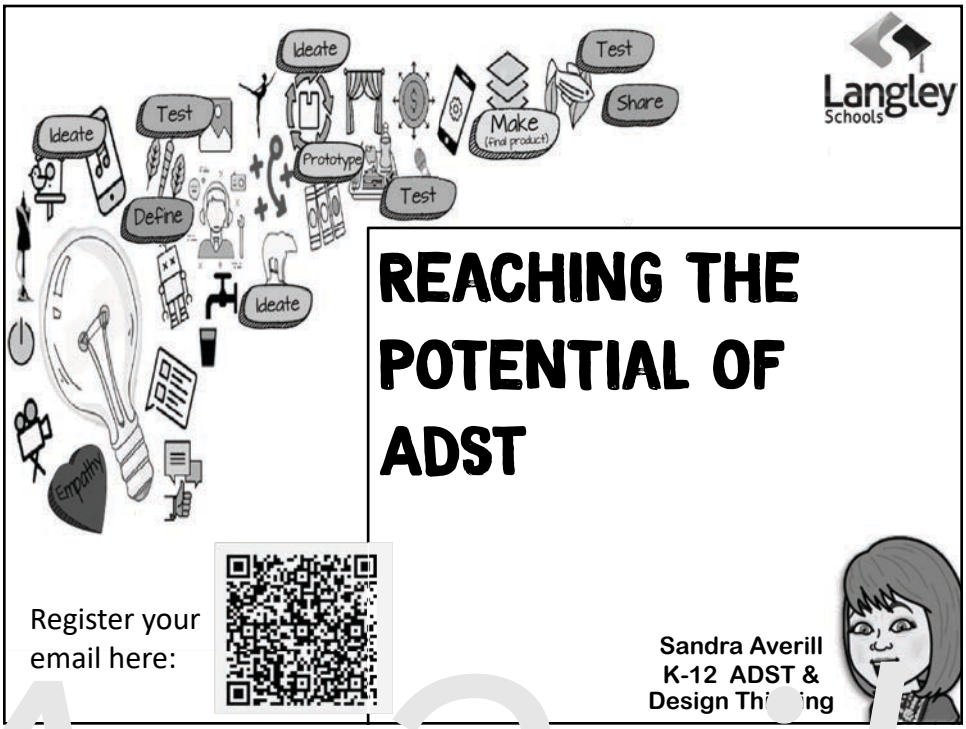
Ideate
Test
Share
Ideate
Test
Make
(final product)
Prototype
Test
Define
Ideate
Empathy
Langley
Schools
REACHING THE POTENTIAL OF ADST
Register your email here:
Sandra Averill
K-12 ADST &
Design Thinking

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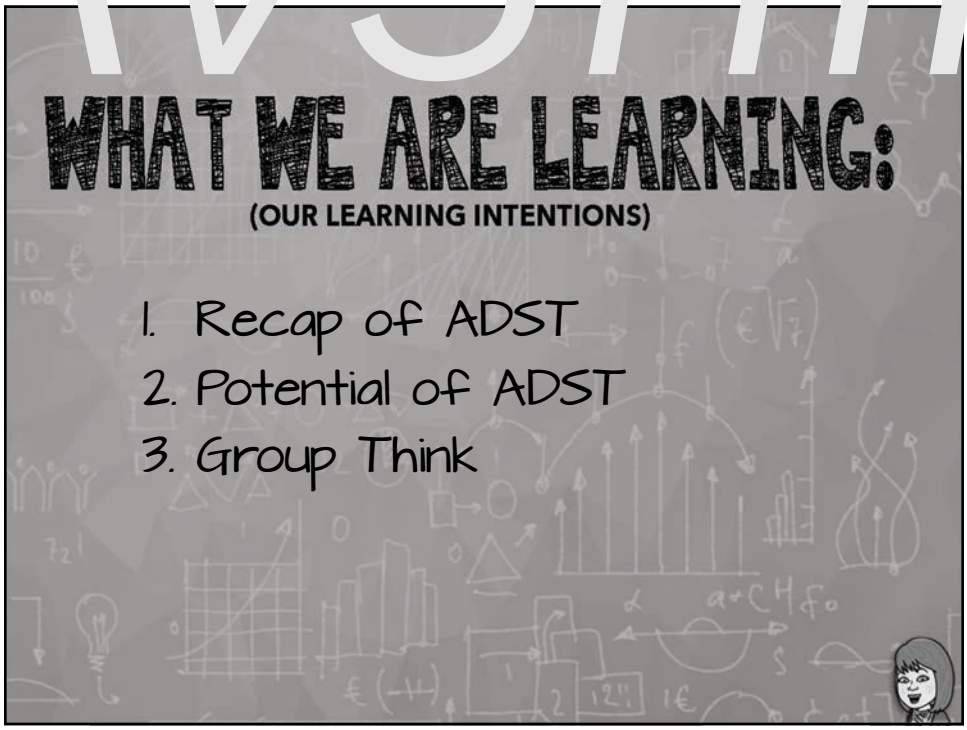
WHAT WE ARE LEARNING:
(OUR LEARNING INTENTIONS)
1. Recap of ADST
2. Potential of ADST
3. Group Think

SUCCESS WILL LOOK LIKE:

Teams will identify ADST roadblocks, and will work collaboratively in determining possible solutions

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Technology: Tools that can extend human capabilities

