

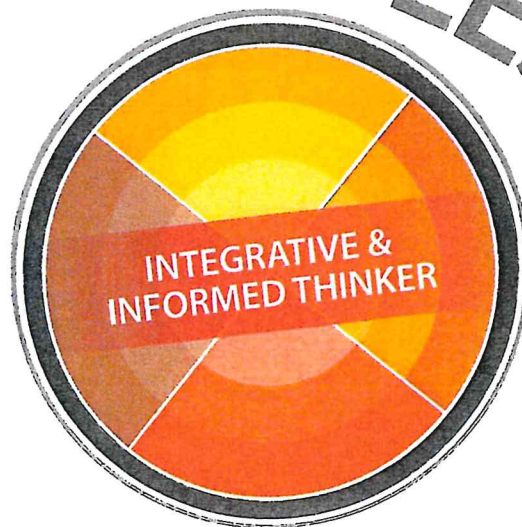


# UNDERSTANDING MAINE'S



# GUIDING

# PRINCIPLES





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# AN INTRODUCTION

## TO DEVELOPMENTAL FRAMEWORKS FOR MAINE'S GUIDING PRINCIPLES

The competency-based diploma legislation passed in 2011 requires that students demonstrate proficiency in the Guiding Principles. School systems are actively preparing for this new requirement, set to take effect in 2018. Through early efforts to develop rubrics and other materials to help educators translate the Guiding Principles into practice, it became clear that a common understanding of the Guiding Principles was a critical first step. The Guiding Principles and their descriptions set a vision for student success in careers and college, yet the distribution of roles and responsibilities across disciplines remained unclear. The enclosed Frameworks were created to convey the knowledge, skills, and dispositions embedded in the Guiding Principles by describing ways students could, and may already, exhibit the hope and intentions behind them.

### PURPOSE OF FRAMEWORKS

The Guiding Principle Frameworks are not a one-stop solution to help students develop these important skills; nor do they replace Guiding Principle resources already created in some of Maine's leading schools and districts. Instead, the frameworks convey the spirit of each Guiding Principle and allow educators to consider many ways that Maine students show this spirit, whether through class projects, school activities, interactions with peers, or their efforts beyond school walls. Building a shared understanding of the Guiding Principles is a key first step toward celebrating such demonstrations of skill and ensuring that every student has the opportunity and support to develop these critical abilities.

It is important to note that these frameworks were not designed as classroom-ready rubrics. Instead, each framework describes increases in the complexity of a learner's skills and behaviors, based on research about the development of expertise. Unlike the journey toward becoming a professional musician, expert scientist, or Nobel laureate, rubrics are designed to capture performance at a single instance or comparative performance over shorter periods of time. Advanced skills, whether developing software programs or baking award-winning cakes at national competitions, require thousands of hours to tinker, explore, test, and succeed, but also to learn from failure. Skill development is dependent on scaffolding and support from mentors with more developed skill sets. The frameworks describe types of behaviors reflective of the spirit of the Guiding Principles that learners could develop over years of actively engaging challenges within a supportive environment.

### USING THE FRAMEWORKS

The frameworks encourage educators to consider the environments and learning opportunities needed to position students for success. Context-neutral language allows educators to examine how the Guiding Principles support the development of discipline-specific knowledge and skills, raising questions such as, "In what ways is creative and practical problem solving essential in theater, literary

arts, physical education, or history? How does development of this Guiding Principle in each discipline help students prepare for challenges in careers and day-to-day life?" The nature of the developmental progressions also encourages cross-level discussions around expectations for Guiding Principle development from early childhood through high school. Cross-level teams might consider, "What range of development do students currently display as they enter primary grades? What does this developmental range look like for students now entering high school?" Through these conversations, educators can celebrate ways the Guiding Principles are already being cultivated and demonstrated within each discipline and grade, and identify opportunities and avenues to further enhance students' skill sets.

