

Arte/Scienza—The development of the balance between science and art, logic and imagination. "Whole-brain" thinking.

Corporalita—The cultivation of grace, ambidexterity, fitness, and poise.

Connessione—A recognition of and appreciation for the interconnectedness of all things and phenomena. **Systems thinking.**



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1.6 Benefits of Pre-Employment Training to the community:

- **Building a community and culture of a learning team:** Learn about and how to develop a learning culture that is like a sports team. How to handle disagreements and work together to solve a problem.

Area	Benefits
Society	Character traits, Problem solving, Design thinking, Soft-skills, Social & Emotions learning (SEL)
Citizenship	Thinking skills (creative and critical thinking, questioning, reflection), Values, Character development
Work	Process methods, Collaboration, Innovative thinking, Financial understanding
Lifelong learners	Excitement in learning, Risk taking, Feedback, Values

2.0 Responsibilities of the student

This is your handbook:

“Faber Est Suae Quisque Fortunae”

“Everyone is the maker of their destiny” 4th street school, Sydney, Australia

Your initial responsibility:

It is important for you to understand that you will build your own knowledge by using questions of why, how, what, when, & where

You will learn to think using creative questions as well as critical thinking question that will support you in your growth in a career or as well college. You will see that you need to become a lifelong learner to survive.

Commitment to each other:

In order to be successful, the organization; Project Academy, and the student must agree to following the training plan, time contracts and commitments of the plan, showing up and being prepared are critical for success both in this training as well as the work environment. Project academy will support the students outside needs of services such as transportation, legal, housing & food. These requirements will be learned



Pre-employment Learning Handbook

in the beginning interview process. Project Academy also commitments to provide on-going support after the student finds employment. High standards and expectations will be the norm for both parties. The students will commit to viewing this program with a long-term attitude and Grit to get it completed successfully.

2.1 Attendance:

Commitment for attendance is critical for success in this program. It is important to not missing classes during the 14 weeks. This is a skill that is very important in the work environment. Project Academy and your new employer needs to be able to count on your being there. ***"80 percent of success is just showing up" —Woody Allen***

Weekly feedback sessions:

Each week, the teams will discuss the past weeks learning and write down what went right or wrong. The teams will share their perspective with other teams and discuss their finding. Feedback will be shared with Project Academy to improve the program. The results shall be visually posted each week.

2.2 Project Academy's responsibility/culture:

A holistic approach will be used where students' strengths and needs are assessed; a learning environment using project based learning is established for learning college and career readiness skills (CCR) and finally a community structure that is available for on-going learning and support.

Project Academy will foster a working environment (Culture) that treats individuals as partners. It will establish a community of people who will work together for the common good of the team. Classroom atmosphere will balance trust, risk-taking, originality and respect. It will be an innovation-friendly environment that embraces fast-cycle sharing, supports risk taking, and celebrates learning from failure... establishing a protective environment. The approach of continuous improvement will be practiced throughout the program.

Project Academy's culture statement:

Key Word:	Description:
Expectations	We will have high expectations to achieve the best results for things we strive for. Our outlook will be to always make things better than what we found.



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Key Word:	Description:
Trying something different	We should be willing to take risk in doing our projects and activities. We are looking for amazing things to be accomplished by all of us.
Believe in people	Each of us are unique in what we can do and accomplish. We look for the good versus the bad in our make-up. We should strive to become better in our outlook.
Community	Our organization does not exist alone but is part of a community of others. We should strive to continuously be looking to make it better and be an active member.
Values:	Caring, Empathy, Striving for the best. Loving kindness, Trust, Respect, Curiosity, Thinking skills (creativity, critical, questions, reflection), Responsibility. No excuses
Language:	We should communicate with our fellow team member to achieve results that make them look better and have a positive outlook towards them. Our body language is a smiling face that looks at you in a positive way. We greet each other when we meet. and are polite and not aggressive.
Rituals:	We should take the time to celebrate our actions and communicate what we are planning or achieved. We use visual measurement to communicate and keep each of us posted on our schedule
Overall symbol:	“Faber Est Suae Quisque Fortunae” <i>Everyone is the maker of their destiny</i>
Our vision, goals, mission and purpose	Our organization documents are posted, clearly reviewed and discussed. We shall include where necessary, time frames, measurements and expected outcomes to make sure these items are real.
Mindset thinking:	Ownership mindset ... <i>think like an owner</i> Cultural engineering mindset ... <i>manage tasks around a project</i> Growth mindset ... <i>The brain is like a muscle use it or lose it</i> Team mindset: ... <i>work together like a winning learning team.</i>



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Key Word:	Description:

2.3 Following on services after the training:

Project Academy will provide the students with a monthly evening meeting to provide the following:

- Listening session to understand and provide feedback on student comments.
- Provide support for building their marketing brand.
- Will create a web blog to provide to students for communications.
- Will create following on classes for student supported needs.

2.4 Student Engagement: Have a discuss about the following;

Why do you think it's important to learn life-skills? What key words would they use to describe them? Have you use them in a sports team?

Ask the students:

- What class they had that made them feel good about learning?
- What was it about it that did it for them?
- If they have no answer, what teacher did they have that did not help them and why?
- Why do they think it is important for them to be good learners?
- Identify your highest hopes and deepest fears in life?

Recognize that you own your learning and are responsible for its success

Think of yourself as in your own business of learning, what are you going to do to be successful?

“Students need to change their disposition toward school away from being directed by someone else to an attitude of working for your-self—agency, self-discipline, initiative and risk-taking are all important on the job.”

Students should use a to-do list, develop a personal learning plan and create a portfolio of their best work



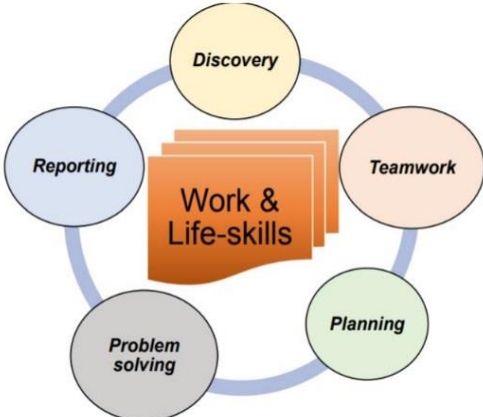
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They learn to self-manage their time, reflect on how things are going against the plan and how-to check-in when they know they need support.

We are creating a new kind of employee... mindset thinking

- Customer focus & process design
- End to end design
- Inter-personal skills/ team player/ problem solver
- Ability to handle constructive criticism
- Focus on hard work and results
- Desire to learn and excel
- Teamwork and thinking outside the box
- Good communications and non-verbal skills
- Eager to work out issues
- The bigger the problem the bigger the opportunity

3.0 Approach to learning:

<ul style="list-style-type: none">• Mindset thinking:• Questioning process• Project based learning• Process thinking• AI understanding• A team effort and you• Life-skills• Community• Business math & communication skills• Problem solving	
---	---

3.1 Elements

3.1.1 Mindset thinking

Students are shown how to be an owner of their own business; what's involved with their customers, suppliers and staff. Thinking like an owner allows you to interface and understand your boss and constantly improving your skills.