(ADST)

http://farm8.static.flickr.com/
24/10310176123_79de3a9760.jpg

ADST BIG IDEAS

	K-3	4-5	6-8	9-10	11-12
APPLIED DESIGN	Designs grow out of natural curiosity.	Designs can be improved with prototyping & testing.	Design can be responsive to identified needs.	Social, ethical, & sustainability considerations impact design.	Products can be designed for lifecycle.
APPLIED SKILLS	Skills can be developed through play.	Skills are developed through practice, effort, & action.	Complex tasks require the acquisition of additional skills.	Complex tasks require the sequencing of skills.	Personal design interests require the evaluation & refinement of skills.
APPLIED TECHNOLOGIES	Technologies are tools that extend human capabilities.	The choice of technology & tools depends on the task.	Complex tasks may require multiple tools and technologies.	require different technologies & tools at different stages.	Tools & technologies can be adapted for spec purpos

THINKING TO APPROACH A PROBLEM

SKILLS TO SOLVE A PROBLEM

TOOLS TO SOLVE A PROBLEM

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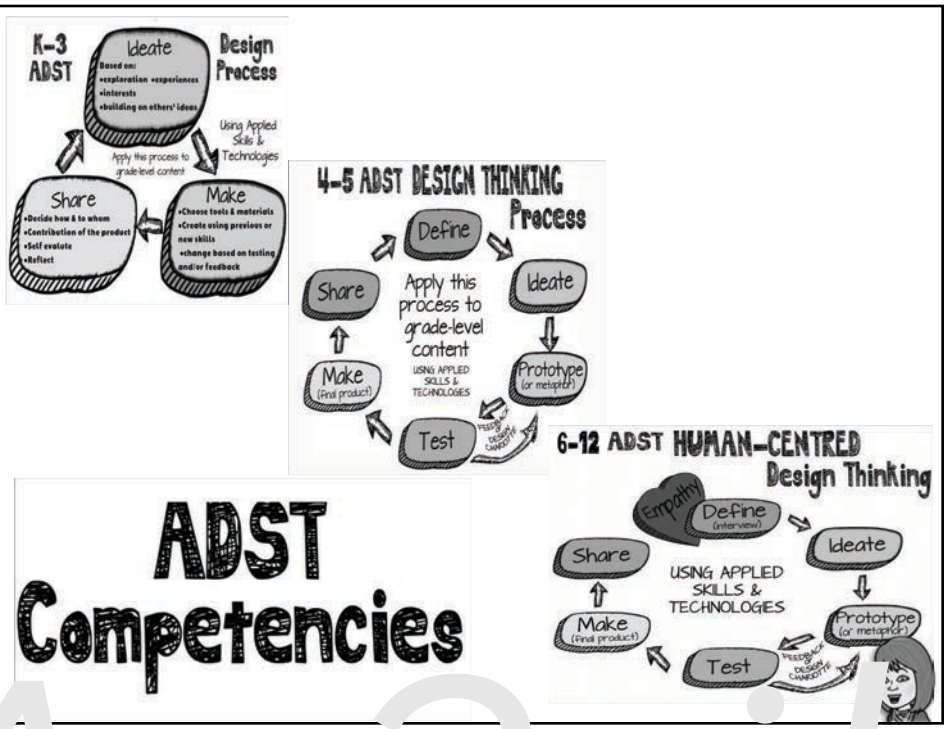
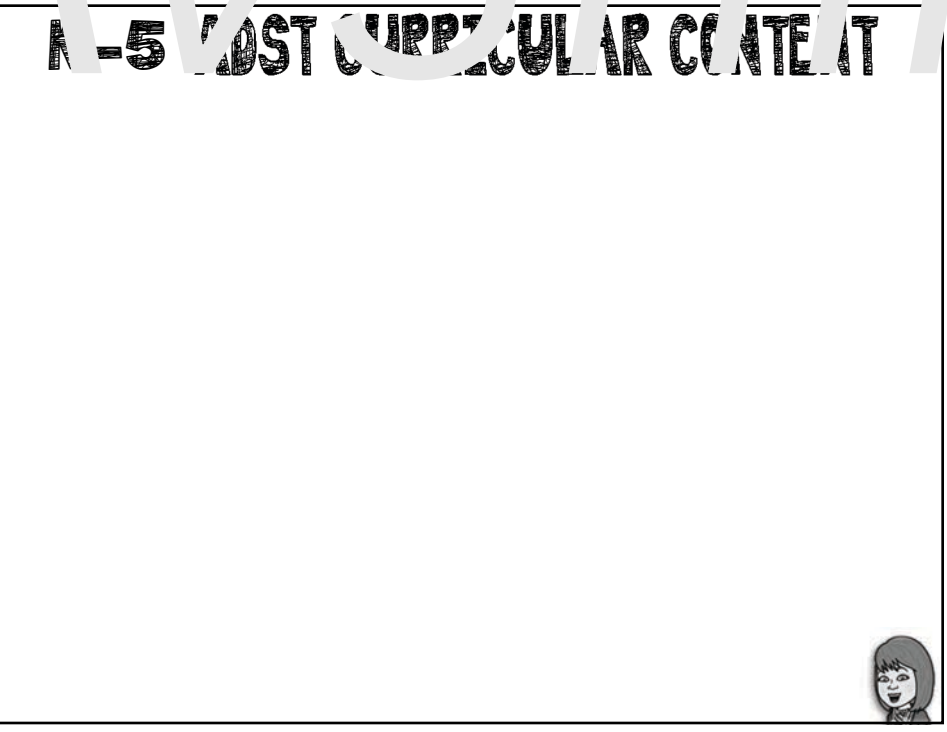

K-3 ADST
Design Process
Ideate
Based on:
•exploration •experiences
•interests
•building on others' ideas
Using Applied Skills & Technologies
Apply this process to grade-level content
Make
•Choose tools & materials
•Create using previous or new skills
•change based on testing and/or feedback
Share
•Decide how & to whom
•Contribution of the product
•Self evaluate
•Reflect
4-5 ADST DESIGN THINKING Process
Define
Ideate
Prototype (or metaphor)
Test
Make (final product)
Share
Apply this process to grade-level content
USING APPLIED SKILLS & TECHNOLOGIES
6-12 ADST HUMAN-CENTRED Design Thinking
Empathy
Define (interview)
Ideate
Prototype (or metaphor)
Test
Make (final product)
Share
USING APPLIED SKILLS & TECHNOLOGIES
ADST Competencies