## FRAMEWORK DEVELOPMENT

Researchers at the Educational Policy Improvement Center (EPIC) examined the Guiding Principles to identify applicable fields of research in which to target its literature review. Next, EPIC researchers identified common areas of overlap that informed components for each Guiding Principle and the component definitions. Initial definitions were revised through the suggestions and insights of Maine Department of Education content-area specialists, the Proficiency-based Education Specialist, and the Director of Standards and Instructional Supports. Researchers applied aspects of each component definition across a developmental progression to reflect changes in how learners approach a task and changes in the complexity of behaviors that develop through tinkering, focused practice, and acquiring strategies while engaging one challenge after another. Through a series of regional meetings, educators across the state provided additional feedback on the components, progressions, and overall language that steered each framework into its current form.

### *Foundational Concepts*

**RESEARCH BASE.** Supporting research, theories, and models were drawn from fields relevant to each Guiding Principle (e.g., the fields of global competence, citizenship, and civic engagement informed A Responsible and Involved Citizen). Within these fields, researchers focused on sources that provided a definition, identified aspects, or described how skills develop. EPIC identified common areas of overlap across the literature base that informed components for each Guiding Principle and the component definitions.

**COMPONENTS OF A WHOLE.** Each Guiding Principle is a complex combination of multiple skills at work. These skills serve as essential elements with unique qualities that when combined represent the complex nature of a Guiding Principle. Identifying these supporting skills as a set of components conveys the interdependence of key skills and makes the spirit of each Guiding Principle visible. Components can support the ability of educators and students to set learning goals along a path of continued growth.





*(Image by Lench, Fukuda, Anderson (2015) with permission from the Center for Innovation in Education, Lexington, KY)*

**DEVELOPMENTAL APPROACH.** Components derived from the literature were applied to a model of novice-to-expert skill acquisition (Dreyfus & Dreyfus, 1980, 2005). The Dreyfus model of skill acquisition describes changes in skill performance as moving from reliance on rules, to analysis, toward intuition based on past experience. Growth is fostered first through tinkering, then exploration, focused investigation, all leading to fluid expression of enhanced skill sets. Five stages of development within the Dreyfus model reflect these changes over many years and thousands of hours of active engagement and learning from failure. The Guiding Principle Frameworks capture similar changes in ability across four milestones, ending with emerging expert, in recognition of the continued development that occurs beyond the K–12 system and learners’ increased personal awareness of even more ways to grow.

**ACTIVE LEARNING.** Even young learners can begin to develop the Guiding Principles through scaffolded engagement. By mimicking the behaviors of others and responding to prompts with encouragement and support, beginners as well as more experienced learners can be active agents in their own development.

**EMBEDDED METACOGNITIVE ASPECTS.** Fields of study ranging from cognitive psychology to neuroscience are increasingly recognizing the role that metacognition plays in learning and skill development. Metacognitive aspects embedded within the progressions of the Guiding Principle Frameworks highlight the active reflection, monitoring, and adapting that learners engage in to improve their performance, learn, and grow from past experience.

CONTEXT DEPENDENCY. The strength of a learner's performance depends on their experience with both the task itself and the context of performance. A wealth of relevant experience allows an emerging expert to rely on informed intuition, yet the same individual will turn to analysis in less familiar situations. The role of relevant experience has implications for interpreting a learner's performance, understanding existing assumptions about applying skills across contexts, and identifying the types of opportunities learners need for success. Learners with a wealth of experience applying a Guiding Principle in one domain will still require many practice opportunities in other domains and with real-world situations in order to be successful. Likewise, evaluating a learner's performance requires consideration of the opportunities the learner has had to truly engage in Guiding Principle skill development.

Through engagement and opportunities to learn from challenges and failure, learners grow in how they approach and engage a task, the ways in which they involve others, what they are able to perceive, and the extent to which they can transfer a specific skill. Highlights of these types of growth are described in Figure 1.