Owners mindset thinking:	Students are shown how to be an owner of their own business; what's involved with their customers,
---------------------------------	--



Pre-employment Learning Handbook

	suppliers and staff. Thinking like an owner allows you to interface and understand your boss and constantly improving your skills.
Engineering mindset thinking	Activities around the process that cover all the details to make it successful. Its assuring that all the team are aware of items, deliverables are met, problems solved, and the customer is informed.
Growth mindset	Brain Plasticity... The brain is like a muscle ... Use it or lose it.
https://youtu.be/8VN8jAzw_MA ownership mindset	
https://www.google.com/search?q=ownershipatwork.com&nfpr=1&sa=X&ved=0ahUKEwid977uyp7hAhWDdd8KHc-wBN8QvgUILCgB&biw=2316&bih=575 ownership questions	

3.1.2 Questioning Learning The students have to own the process. It's not the teacher asking the question.

Pick a text, picture or video to have the students look/read at about the subject we want them to learn. After they complete to task, ask them the following:

- What question do you want to ask about this Text, Video, Picture?
- What excited you, or made you sad about what we discussed? **Involve the group** ...Do they agree or have other questions or thoughts?
- What question comes to mind as you consider this painting/text?
- What are the different levels of questions like the [BloomTaxonomy?](#)

3.1.3 Project based learning... *Self-direct learning*

- Getting to know each other
- Team creation ... **learning & building a culture**
- Picking a problem to work on
- Problem solving



Pre-employment Learning Handbook

- Public reporting

3.1.4 Process thinking... A series of actions or steps taken in order to achieve a particular end.

The right kind of people will be focused not on the boss but on the customer; not on individual performance but on team performance; not on the task but on the outcome. Process understanding is a key factor in achieving success.

3.1.5 AI Understanding: Most companies will be experimenting with the introduction and use of AI within its corporate structure. It will take all employees to be part of the successful implementation. From a recent HBR article 6/2019, employees must be verse in the following skills:

1. Interdisciplinary learning and working
2. Self-motivation
3. Data usage
4. Creative ownership

3.1.6 Team approach: Teamwork is a critical skill that people in companies need to be successful. The employees must be well versed in the following skill sets: working with others, helping others, focusing on results, being hardworking, working for the greater good, desiring to learn and excel, eager to work out issues, able to handle constructive criticism, to be good listeners and communicators, communicators, a willingness to be an “unsung hero, ambitious but not to the detriment of others, and assertive but not aggressive. How’s that for the dream employee? Aptitude is more about the ability to learn and tends to differ among organizations. A financially focused job requires an aptitude for understanding math, accounting, financial statements, and financial relationships, while a utility or science-based position requires relevant technical skills. But aptitude also includes an ability to understand what others in the organization do. An employee might not need to be able to parse a financial statement, but she has to understand how financial people work and the role they play in the organization’s success”. Mike Hammer

3.1.7 Business math & Written communication skills



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Business algebra: Learning about simple equations, graphs and units will be introduced in a fun and thought-full way

Written communications skills: Classes will show how to present ideas and thoughts using key thoughts outline and elevator type presentations.

3.1.8 Problem solving:

3.1.8.1 Optional two week coding class

Learning the fundamentals of computer coding using MIT App Inventor

<http://appinventor.mit.edu/> Our students start with **block-based**

programming to develop their fundamental programming concepts and problem solving skills. Our core curriculum covers the programming languages **Python**.

3.2 Project Rubric:

	Not yet demonstrating	Beginning	Progression	Mastery
Team Work	Sees this as just a group	Recognizes that this means working together	Understand about a culture	See themselves as making their teammates successful
SEL skills	Not well behaved	Stops to think about control	In control most times	Works well with others
Independent studies	Doesn't know where to begin	Can build a schedule		Does independent work
Problem solving		Knows the steps	Lays out a plan	Masters each step
Business focus	Not sure what this means	Beginning to understand "the Agenda"	Articulate about the customer needs	Can set measurements to make the customer and company successful
Process understanding		Lays out the elements	Can set the flow map	Provides the measurements
Questioning skills	Random questions	Yes/no questions	Understands open ended questions	Uses questions as part of the learning process
Reflection	Does not think of the past	Understands what they learned	Connects the thoughts in discussion of what they learned	Uses their discuss to learn from what they did



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	Not yet demonstrating	Beginning	Progression	Mastery
Presentation skills	Randomly tells a story	Begins to organize their thought	Organizes their thought	Organizes and understands what their customers need

3.3 Life-Skills (soft skills): Students become cognitively aware of their life skills while doing activities:

Our approach is unique in that it brings together the needs of both sides in the workplace. Our program shows the new trainees how that can interface with the companies' values while building their strengths to become a needed employee or owner. The company gets an employee with a culture and values that fit nicely into a corporate culture.

The following is a grouping of the life-skills that will be incorporated in the training:

Attitude (positive attitude, focus, emotions, flexible, moral leadership)

- **Social & emotional learning** ([character development](#), [empathy](#), responsibility, [self-esteem](#), flexibility, self-discipline)
- **Team-work** (charter, respect, values, [listening](#), trust, diversity, culture,) ... *working like a sports team*
- **Problem-solving** ([creative & critical thinking](#), decisions, planning, curiosity, [reflection](#))
- **Personal skills**, ([financial-literacy](#), [time-management](#), [communication](#)(verbal & non-verbal, goal setting)
- **Business literacy** (quality, processes, matrices, change management reporting, [leadership](#), judgment, customer focus, info. mapping)

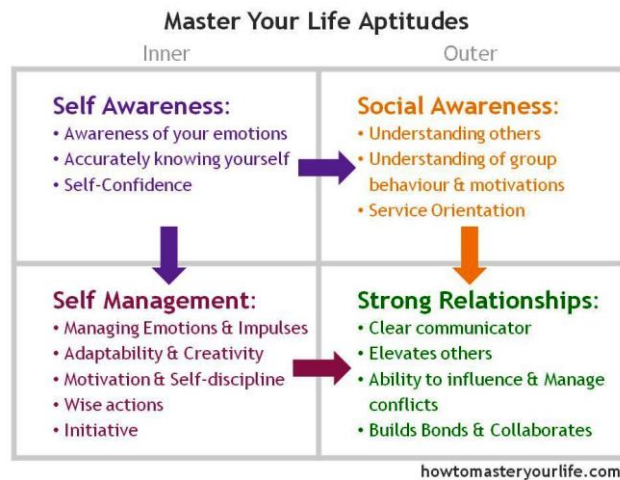
Key individual interface Email, Social networking, YouTube, Self-branding skills (Who you are), Networking