K-5 ADST CURRICULAR CONTENT

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6–9 ADST CURRICULAR CONTENT

6–7	8	9
3 MODULES EACH YEAR	FULL YEAR COURSE OF 1+ MODULE	FULL YEAR COURSE OF 1+ MODULE
COMPUTATIONAL THINKING	COMPUTATIONAL THINKING	INFORMATION & COMMUNICATION TECHNOLOGIES
COMPUTERS & COMMUNICATION DEVICES	COMPUTERS & COMMUNICATION DEVICES	
DIGITAL LITERACY	DIGITAL LITERACY	
DRAFTING	DRAFTING	DRAFTING
ENTEPRENEURSHIP & MARKETING	ENTEPRENEURSHIP & MARKETING	ENTEPRENEURSHIP & MARKETING
FOOD STUDIES	FOOD STUDIES	FOOD STUDIES
MEDIA ARTS	MEDIA ARTS	MEDIA ARTS
METALWORK	METALWORK	METALWORK
POWER TECHNOLOGY	POWER TECHNOLOGY	POWER TECHNOLOGY
ROBOTICS	ROBOTICS	ELECTRONICS & ROBOTICS
TEXTILES	TEXTILES	TEXTILES
WOODWORK	[illegible]	WO[illegible]WORK

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WHAT WE ARE LEARNING:

(OUR LEARNING INTENTIONS)

1. Recap of ADST
2. Potential of ADST
3. Group think

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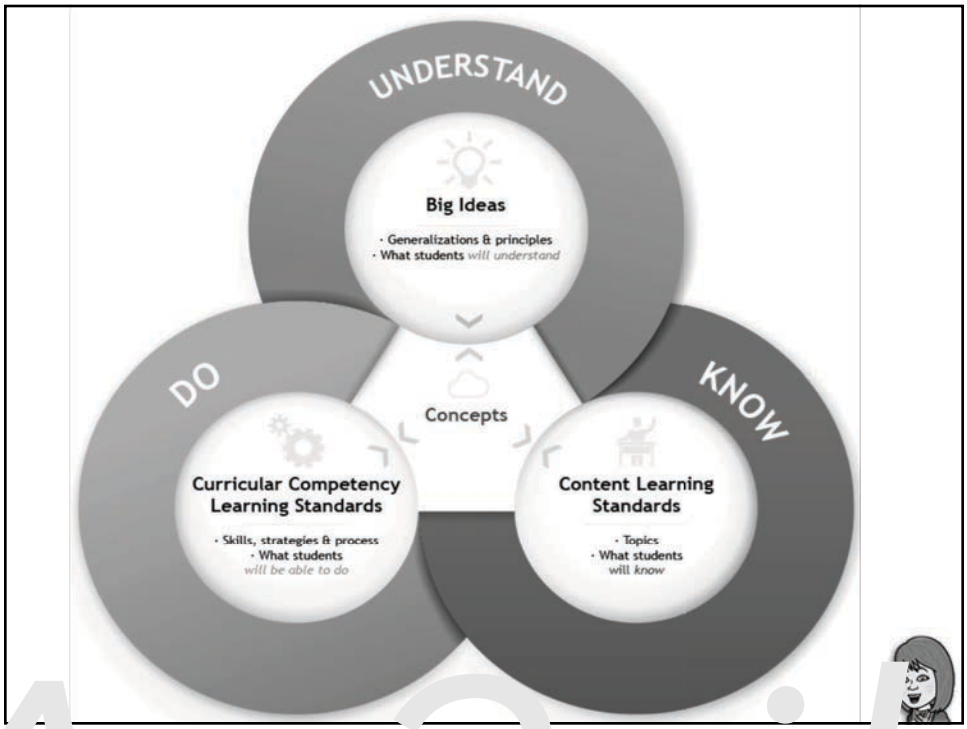
UNDERSTAND
Big Ideas
· Generalizations & principles
· What students will understand
DO
KNOW
Concepts
Curricular Competency Learning Standards
· Skills, strategies & process
· What students will be able to do
Content Learning Standards
· Topics
· What students will know

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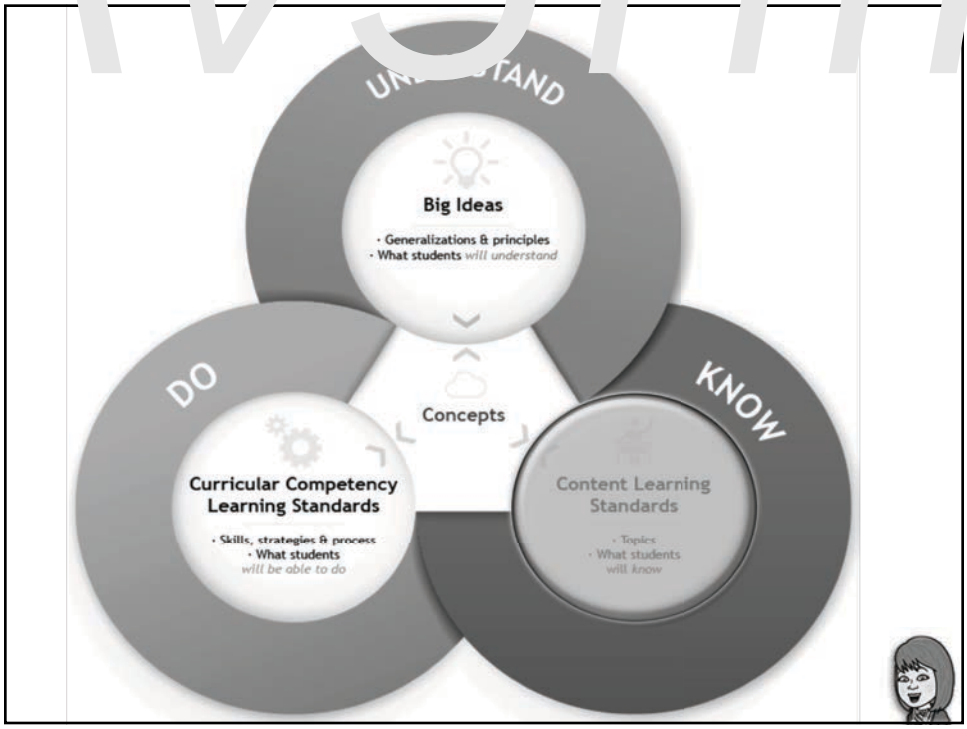
Big Ideas
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· What students will understand
DO
KNOW
Concepts
Curricular Competency Learning Standards
· Skills, strategies & process
· What students will be able to do
Content Learning Standards
· Topics
· What students will know