		ADVANCED BEGINNER	STRATEGIC LEARNER	EMERGING EXPERT
EXPERIENCE	Is new to task and context.	Is familiar with specific task and context.	Completes different forms of task in related contexts.	Experiences wide variations of task in different contexts.
APPROACH	Follows directions.	Understands and follows rules.	Analyzes situations to plan an approach.	Acts on intuition, but turns to analysis in unfamiliar contexts.
ENGAGEMENT	Tinkers with and mimics modeled behaviors.	Purposefully explores through trial and error.	Refines approach by testing in unfamiliar situations.	Seeks connections to other contexts to broaden abilities in own field.
ROLE OF OTHERS	Responds to guidance.	Looks to others for support.	Selectively draws on the expertise of others.	Organizes collaborative engagements to enhance approach and outcomes.
TRANSFER	Learns to use skills within a controlled context.	Uses known steps to complete similar tasks.	Identifies familiar aspects of tasks in unfamiliar contexts to draw on relevant strategies.	Looks for connections in other areas and tailors application of skills.
PERCEPTION	Considers what is presented.	Discovers patterns.	Identifies relationships.	Anticipates consequences, noticing antecedents and what is missing.

Figure 1. Changes in behavior from active engagement and experience.

(Figure by Lench, Fukuda, Anderson (2015) with permission from the Center for Innovation in Education, Lexington, KY)



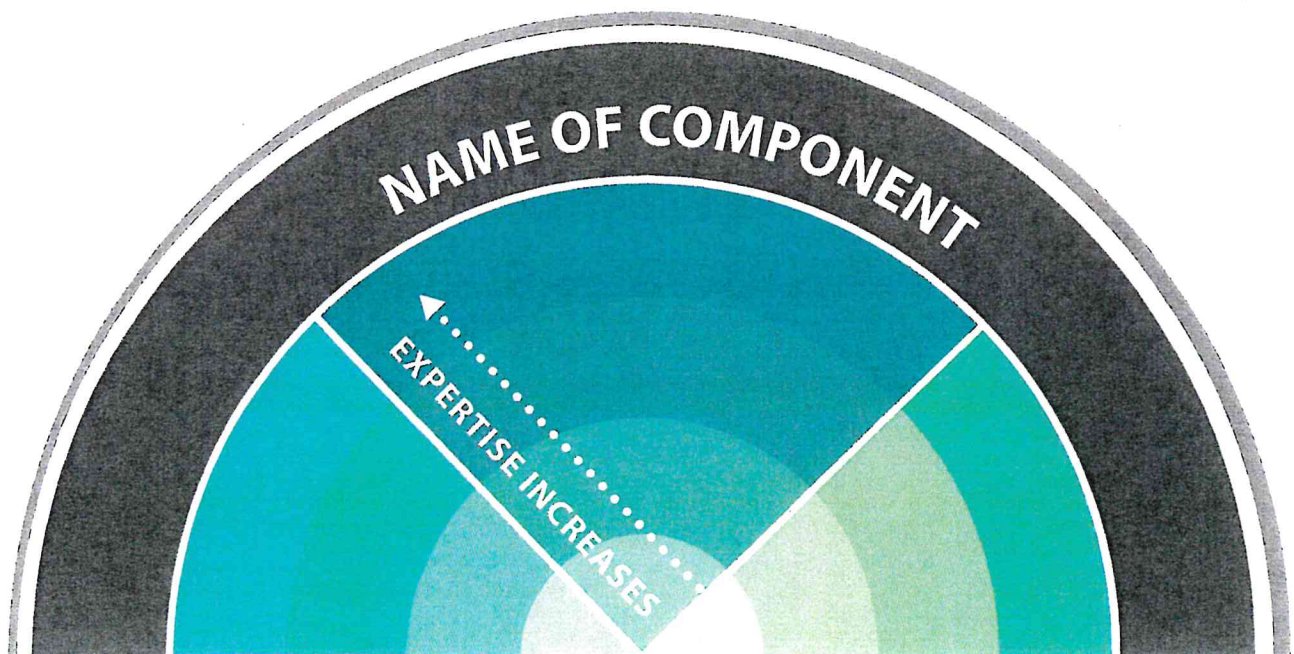
### *Structure of the Guiding Principles Frameworks*

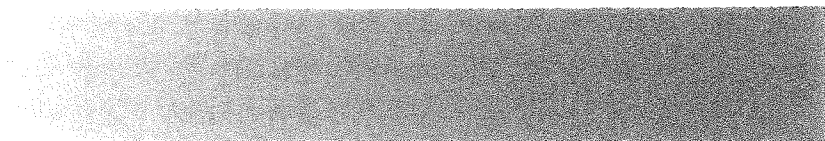
LAYOUT. The following pages present component progressions for each Guiding Principle. As seen below, components are presented as pieces of a whole. The component of focus on each page is situated at the bottom of the circle, with markers moving from the center outward to represent a progression in abilities that students develop with productive experience. Each marker points toward a corresponding progression box which describes behaviors for that component that might be expected of learners given that level of experience.