Social & Emotional learning (SEL) graphic pictures



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the mental and moral qualities distinctive to an individual



- [Character development](#)
- [Executive functions](#)
- [Thinknig skills](#)
- [Habits of mind](#)
- [Social Intelligence](#)
- [Emotional Intelligence](#)

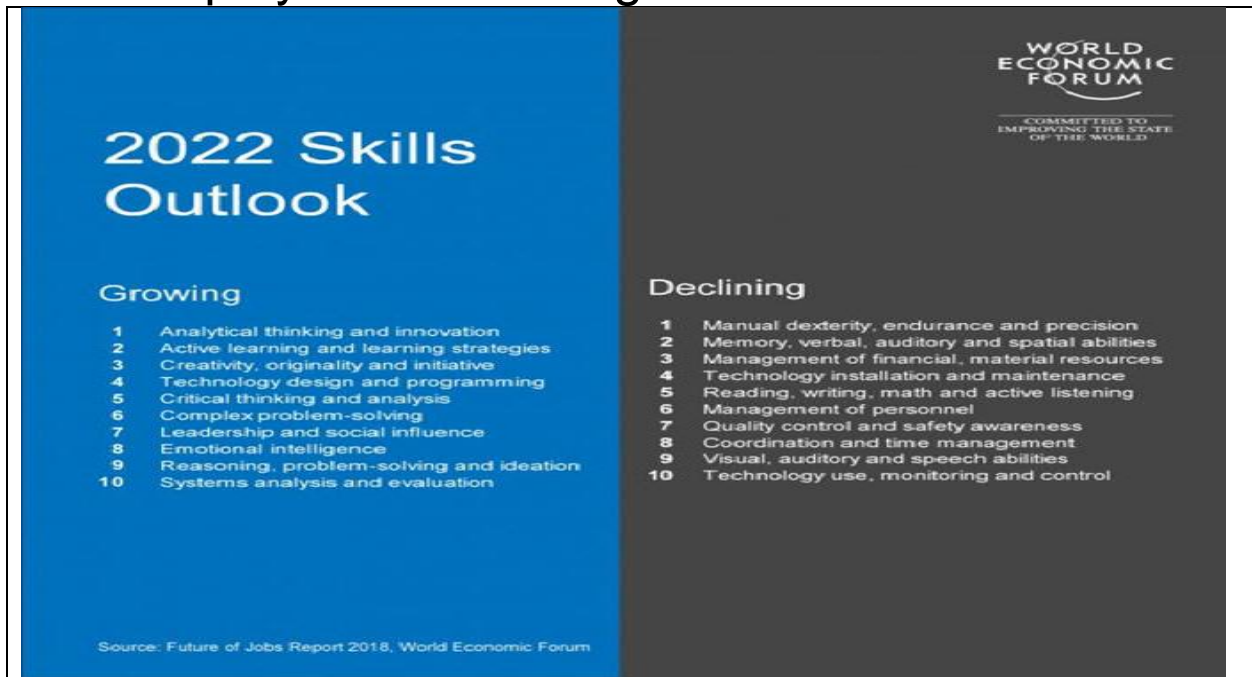
Self-Awareness & Self-Esteem	Social Awareness	Self-Management	Relationship Management	Cognitive Skills
<ul style="list-style-type: none"> • Self-Appreciation • Maximising Strengths • Managing Weaknesses • Building Confidence 	<ul style="list-style-type: none"> • Empathy Skills • Appreciating Diversity • Respect • Honesty • Trust 	<ul style="list-style-type: none"> • Anger Management • Stress Management • Dealing with: <ul style="list-style-type: none"> • Sadness • Frustration • Disappointment • Motivation • Positive Thinking 	<ul style="list-style-type: none"> • Communication Skills • Teamwork • Assertiveness • Negotiation • Conflict Management • Friendship Skills 	<ul style="list-style-type: none"> • Problem-Solving • Presentation Skills • Organising • Goal Setting • Financial IQ • Critical-Thinking • Decision-Making



Business Needs



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3.4 Learning process/Tools: Tools are used within the learning to make it more fun that engages the student to enhance the learning. Each class hour is broken into three sessions

Class time organization:

- 15 min. of class learning/discussion video's , tutorials
- 30 min. of Exercise / Activities by the teams
- Break

Tools:

- [Improv.](#)
- [Drawing exercise](#)
- Problem solving
- Team building games
- [Socratic Questioning](#)
- Seminars on relevant topics
- Video tutorials available on the web

3.6 The following are our Uniqueness:



Pre-employment Learning Handbook

The program focuses on teaching life-skills to create a well-rounded individual who will fit into the work environment. It uses the concept of mindset thinking around the following:

- Ownership mindset ... ***Think like an owner***
- Cultural Engineering mindset ... ***Provide leadership & management of a project***
- Growth mindset ... ***Your brain is like a muscle, use it or lose it***
- Team mindset ... ***To be successful. need to work together***
- Brand mindset ... ***Who are you and how to show the world***
- Life skills ... ***Students become cognitively aware of their life skills while doing activities***

3.7 The Agenda by Mike Hammer

Our program incorporates the elements from the book by Mike Hammer that details what a great company must do. These skills are an integral part of curriculum. Our belief and experience is that if the students have internalized these concepts they will make great employee.

1.	Make your-self easy to do business with.
2.	Add more value for your customers.
3.	Obsess about your processes.
4.	Turn creative work into process work.
5.	Use measurement for improving, not accounting.
6.	Loosen up your organizational structure.
7.	Sell through, not to, your distribution channels.
8.	Push past your boundaries in pursuit of efficiency.
9.	Lose your identity in an extended enterprise.
10.	End to end process measurements



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From our experiences in business & education, we have created a curriculum that sifted out the manual part of work and created thinking employees with unique mindset thinking and life-skills to be productive in your organization. ***These are the people that AI will be difficult to replace.***

3,8 Training videos:

Videos that are available on YouTube and other sites will be incorporated in the class room training.

<https://www.youtube.com/user/macmillanELT> Also available is <https://www.skillsyouneed.com/> an organization that provide tutorial on life skills.

4.0 Schedule

4.1 Course details:

Major area	Theme
Introduction / Creating a learning collaborative in the classroom / pre-Assessment of engineering knowledge and thinking skill awareness	Attributes, Values, Teacher Skills and the relation to excellence in academics and the larger world of work. Developing the outcome goals for the class.
Work in teams	Part of Team Project ... Collaboration, decision making, brain writing
Problem framing and solving Empathy	Part of Hands on Learning ... understanding what the true problem is and tinkering with ways to solve the problem
Creative and critical thinking skills around the design process	Learn the tools of brainstorming, brain-writing, and decision making for divergent and convergent processing skills
Brain Plasticity ... Growth mindset <ul style="list-style-type: none">• Carol Dweck, Ph.D	... we continuously are able to learn new things Two 30 minutes discussions a total of 60 minutes spent teaching not math but a single idea: that the brain is a muscle. Giving it a harder workout makes you smarter. That alone improved their math scores.