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EngLangArts8
MediaDesign12
PowerTech10
Drafting10
LitStudies10
BusCompApp12
CompProgram12
CreativeWtg10
Woodwk12
Textiles12
EngLangArts4
Robo11
DigMediaDev12
DigitalComm11
EngLangArts6
FashInd12
Entrepr12
ADST5
MediaDesign11
CulArts11
MediaDesign10
Engine&Drivetrain12
FoodStudies10
Furn&Cab12
Elect11
ADST9
Econs12
Textiles11
NewMedia10
R.O.&Drones12
Food12
AutoTech11
Drafting11
Robo12
Metalrk12
FinAccountg12
ADST3
Tourism11
Woodwk11
CompStudies10
DesignProcess(K-12)
E-Comm12
SpecFood12
CulArts12
TechExpl10
ADST1
Accounting11
Mechatr12
ADST2
ADST4
CompInfoSys11
Metalwk11
ADSTK
IndCod&Design12
GraphicProd11
Writing10
Electronics12
ADST7
H&LEnviro12
Market&Promo11
WebDev10
ADST8
ADST6
Engineering12
Engineer11
Tourism12
Elect&Robo10
CompProg11
EngLangArts5
Textiles10
Composition10
Drafting12
Account12
EngLangArts9
Mach&Weld12
CulinaryArts10
IPR&FamRel11
EngLangArts7
Metal&Jewe12
Food11
ChildDev&Care12
AutoTech12
CompInfoSys12


Math6
EngLangArts6
CreativeWtg10
Woodwk11
MediaDesign12
ADST7
SpecFood12
ADST1
Françaislangue10
Food11
Writing10
CompProgram12
Math4
Textiles10
ADST9
MathK
Arts8
Engine&Drivetrain12
CompProg11
Math10
Drafting10
Arts6
Sc6
CulArts11
Metal&Jewe12
PowerTech10
Arts7
Mechatr12
Socials4
EngFirstPeoples10
Drafting12
EngLangArts7
Socials8
Sc8
EngLangArts4
CulArts12
EngLangArts5
Socials3
Socials6
Math8
Arts1
Sc5
Arts3
Math2
Socials7
Socials5
Electronics12
Math7
Inquiry(K-12)
H&LEnviro12
ADST8
Arts9
Socials2
Robo12
ADSTK
Metalwk11
FashInd12
IPR&FamRel11
Sc7
ArtsK
FinAccountg12
Fam&Society10
Metalrk12
Arts4
AutoTech11
Arts10
Sc10
Furn&Cab12
AutoTech12
Sc9
Math3
ADST6
Mach&Weld12
ADST5
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DigitalComm11
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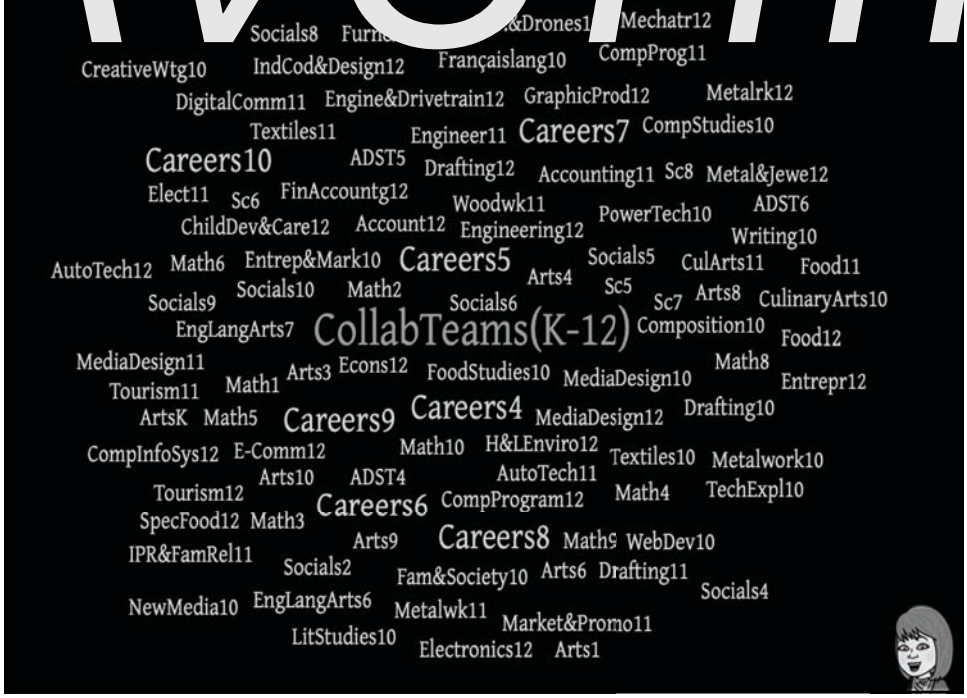
Textiles11
LitStudies10
MediaDesign11
Engineer11
Socials10
Math9
Elect&Robo10
Math1
EngLangArts9
R.O.&Drones12
Math5
IndCod&Design12
GraphicProd12
EngLangArts8
TechExpl10
Tourism11
WebDev10
Socials9
Woodwk12
Sc4
ADST3
Accounting11