### *Reflection Questions*

While reading the frameworks consider the following questions:

- What is exciting and what challenges your interpretation of the Guiding Principles?
- What opportunities have you had to engage components of the Guiding Principles in your professional practice?
- Where do you see the components of Guiding Principles within existing learning opportunities for students?





# CLEAR & EFFECTIVE COMMUNICATOR

## 4 Components

Whether communicating via social media, dance, formal presentations, or casual discussions with peers, the context in which communication takes place and associated norms drive the success of conveying a message and interpreting meaning. Progressions for each of the components below reflect critical pieces to being a Clear and Effective Communicator.

### CONTEXT & MESSAGE:

Reflecting on past communication experiences, strengths, and challenges.

Attending to context, source or audience, word choice, and mode of communication when creating and interpreting messages. Understanding that different norms exist in different contexts.

### DEVELOPING APPROACH:

Choosing format and organizing ideas to engage others. Practicing techniques and seeking feedback to learn new conventions and refine approach.

### MAKING MEANING:

Drawing on compelling examples to help an audience construct meaning from the message. Analyzing received messages for implicit and explicit meaning, validating accuracy of own interpretation.

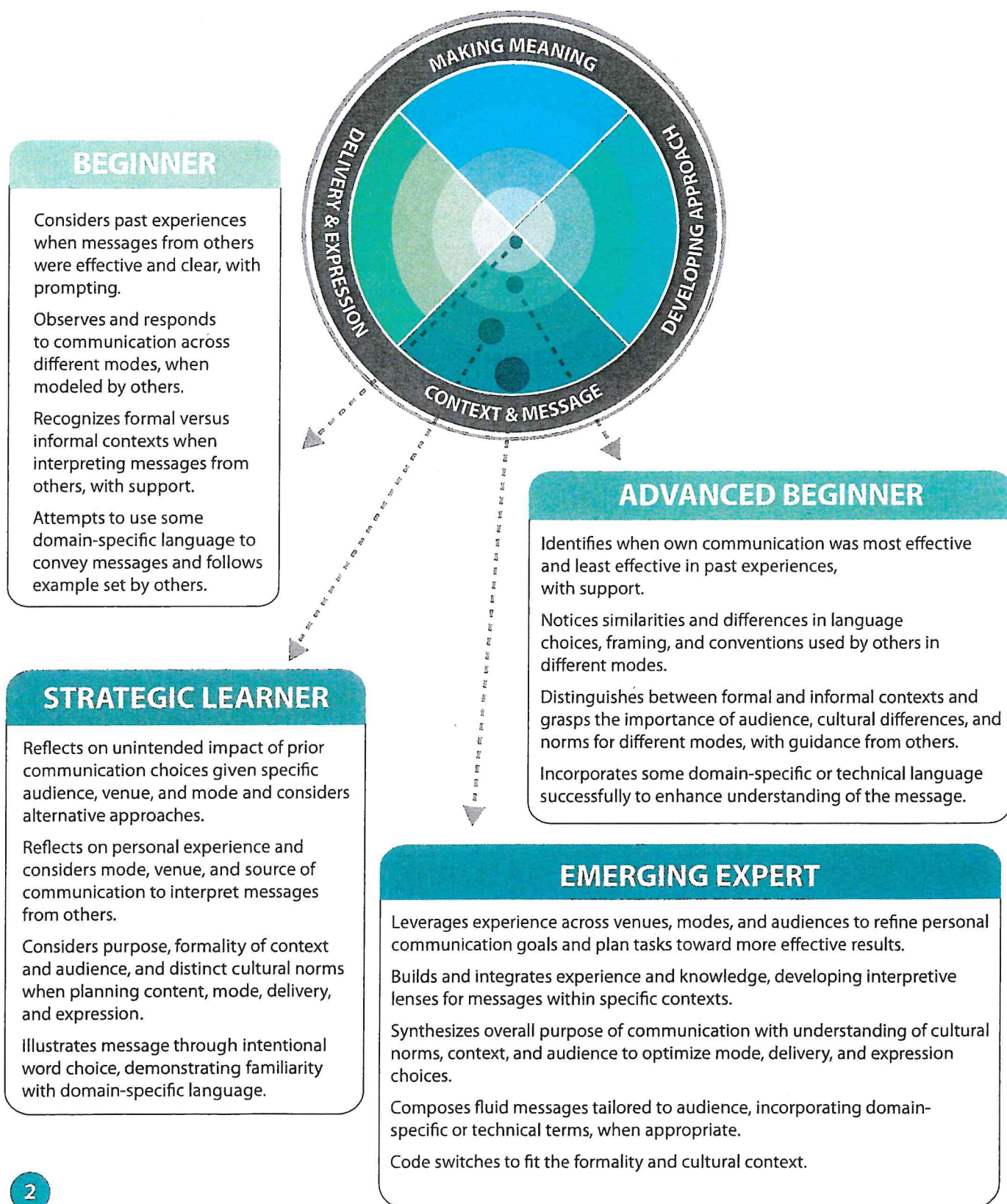
### DELIVERY & EXPRESSION:

Attending to body language, tone, and volume, as appropriate, to interpret and convey meaning. Regulating engagement, emotional response, and responding to nonverbal cues of others. Cultivating and celebrating own style.



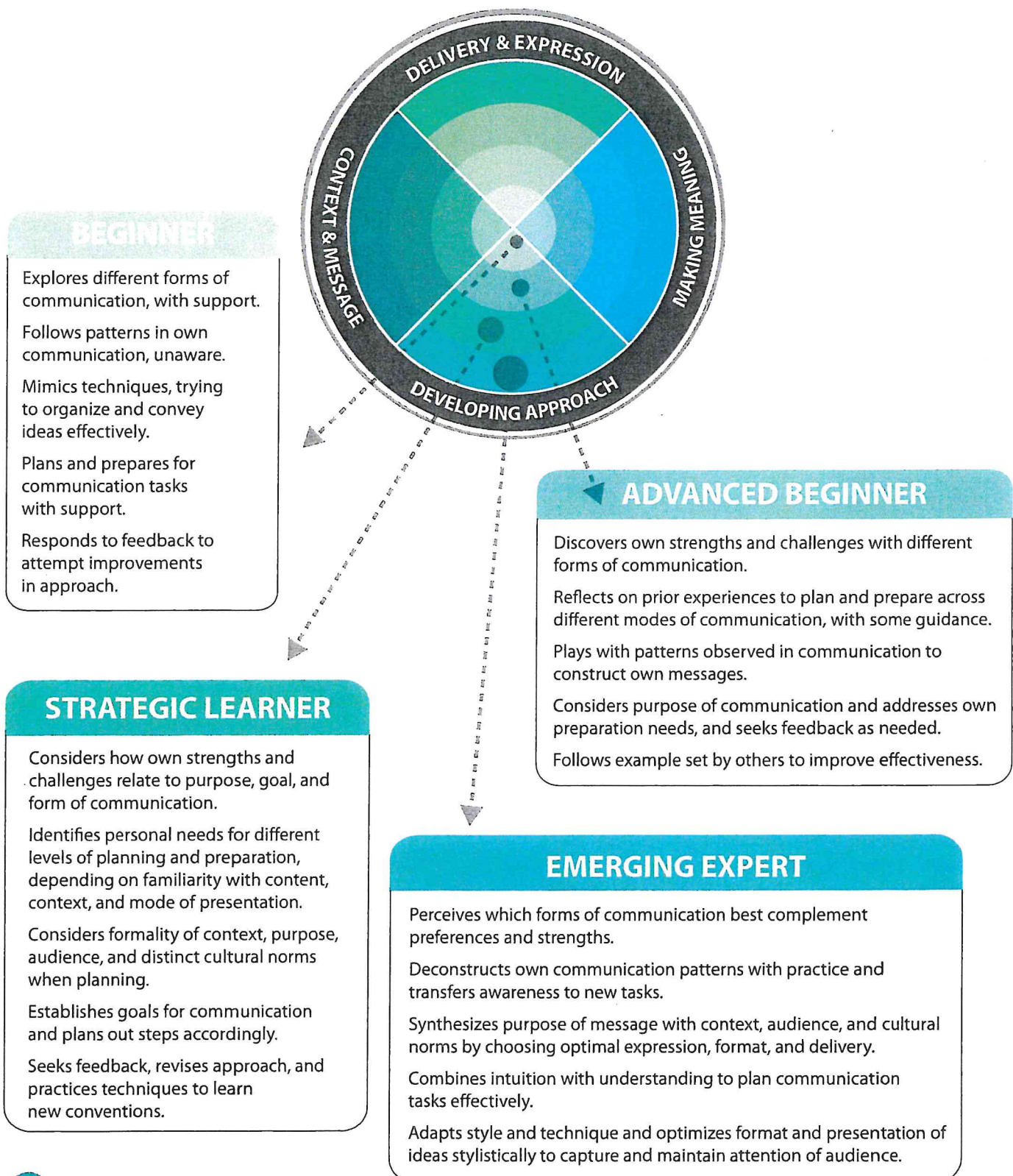
## CONTEXT & MESSAGE

*Reflecting on past communication experiences, strengths, and challenges. Attending to context, source or audience, word choice, and mode of communication when creating and interpreting messages. Understanding that different norms exist in different contexts.*