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Major area	Theme
<ul style="list-style-type: none"> Claude M. Steele Ph.D 	
Habits of Mind	Built into projects and continuous discussion
Infusion of thinking skills	Create an appreciation for life-long learning by providing opportunities to develop creative and critical thinking skills
Dialogue	... 6 Hats How to create dialogue and not shouting matches. Using dialogue question
Professionalism	Respectful dealing with others
Entrepreneurships / Innovation	Business processes... Persistence, problems as opportunities, finding humor, accuracy in your work, remain open to continuous learning
Conclusions, Self-Assessment Quality focus	Understand why you did certain things, What can you learn from your actions to improve How can you use data to improve?
Community support <ul style="list-style-type: none"> Job training Internships Technicians Apprenticeships Mentors 	<ul style="list-style-type: none"> Get a partnership with industry that provides career opportunity if we provide a person with good soft-skills. Retail stores, Warehouses, etc. Relationship with non-profits that focus on this area.

4.1.1 Team Work

People who work together will win, whether it be against complex football defenses, or the problems of modern society... Vince Lombardi

Organizational Team ... Come together as a team to achieve a common goal.



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Organizations have a culture



- Elements of Culture
 - Language
 - Communication
 - Symbol
 - Gesture, sound, color, design
 - Values
 - Goodness and beauty
 - Beliefs
 - Shared ideas
 - Norms
 - Rules and expectations
 - Rituals
 - Rites and Public ceremony

The sum of attitudes, customs, and beliefs that distinguishes one group of people from another.

Culture is transmitted, through language, material objects, ritual, institutions, and art, from one generation to the next.

Organizational Culture

What do we want it to be?

•**Example:** the team/ school will foster a culture of a learning environment, with all treated as adults and with respect.

•**Key values are:**

•Respect, Trust, Empathy, Kindness, Curiosity, Innovation, Persisting, Flexibility, Continuous learning. Humor and Taking

Schedule

Time	Activity
	Culture Discussion
	Community
	Creating charter

The community will operate will the following norms:

- Build bridges and learning from other societies
- Working towards stretch goals
- Measurements are for learning and continuous improvement
- Making the world a better place



Creating a team charter First, create a team charter to define the purpose of the team, as well as each person's role. Present this charter at the first team meeting, and encourage each team member to ask questions, and discuss his or her expectations. Next, consider organizing team building exercises. When chosen carefully and planned well, these exercises can help "break the ice" and encourage people to open up and start communicating.

The Charter Covers:

- Goals (Fun,),
- How will we be measured at the end,
- Roles that the team will do, (Scribe, Captain, Planner, Advisor, Tester, Public reporter,)
- Our values, ... Curiosity, Trust, Flexibility ,,,
- Deliverables?
- How will we handle conflicts?



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Learning aids:

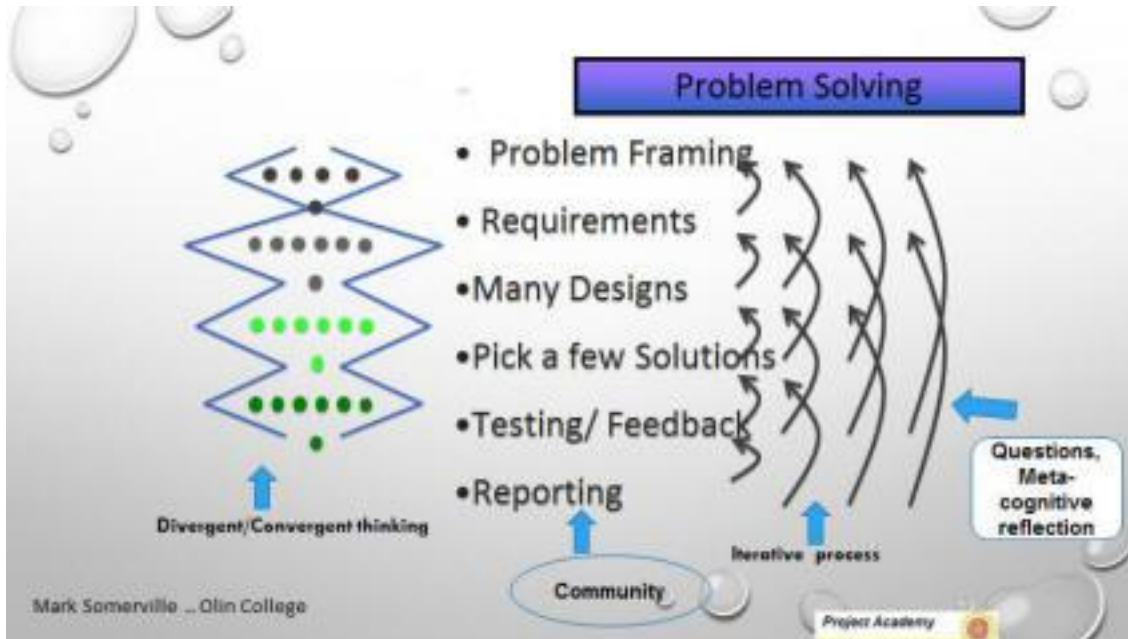
Processes	Activities
One-pager	Conflict resolution
Discussion ...very good overview to begin	Team charter work sheet
Flow-map ... of the process	Team roles work sheet
Five principles teaching students to work in teams is one of the most important goals of a twenty-first-century teacher.	Listening skills
Wonderful Principles <ul style="list-style-type: none"> • Respecting Others • Show Support • Encourage Participation • Give Positive Feedback • Listen Before You Speak • Honest 	Like a sports team
	Team work sheet

4.1.2 Problem Solving... Tools

Description	Details
<p>Dr. Deming ... 14 points Softskills ... Conway</p>	



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Task	Explanation
Divergent/Convergent thinking	
Iterative process	
Questioning	http://www.projectacademy.org/Documents/questions_relationship%20to%20the%20engineering%20Design%20Process_071207.pdf
Problem Framing	http://www.projectacademy.org/fuller/problem-framing.pdf
Requirements	http://www.projectacademy.org/Documents/Requirements_03102011.pdf
Research	
Many designs	Brain Storming / Writing Shaping
Pick	Decision making



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Testing/ Feedback	
Reflection	http://www.projectacademy.org/fuller/reflection-skills-012017.pdf
Reporting	http://www.projectacademy.org/Documents/elevator-pitch-09182016.pdf Preparing the presentation: http://www.projectacademy.org/fuller/Presentation%20Day%20Check%20list.pdf
Celebration	

How are we going to learn these skills in our project of Teamwork, Problem-solving and Presenting?