Socials8
Mechatr12
CreativeWtg10
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Françaislang10
CompProg11
DigitalComm11
Engine&Drivetrain12
GraphicProd12
Metalrk12
Textiles11
Engineer11
Careers7
CompStudies10
Careers10
ADST5
Drafting12
Accounting11
Sc8
Metal&Jewe12
Elect11
Sc6
FinAccountg12
Woodwk11
PowerTech10
ADST6
ChildDev&Care12
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Socials2
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Arts6
Drafting11
Socials4
NewMedia10
EngLangArts6
Metalwk11
Market&Promo11
LitStudies10
Electronics12
Arts1

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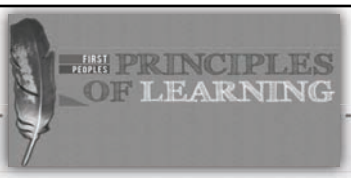
Learning includes:



- family and community members
- relationships with the surrounding community
- cross-curricular learning experiences
- experiential learning
- relevancy
- choice and flexibility in activities
- skills for effective self-reflection
- collaborative and cooperative opportunities
- mentoring peers
- multiple access points
- multiple ways to represent th[illegible]rning

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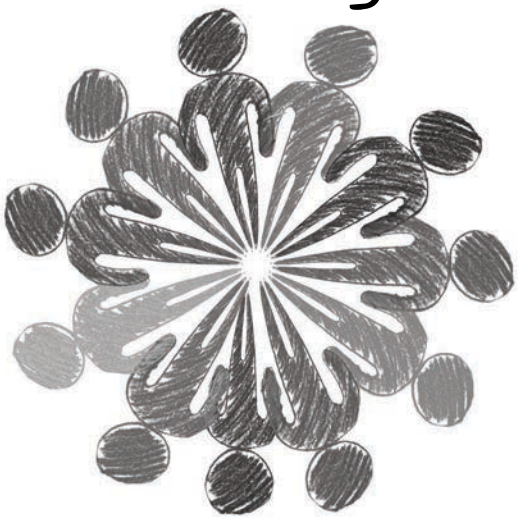
Building



Collaborative Teams

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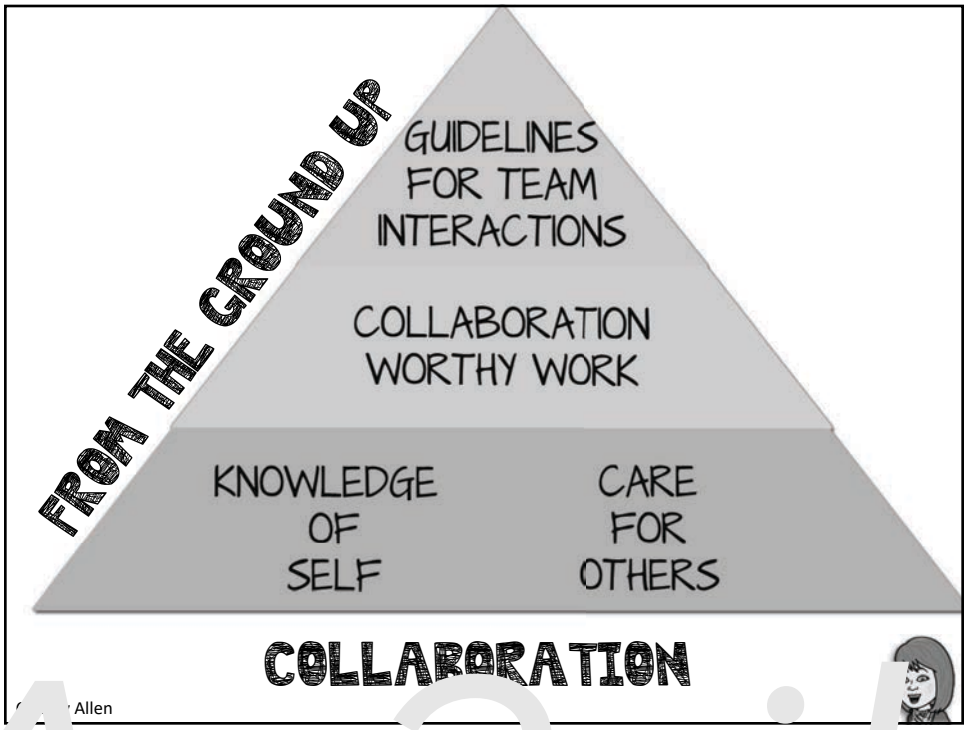
CAUTION

"Students are working in teams during this project, so that's collaboration"