# DEVELOPING APPROACH

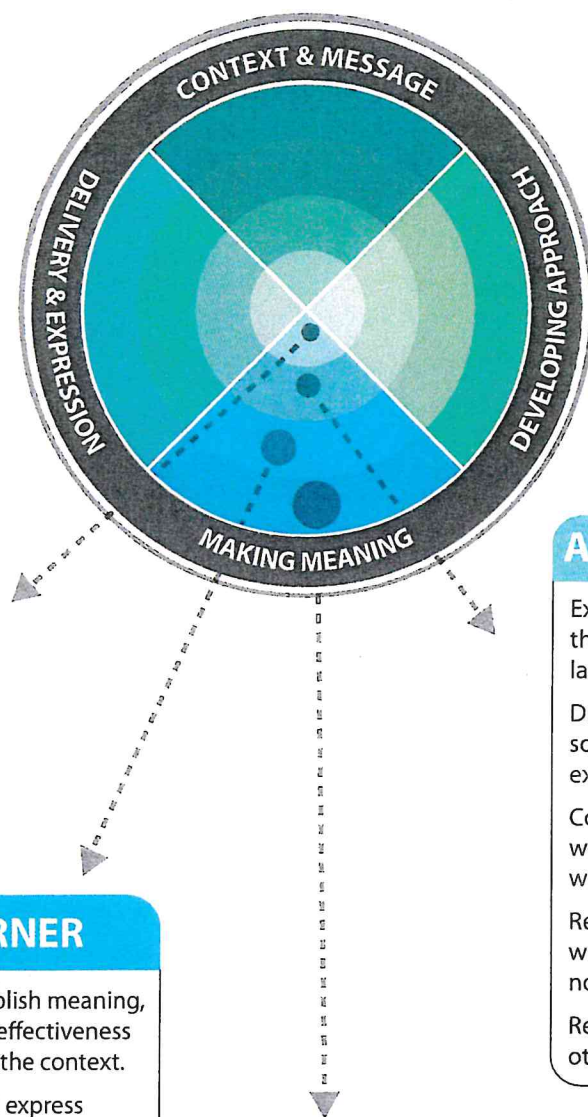
*Choosing format and organizing ideas to engage others. Practicing techniques and seeking feedback to learn new conventions and refine approach.*





# MAKING MEANING

*Drawing on compelling examples to help an audience construct meaning from the message. Analyzing received messages for implicit and explicit meaning, validating accuracy of own interpretation.*



## BEGINNER

Depends on personal experiences to convey meaning of own message to others.

Restates evidence to support own meaning without considering the intended effect.