- Create a description of the skill and write it up, definition
- Draw a picture
- Do a sketch of the skill as a team
- How do we practice the skill?

4.2 Monthly class details Month 1

	Day	Learning	Life-skills
Week 1 Introduction/ Course objectives Problems as opportunities Teamwork/life-skills Who am I? My skills; Here's an excellent video Culture in an organization	1	Intro, Ice breakers, My likes (what interests me)	Attitude Hand-shake Inter-personal
	2	Building a team, culture, values	Positive attitude
	3	Role playing, Improv Negotiation	Keeping your focus
	4	Mapping our learning, mindset , brain plasticity	Controlling your emotions
	5	Why teams are important to be successful	Flexible
Week 2	Day	Learning	Life-skill
	Day	Learning	Life-skill



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<ul style="list-style-type: none"> • Study project: Trip to the mall to observe retail work force Selecting a problem, Team rules Problem-solving 	1	Work place problem to solve	Respecting others
	2	Research the problem we will work on	Active listening
	3	Field trip... How do people act when serving the customer	Working together
	4	Problem activity	Being reliable
	5	Problem solving	Understanding the problem-solving process
<ul style="list-style-type: none"> • Discussion web tools; problem solving Process • Collaboration 6 hats • Engr. Is everywhere 			
Week 3 Study project: Trip to the Waltham manuf. Museum or MIT Physical appearance	Day	Learning	Life-skill
	1	Testing, Reflection	Responding to conflicts in a positive manner
	2	Elevator pitch	Helping customers
	3	Field trip	Time management
	4	Branding ... what does it mean and how does it apply to us.	Planning ahead
5	Work environment, customer, processes, metrics; a day at work	Work place ethics	
Week 4 Trip to the Framingham hospital; Reflection/ Re-due Personal Hygiene & Dress Non-verbal skills	Day	Learning	Life-skill
	1	Work environment, planning	Info mapping writing
	2	Social & Emotional learning	Thinking skills (creative & critical), questions & reflection
	3	Field trip -self-directed work team	Measurements & Feedback
	4	Branding, interviewing, dealing with others	Problems as opportunities
5	Preparing for the project		
<ul style="list-style-type: none"> Discussion web tools; problem solving Process • Collaboration 6 hats • Engr. Is everywhere 			



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Month 2 Week 5,6,7,8,

Working as a Team & Problem solving... Follow-up on second 4 weeks

- Create team organization & guidelines
- Pick problem to solve and report on
- Using good reporting tools (elevator pitch, mapping)
- Mistakes are what we learned from

Picking a problem

Interview a sports team

Month 3

Week 9 Process designer Customer needs and the business improvement Working between two organizations	Day	Learning	Skills
	1	Critical & creative thinking	Asking questions
	2	Communication	Listening
	3	System thinking	Thinking skills
	4	Common sense	Reasons
	5	Make your-self easy to do business with	
Week 10 Assessment/ measurements Balance scorecard	Day	Learning	Life-skill
	1	Process	
	2	End to end processing	
	3	Measurement	
	4	Financial thinking	



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	5	Reflection	
Week 11 Finance literacy Entrepreneurship	Day	Learning	Life-skill
	1	Goal setting	
	2	Customer value	
	3	Personal management tools	
	4	Testing process	Learning from failures
	5	entrepreneurship pathways provide value by engaging opportunity youth and developing noncognitive skills.	
Week 12 Summary/ Review Failure is a form of learning	Day	Learning	Life-skill
	1	Elevator pitch	
	2	Presentation skills	
	3	Branding process	
	4	Community presentation	
	5	Review	
Elevator pitch: http://www.projectacademy.org/Documents/elevator-pitch-09182016.pdf Presentation check-list: http://www.projectacademy.org/fuller/Presentation%20Day%20Check%20list.pdf			
Month 4 +			
Week 13	Day	Learning	Life-skill



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<p>Evidence Based: Create and iterate approaches based on research and experience with partners across the labor market</p> <p>Partnership Oriented: Collaborate with existing players to pursue the fastest, most effective path to change</p>	1	Critical thinking	
	2	Customer value	
	3	Change management	
	4	Data analyzes	Learning from failures
	5	Engineering mindset	

<p>Week 14</p> <p>Are we creating another category of worker?</p> <p>Project Planner?</p> <p>Thinking Technician</p>	Day	Learning	Life-skill
	1	Process designer	
	2	Change management	
	3	Info.-mapping,	
	4	math (algebra, tables)	
	5		

Week 15

<p>Week 15</p> <p>Business & Thinking tools</p>	Day	Learning	Life-skill
	1	Info mapping	
	2	Process diagrams	
	3	Balanced Scorecard	
	4	Flow charts	
	5	Data sheets & Summary	



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Week 16 Technology future direction ... AI, Robots, Internet of things & Analytics	Day	Learning	Life-skill
	1	AI	
	2	Robotics	
	3	Internet of Things	
	4	Analytics	
	5	Cerebration	

5.0 Example of a day's training ... Lets focus on training in the team formation

People with the kinds of backgrounds that indicated they were **highly motivated** and had the **ability to learn new ways** of doing things

Module Description	Module Description	Learning Objectives Students will be able to:	Behavioral Goals
Team format	Though a series of activities students will develop a team charter and learn various life-skills for working together Teams will compete in various games & Improv activities.	Understand to similarities of a learning team to a sports team • Relate the team to a community organization	Students will be able to work together and deal with issues in a positive manner • Interpersonal skills will be practiced

From our monthly schedule; Day 2, 5 Week 1... Why teams are important to be successful

Each classroom hour

- 15 min. of class learning/discussion
- 30 min. of Exercise / Activities by the teams
- Break



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Tools

Improv.	<ul style="list-style-type: none"> • Drawing exercise 	<ul style="list-style-type: none"> • Problem solving
Team building games	Socratic Questioning	Seminars on relevant topics

Overview:

create a learning team that has shared values and a set of developed norms; Below are the table of classes from the mail schedule.



<i>hour</i>	Day 2		Day 5
1	Discussion of what is a team		Summary of our team
2	Sports team discussion		Improvement
3	What is Culture		Spaghetti tower
4	Culture		Creating the charter
lunch			
6	Building the charter		Team positions
7	Charter		Boss vs Customer
8	Role-play		Reflection

Team learning

- How should it operate?
- How does it compare to a sports team?
- What are our roles?
- How am I successful?
- How do we communicate and collaborate, together?

Essential Questions



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1. What do I bring to the team?
2. What are our commitments to one another?
3. What differences exist between us?
4. How will we operate?
5. How will we know we are succeeding?