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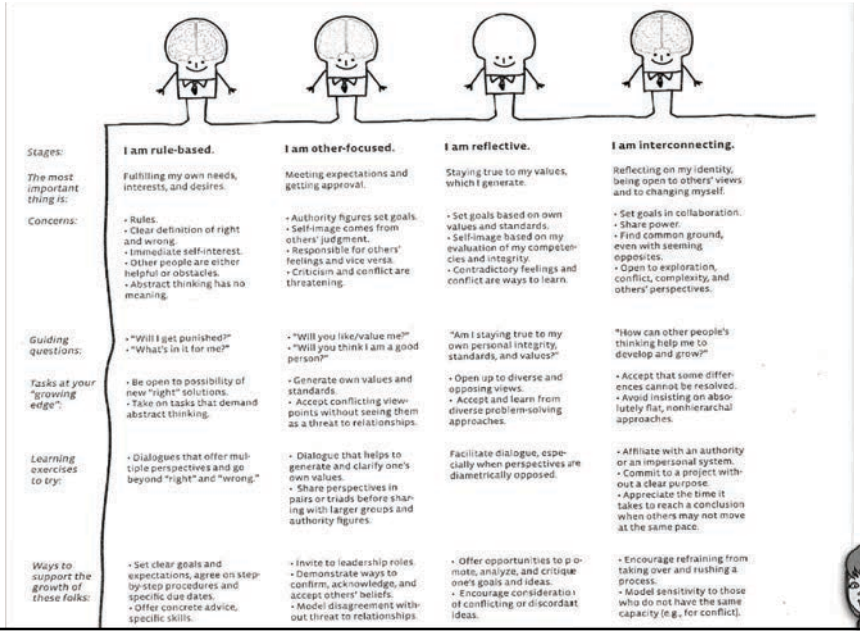
Understanding Self/Team Members



Stages:	I am rule-based.	I am other-focused.	I am reflective.	I am interconnecting.
The most important thing is:	Fulfilling my own needs, interests, and desires.	Meeting expectations and getting approval.	Staying true to my values, which I generate.	Reflecting on my identity, being open to others' views and to changing myself.
Concerns:	• Rules. • Clear definition of right and wrong. • Immediate self-interest. • Other people are either helpful or obstacles. • Abstract thinking has no meaning.	• Authority figures set goals. • Self-image comes from others' judgment. • Responsible for others' feelings and vice versa. • Criticism and conflict are threatening.	• Set goals based on own values and standards. • Self-image based on my evaluation of my competencies and integrity. • Contradictory feelings and conflict are ways to learn.	• Set goals in collaboration. • Share power. • Find common ground, even with seeming opposites. • Open to exploration, conflict, complexity, and others' perspectives.
Guiding questions:	• "Will I get punished?" • "What's in it for me?"	• "Will you like/value me?" • "Will you think I am a good person?"	"Am I staying true to my own personal integrity, standards, and values?"	"How can other people's thinking help me to develop and grow?"
Tasks at your "growing edge":	• Be open to possibility of new "right" solutions. • Take on tasks that demand abstract thinking.	• Generate own values and standards. • Accept conflicting viewpoints without seeing them as a threat to relationships.	• Open up to diverse and opposing views. • Accept and learn from diverse problem-solving approaches.	• Accept that some differences cannot be resolved. • Avoid insisting on absolutely flat, nonhierarchal approaches.
Learning exercises to try:	• Dialogues that offer multiple perspectives and go beyond "right" and "wrong."	• Dialogue that helps to generate and clarify one's own values. • Share perspectives in pairs or triads before sharing with larger groups and authority figures.	Facilitate dialogue, especially when perspectives are diametrically opposed.	• Affiliate with an authority or an impersonal system. • Commit to a project without a clear purpose. • Appreciate the time it takes to reach a conclusion when others may not move at the same pace.
Ways to support the growth of these folks:	• Set clear goals and expectations, agree on step-by-step procedures and specific due dates. • Offer concrete advice, specific skills.	• Invite to leadership roles. • Demonstrate ways to confirm, acknowledge, and accept others' beliefs. • Model disagreement without threat to relationships.	• Offer opportunities to promote, analyze, and critique one's goals and ideas. • Encourage consideration of conflicting or discordant ideas.	• Encourage refraining from taking over and rushing a process. • Model sensitivity to those who do not have the same capacity (e.g., for conflict).

"A lack of clarity
will put the brakes on
any journey to success."

~Steve Marab

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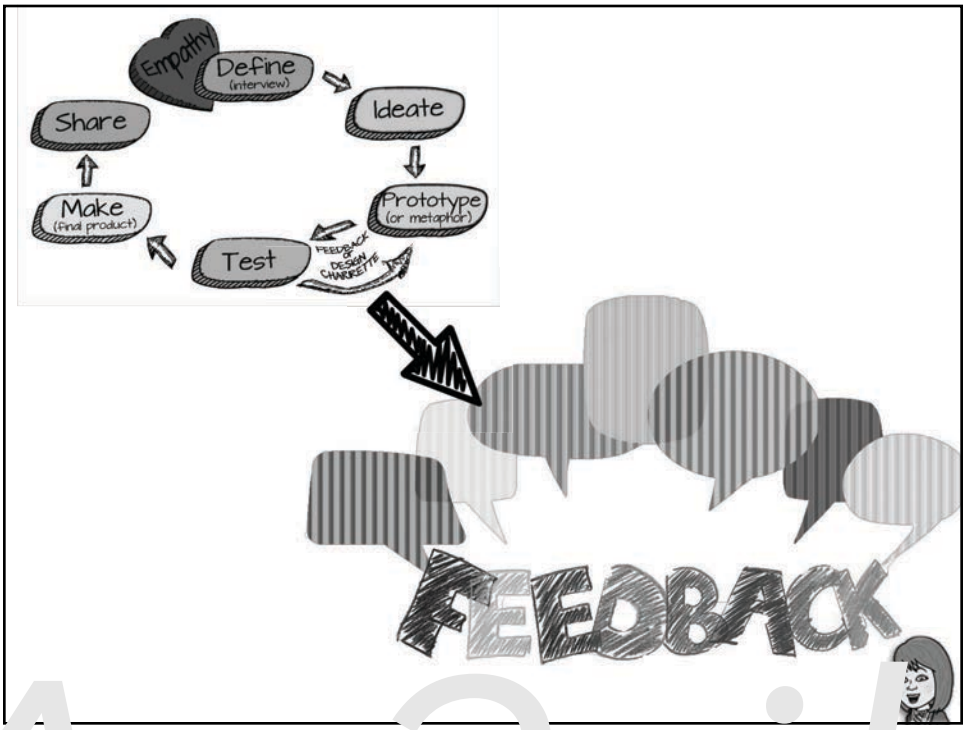
Common Team Roles

TEAM LEADER • Establishes and runs team meetings • Sets and monitors goals & agreements and redirects team, as needed • Delegates tasks and divides work, as needed • Mediates conflict between team members • Encourager *Key Trait: Relationship-oriented*	**RESEARCH LEAD** • Goes outside of provided materials to gather and share useful information. • Focuses on "supporting on the sidelines" • Helps team overcome obstacles and roadblocks. • Collects, maintains and uses the Team Need to Know List to drive work *Key Trait: Resourceful*	**ORGANIZATIONAL LEAD** • Keeps time during activities and phases of design • Maintains a schedules and tracks progress toward goals and milestones • Keeps track of materials • Organizes and maintains team documents *Key Trait: Detail-oriented*
DESIGN LEAD • Directs team to use the design process. • Tracks team's use of each phase of design • Gathers team perspectives, makes key design decisions *Key Trait: Process-oriented*	**ARCHIVIST** • Archives team's work in progress, drafts and prototypes • Takes photos and videos of work in progress • Captures quotes, moments & process *Key Trait: Reflective*	**CURATOR** • Focuses on how work will be displayed at the end • Pays attention to detail without losing sight of the big picture • Collaborates with other curators to ensure continuity of work curating at the end • Consults with team on during project *Key Trait: Visionary*



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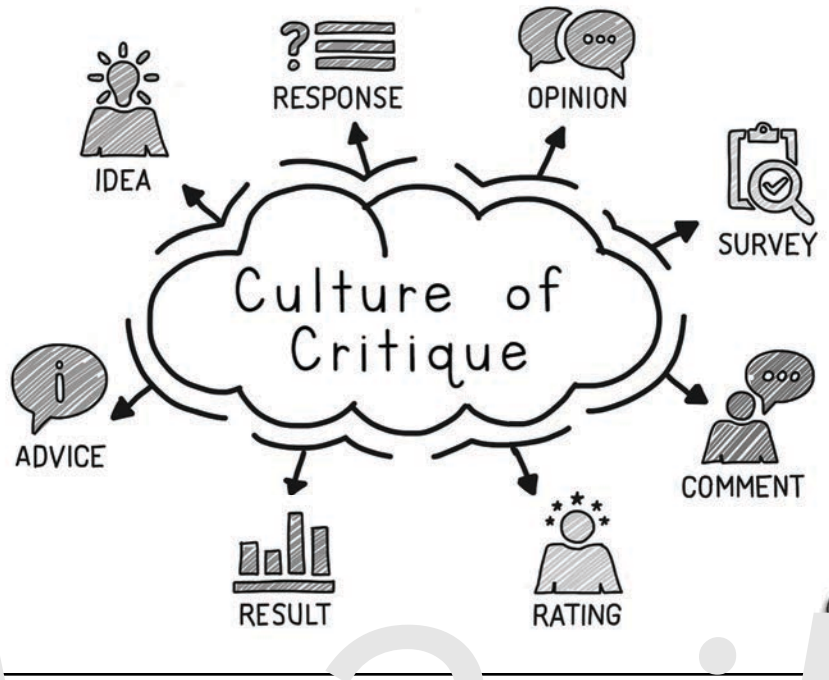
seeking

and

acting on feedback

CAN BE HARD



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Critical Friend …
Friendly Feedback …

can TRIGGER anyone

TRIGGERS

1. TRUTH
   - 😟 That's wrong!
2. RELATIONSHIP
   - 😟 Who are you to say that? You're the problem, not me.
3. IDENTITY
   - 😟 This doesn't match my story of self. I feel threatened.

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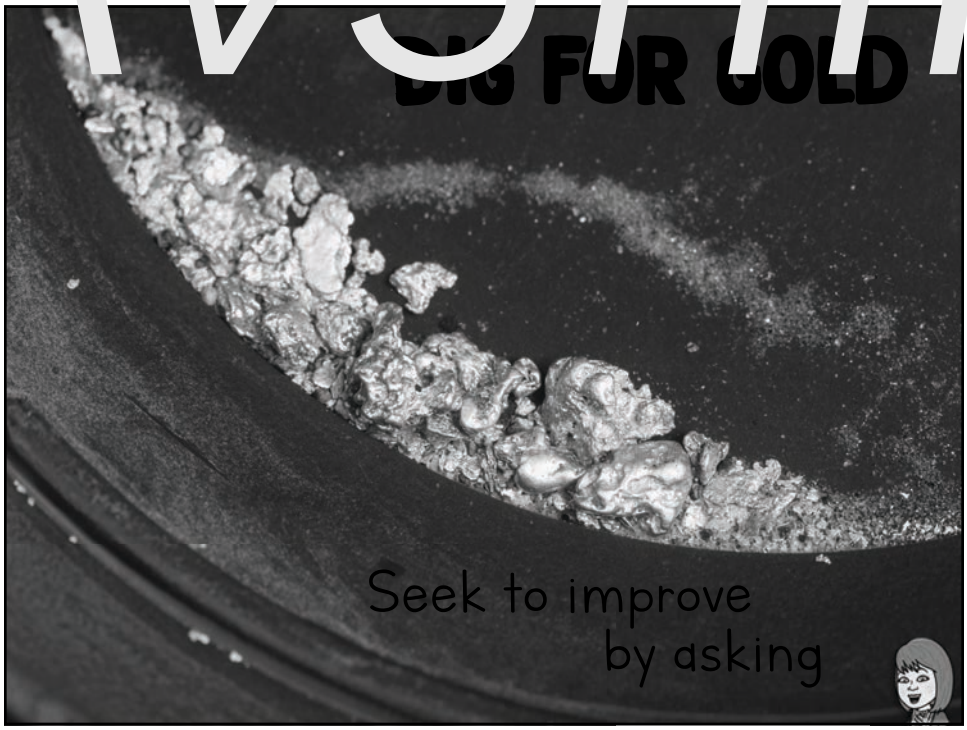