- Comparison to a sport team
- Creating a learning team charter
- What roles will we have in our team
- Diversity, Values of a culture, Listening skills, Collaboration, Character development

Team Charter:

- Overview of the Team function
- Measurable team goals, roles, Deliverables
- How will we measure success?
- Expectations ... How are we going to work together? Handle conflicts?

Three questions to answer *Yale Center for Emotional Intelligence*

1. How do you want to feel as a team?
2. What can we each do in order to have those feelings more often?
3. How will we handle conflicts when they arise

Building the team culture

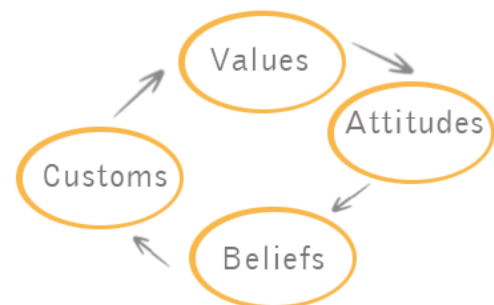
Creating teams- Like a Sports/Music team:

... Listen to each other; become a learning team... What is our culture?

- Overview of the project
- Measurable team goals, roles, deliverables

Create a team charter, The Charter Covers:

- Goals (Fun,),
- How will we be measured at the end,
- Roles that the team will do, (Scribe, Captain, Planner, Advisor, Tester, Public reporter,)
- Our values, ... Curiosity, Trust, Flexibility ,,,
- Deliverables?
- How will we handle conflicts?



teaching students to work in teams is one of the most important goals of a twenty-first-century teacher

Here's an [excellent video](#) to help you get started in building your own culture and values.



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- Elements of Culture
 - Language
 - Communication
 - Symbol
 - Gesture, sound, color, design
 - Values
 - Goodness and beauty
 - Beliefs
 - Shared ideas
 - Norms
 - Rules and expectations
 - Rituals
 - Rites and Public ceremony

6.0 Business & Community Involvement

6.1 Business

Businesses are reporting that a major need for their success are employees with life skills such as; interpersonal skills, communication skills, teamwork, critical thinking and problem solving. Our program intends to work with local businesses to insure that we provide these skills in addition to a positive attitude and seeing problems as opportunities.

Become a supplier of applicates for Apprenticeship and mentorship programs. Project Academy provides the up-front life-skills while the other programs provide the specific job-related skills.

- A voice of the business ... need to operate efficiently
- A voice of the customer ... What the customer wants and will pay for

6.2 Community

Involving parents in projects is productive for several reasons. Projects show parents what quality learning in the twenty-first century can be.



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Parents enjoy seeing their children as motivated, enthusiastic students. And parents recognize that the skills taught through projects will be critical to their children's success.

- Ask parents to serve as judges. Parents can sit on panels for presentations and use rubrics provided to assess student performance.
- During an exhibition, have parents circulate among students and ask questions. Give parents prompts before the exhibition. Debrief with parents.
- Have a student-teacher-parent discussion after the project. What did parents see that they liked? What do they question? What suggestions do they have?
- Plan with parents. Thinking about projects for the year ahead? Sit down with a small team of parents and plan together.

Hammer, Michael. *Faster Cheaper Better* The Crown Publishing Group.
Hammer, Michael. *The Agenda*

Articles about Workplace Skills:

Quick guide to teaching workplace skills	Realcare-curriculum-employment-skills
Mid-career life skills	Hand-book-career-guides
SoftSkills-give-workers-big-edge	JPMorgan New-skills
Skill gap & how to address it ... McKinsey	The growing importance of social skills in the labor market
Securing a new job	



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Creating training pages for the Pre-employment training manuals

Each training plan will have the following elements:

- **Background**
- **Learning details**
- **Desired outcomes**

Topics:

- **Critical thinking**

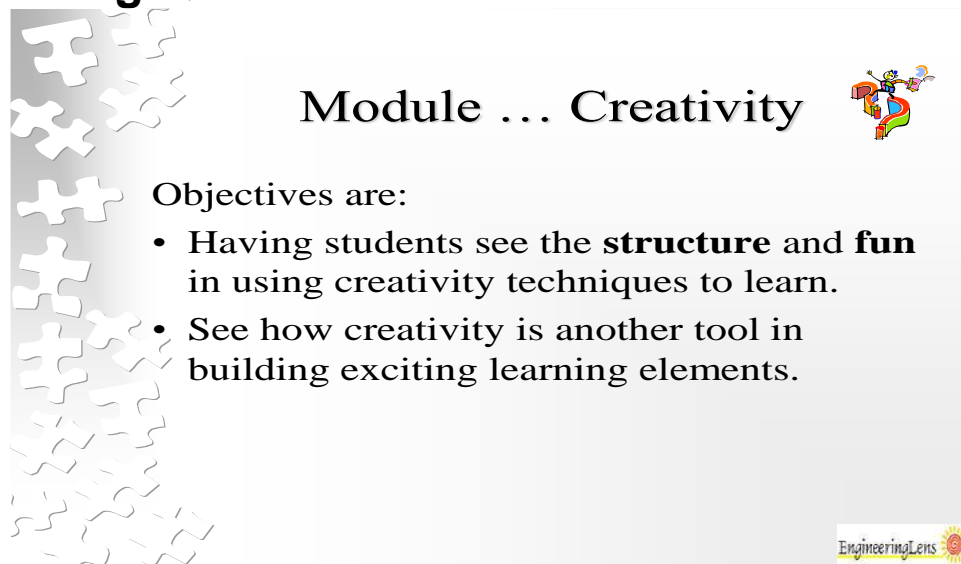
http://www.projectacademy.org/Documents/critical_thinking_module_10312013.pdf


Critical_thinking_module_12232012 powerpoint in Presentation

- **System thinking / Visual thinking**

http://www.projectacademy.org/Documents/mindmapping_11082016.pdf

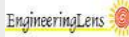
- **Using Questions**



Module ... Creativity 

Objectives are:

- Having students see the **structure** and **fun** in using creativity techniques to learn.
- See how creativity is another tool in building exciting learning elements.



http://www.projectacademy.org/Documents/Children%20learning%20to%20question_08072012.pdf

- **Business thinking Ownership mindset**
- **Engineering thinking/ design**

- http://www.projectacademy.org/Documents/Problem%20Framing_08212012.pdf



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- **Process thinking**

- **Decision thinking**

http://www.projectacademy.org/Documents/Decision%20Matrix_08132010.pdf

Creative & Critical Thinking

Creativity is the bringing into being something which did not exist before, either as a product, a process or a thought.

Critical thinking is a way of thinking that enables us to think at the highest level we are capable of.

Critical Thinking

Analyzing the past
* What evidence?
* What is the author's purpose?
* Convergent thinking
* Skepticism is a virtue

Creative Thinking: Creativity improves pupils' self-esteem, motivation and achievement

Brain storming

Divergent thinking

Exploring your environment & testing many options

Stimulate curiosity

Innovation & entrepreneurship

Meta-cognitive reflection

*** What do I want to understand?**

*** What have I learned?**

What do I still need to learn?