POTENTIAL ROADBLOCKS

- A hyper focus on curriculum CONTENT
- Acknowledgement of Aboriginal Ways of Learning instead of CONCRETE OBJECTS Like CEDAR CANOES
- Cross curriculum approach instead of SILOS
- Collaborative teams instead of GROUP WORK
- Culture of Critique instead of FIRST DRAFT IS FINAL DRAFT

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WHAT WE ARE LEARNING:

(OUR LEARNING INTENTIONS)

1. Recap of ADST
2. How ADST Connects
3. Group Think

Each table should have 6 people

- Coordinator
- Timer
- Mediator
- Recorder.
- Curator
- Monitor

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1. Each person at table take 2 stickie notes from center pack.
2. Write one roadblock of the ADST curriculum on each note

3

3. Put all the completed stickie notes into one pile
4. Curator takes this pile to the table that is one number higher than yours

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5. Each group member chooses 2 stickies & reads I aloud circling the table twice
6. Members explore the item & generate assumptions (record assumptions on the stickie note) Example...

(Roadblock)
Implementing ADST requires effective classroom management

(Assumptions)
- Classroom Management requires structures
- Teachers need to teach routines to students
- Routines should be developmentally appropriate

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5. Each group member chooses a stickie & reads it aloud
6. Members explore the item & generate assumptions (record assumptions on the stickie note)

....there may be duplicates

MEDIATOR & TIMER

12

5. Team determine the top 3 roadblocks discussed

2

MONITOR & TIME

For each of the 3 chosen:

6. On chart paper identify the challenge, assumption, implication & possible solution(s)

Example.....

RECORD

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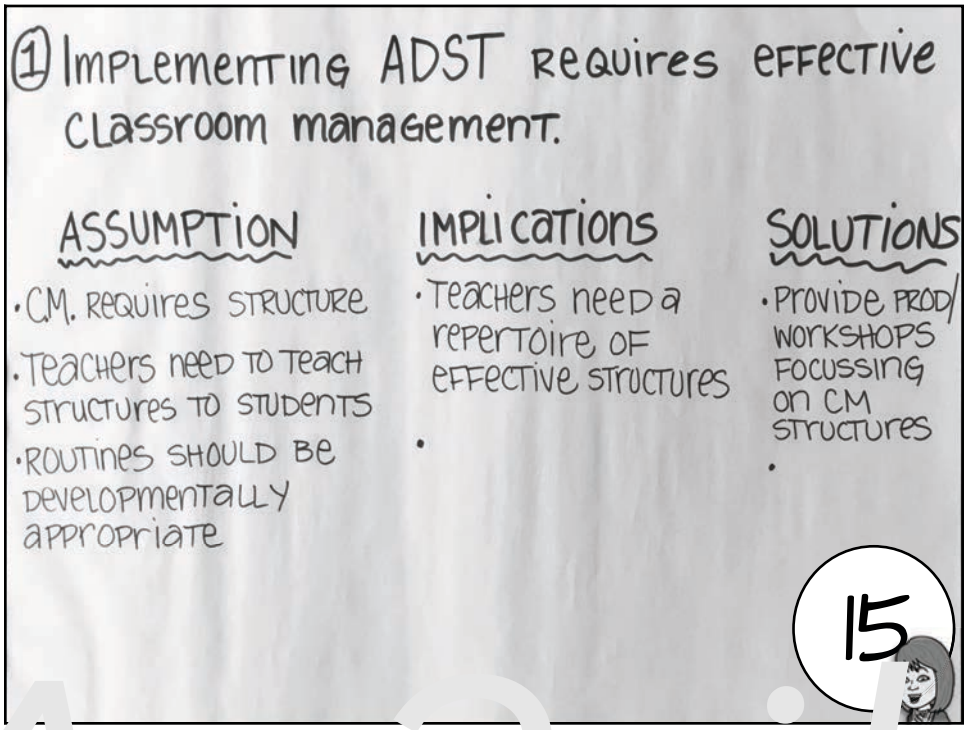
① Implementing ADST requires effective classroom management.
ASSUMPTION
• CM. requires structure
• Teachers need to teach structures to students
• Routines should be developmentally appropriate
IMPLICATIONS
• Teachers need a repertoire of effective structures
SOLUTIONS
• Provide PROD/ workshops focussing on CM structures
15


7. Display your team's charts
8. Individually walk around the room, reading other team charts, adding your own 'stickie' feedback:
I like ____ because _____
I wonder _____
A SILENT EXPERIENCE
8

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9. Return to team table.
10. As a team, review the feedback. Adjust your charts based on feedback.

CO[illegible]ATOR & TIMER

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10. Curator take photos of team chart(s) and email to Sandra: saverill@sd35.bc.ca

CURATOR & TIMER

https://k12adst.weebly.com

ADST PRESENTATIONS

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SUCCESS WILL LOOK LIKE:

Teams will identify ADST roadblocks,
and will work collaboratively in
determining possible solutions

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