*** Provide feedback for reflection**

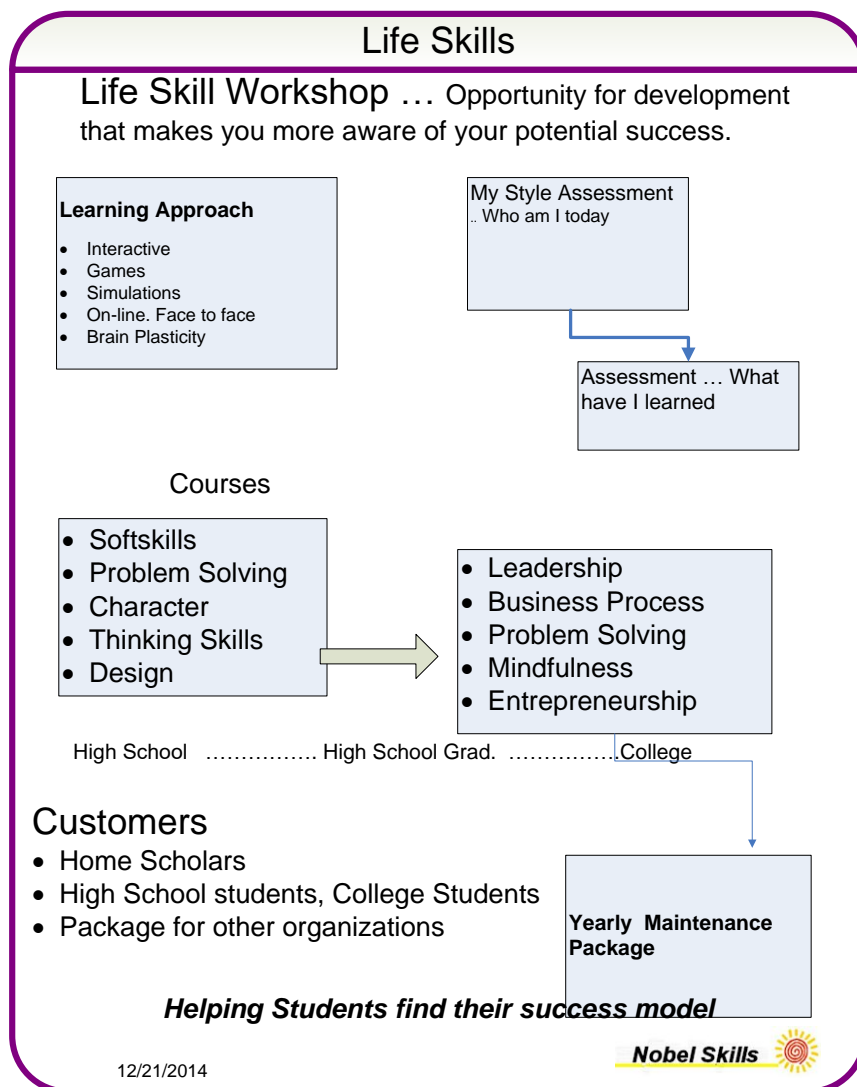
*** Regulate ones behavior**



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Questions ... Engaging the student

* Logical Sequential
* Open ended
* Listening is the first step in good Questioning
* Provocative
* Engage
* Encourage higher order thinking



See folder manufacturing for many flow maps
 F:\Project-Academy-new\flow-maps



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- **Critical thinking**

http://www.projectacademy.org/Documents/critical_thinking_module_10312013.pdf

Title: Critical thinking learning module

Background: One of the key aspects of any project or task is the gather information concerning the problem you are trying to solve. You will rely on the truthfulness of this information to help solve the problem. How do you know if the information is accurate and correct? In todays world of “Fake News” it is very important that you apply critical thinking process to the information you are gathering.

Critical_thinking_module_12232012 powerpoint in Presentation

Learning details:

- Analyzing the past
- What evidence?
- What is the author’s purpose?
- Convergent thinking
- Skepticism is a virtue

Convergent Thinking ...tending to move toward one point or to approach each other : CONVERGING <convergent lines>

Lesson Plan: Provide a statement and ask the teams to determine if its true and the reason why.



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- Asks appropriate clarifying questions
- Judges well the quality of an argument, including its reasons, assumptions, evidence, and their degree of support for the conclusion
- Formulates plausible hypotheses
- Defines terms in a way appropriate for the context
- Draws conclusions when warranted – but with caution

Engineering Design Process	Writing Process	Reading Strategies
Identify Problem	Set purpose for writing	Set purposes for reading
Research	Research: read target book, learn about key concepts, and ask questions	Introduce concepts and information needed for comprehension
Brainstorm	Brainstorm	Ask guiding questions; activate background knowledge
Choose and plan	Choose a topic, plan, organize ideas	
Create	Draft	Read and monitor understanding
Test	Get response to text (peer, teacher, target audience)	Clarify understanding as needed, evaluate text for veracity or completeness



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Redesign	Revise	Re-read for understanding or read another book for additional perspective/ information. Evaluate whether an established purpose was met.
Share	Share/Publish	Discussion, poster or various writing assignments

Kathleen Spencer; Tufts, 2011

Desired outcomes:

Title: System thinking / Visual thinking

http://www.projectacademy.org/Documents/mindmapping_11082016.pdf

Background:

In today's business world and problem solving, a view of the total issue is needed to work the problem and find the best solution. **As DaVinci says** Connessione—A recognition of and appreciation for the interconnectedness of all things and phenomena. Systems thinking expands the range of choices available for solving a problem by broadening our thinking and helping us articulate problems in new and different ways. At the same time, the principles of systems thinking make us aware that there are no perfect solutions; the choices we make will have an impact on other parts of the system. By anticipating the impact of each trade-off, we can minimize its severity or even use it to our own advantage. Systems thinking therefore allows us to make informed choices.

Learning details: Systems thinking is also a diagnostic tool. As in the medical field, effective treatment follows thorough diagnosis. In this sense, systems thinking is a disciplined approach for examining problems more completely and accurately before acting. It allows us to ask better questions before jumping to conclusions.

- **Visual thinking:**



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Within an organization, making information visual for all team members is an important way to keep the team abreast of what is happening. Posting information on walls is one important team resource.

- **Mind maps:**
- **Info mapping:**

Desired outcomes:

Using Questions:

Title:

Background: The atmosphere in the classroom must also be conducive to encouraging children to ask questions. Some ways of showing that questions are welcome are by adding questions to displays and collections, introducing a problem corner in the classroom, creating lists of "questions to investigate," and making sure any work cards or worksheets are framed in terms of investigable questions. Regular discussion of questions is also important. Children, like teachers, do not find it easy at first to change the emphasis in their questioning from unproductive to productive. Novel materials are not necessarily the best stimulus; often more familiar ones help children raise questions, especially with a lead from the teacher to the kind of productive questions that can be asked. Once children begin to ask questions they will ask ones of all kinds; some will be difficult for teachers to handle, but it is important to find a way of doing so that does not make the child wish he or she had not asked. A strategy has been described for analyzing children's questions so that unproductive ones can be used productively.

Learning details: Children learning to question: Summary of Main Points Children learn their question-asking habits from teachers. If children are to be encouraged to raise questions that lead to investigation, this is one more reason (added to those given in Chapter 3) for teachers to make the effort to ask more productive questions and fewer unproductive ones. Some specific ways in which teachers can practice and improve question skills are: Helping Children Raise Questions—and Answering Them

1. Provide a wide range of materials for children to respond to.
2. Practice and improve your questioning style so that it provides an example for the children.
3. Provide a climate of inquiry for children to work in.
4. Encourage children to form and to discuss their own questions.
5. Respond positively to children's spontaneous questions.
6. Turn children's unproductive questions into productive ones that promote investigation of real materials.

Desired outcomes:



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List of tools for students

<https://collegeinfo geek.com/resources/>

JAZZ IMPROVISATION AS A MODEL FOR EDUCATION

- The session will open with a short audio clip or live performance (if permitted), followed by a brief discussion of the language of improvisation. I will discuss the roles of practice, musical form, and performance. This framework is a metaphor for exploring practice, curricula, and assessment in education. Co-authoring student designed curricula, primary source experiences, and dynamic evidence of learning are key concepts.... Markus Hunt, Head of School, [The Logan School for Creative Learning](#)

PROJECT-BASED LEARNING: HOW TO LEARN BY DOING

Would you believe us if we said, "a world where our children are the leaders of their own lives" is possible? Our talk will offer up the struggles & joys of implementing project-based learning in order to inspire others to engage with children in ways that encourage independent thinking & creative problem-solving. How does PBL promote 21st Century Learning Skills? What makes PBL different from traditional education? We will dispell myths, provide insight and teach the key elements of PBL.

Related Media

<https://9thbridgeschool.org/category/video/>

Additional Supporting Materials

<https://9thbridgeschool.org/>

Takeaways



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1. To understand the major myths & initial barriers to successfully executing PBL across all grade levels and to identify strategies to overcome.
2. To analyze PBL's connection to 21st Century Learning Skills by comparing & contrasting a traditional education to key elements of a PBL approach.
3. To identify the academic and social-emotional benefits of project-based learning and observe examples of projects that improved engagement & outcomes.

Speakers

- Demetria Giles, Director, [9th Bridge School](#)

PICKING A PATHWAY FOR EMPLOYMENT SUCCESS

Let's face it, college is expensive and it's not for everyone. Too many students are earning expensive degrees that have limited value; and, essentially, graduating to the couch. What if we did more in middle school for career exploration and workreadiness? What if students could make informed decisions regarding CTE courses or other pathways? What if they all graduated life ready? Wouldn't that be a benefit to them, their family, and their community? Let's discuss!

Related Media <https://youtu.be/OU9IzgNhBk0>

Takeaways

1. Understand the use of assessment in making informed decisions regarding CTE and other pathways for all students.
2. Increasing access to the Least Restrictive Environment for special populations, including special education, 504, ELLs.
3. Use of assessment and vocational programs to increase workplace readiness including soft skills acquisition.

Speakers

- Leslie Polvado, Texas Representative, [TAI - Talent Assessment, Inc.](#)



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Community

https://docs.google.com/presentation/d/1xlpXbxfZgyVIKRWzHUwoaKjhmQ3e4GskxCZ7fhkoms/edit#slide=id.g5dd87841b7_0_0

Training thoughts:

Interpersonal Relationship

However talented the candidate may be, having interpersonal skills like the following will make him or her far more likely to succeed:

- Listening
- Relationship-building
- Collaboration

Problem Solving & Adaptability

These are essentially problem solving or cognitive abilities, such as:

- Analyzing and summarizing information
- Making decisions
- Adapting to change

Personal Values & Commitment

Your goal is to understand to what degree the applicant possesses:

- Integrity
- Respect for diversity
- Adherence to standards and policies

Engineering-Mind-Set

- Setting direction
- Managing change
- Motivating others

- Selecting and retaining talent
- Leading a team
- Holding others accountable

Problem Solving and Critical Thinking

Identify the seven steps to solving a problem effectively

Practice solving work problems as an individual and as a member of a team

Understand how the same problem-solving process works in many settings



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Using Technology

Understand how technology has changed on the job in the past century

Successfully create a PowerPoint presentation, a basic Excel spreadsheet, and a blog using online research

Take a self-inventory of technical skills

Time Management

Take a self-inventory of time management skills and identify how to improve

Learn to discern urgent tasks from important tasks and plan accordingly

Identify common barriers to time management and how to overcome these barriers

Complete a personal time study in order to meet personal goals

Interviews

Understand the purpose of an interview

Identify different types of interviews

Prepare for and successfully experience a mock interview

Be able to write a thank you letter

Motivation

Define intrinsic vs. extrinsic motivation

Complete a self-assessment to identify ways to increase self-motivation

Identify a specific goal and ways to keep motivated to achieve the goal

Work Ethic

Define 'work ethic'

Understand how your work ethic applies in the workplace

Listening

Understand how listening is different than hearing

Practice active listening techniques

Respect

Define 'respect'

Take a personal self-assessment of respect and identify if improvement is needed

Apply tips for increasing respect at work to various scenarios

Responsibility

Understand the concept of responsibility to self and in various groups

Take a personal self-assessment regarding responsibility

Critique workplace case scenarios

Flexibility

Understand the concepts of flexibility and adaptability



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Learn ways to show flexibility on the job
Critique workplace case scenarios

Interpersonal Skills

Understand what interpersonal skills are
Take a personal self-assessment of interpersonal skills
Apply interpersonal skills to work scenarios

Negotiation

Understand the 5 steps to the negotiation process
Learn tips to avoid and processes to try
Apply the 5-step negotiation process to work scenarios

Networking

Understand the process of networking and various channels available
Learn to apply networking to the employment process
Write a networking email seeking employment

Patience

Understand the physical signs of impatience
Learn to identify the root cause of impatience
Identify ways to improve patience at work

Presentation Skills

Learn how to deliver presentations more effectively
Learn ways to enhance PowerPoint presentations
Create and deliver a class presentation using the tips learned in this lesson

Self-Confidence

Take a self-assessment to consider personal levels of self-confidence
Learn ways to build self-confidence, especially at work
Learn to use positive self-talk to build self esteem

Stress Management

Learn to recognize the physical, emotional, and health-related signs of stress
Research and report ways to manage stress successfully
Learn to positively respond to stress