Understands the explicit meaning conveyed by others and grasps some implicit meaning, with support.

Notices gaps in own understanding and asks questions for clarification.

Shares personal perspective and tries to connect to the views of others.

## ADVANCED BEGINNER

Explores ways to convey meaning through information shared and language choices made.

Draws on relevant and familiar sources of information and personal experiences to support meaning.

Comprehends implicit meaning within word choice of others, with support.

Receives messages and identifies where interpretation is supported or not in the evidence provided.

Recognizes different viewpoints of others and connects to own.

## STRATEGIC LEARNER

Chooses effective format to establish meaning, evaluates quality of sources and effectiveness of examples, and justifies use for the context.

Incorporates related sources that express nuances of meaning and repeats key information to make the message memorable to a diverse audience.

Analyzes messages from others and looks for explicit and implicit meaning.

Evaluates own interpretation and understanding of message against range of information received (e.g., tone, word choice).

Initiates engagement with others to validate accuracy of interpretation and to clarify gaps in understanding.

## EMERGING EXPERT

Tailors format to enhance presentation of own ideas, engage different audience members, respond to cultural norms, and clarify meaning.

Synthesizes supporting evidence in coherent and logical organization that optimizes message and evokes desired response from audience.

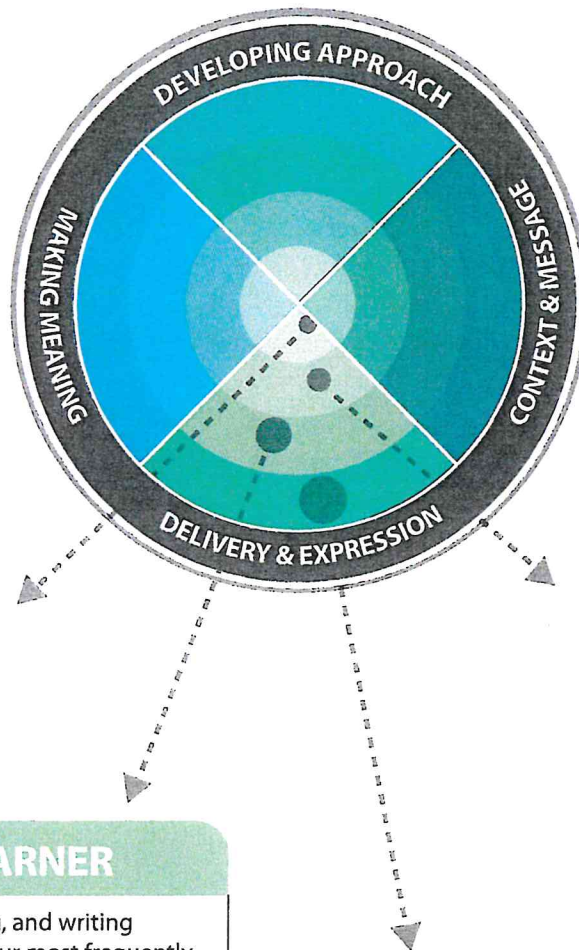
Interprets both intended and unintended meaning by diagnosing word choice and phrasing within received messages, intuitively.

Discerns credible and relevant sources of information and identifies the limitations of current knowledge in a domain when interpreting the messages of others.

Synthesizes alternative perspectives with own to enhance clarity of meaning and overall interaction.

## DELIVERY & EXPRESSION

*Attending to body language, tone, and volume, as appropriate, to interpret and convey meaning. Regulating engagement and emotional response. Responding to nonverbal cues of others. Cultivating and celebrating own style.*



Recognizes how body language, tone, and delivery affect audiences differently, when modeled and identified by others.

Reflects on own level of engagement and emotional response, with feedback.

Relies on observations and feedback from others to adjust body language, eye contact, pace, and volume of speech or technique in writing.

Notices overt body language, tone, and expression of others.

Follows expectations in attempt to convey purpose, using basic conventions.

Tinkers with new forms of expression and techniques toward to explore own style.

### STRATEGIC LEARNER

Is aware of own speaking, listening, and writing tendencies and when patterns occur most frequently.

Regulates own emotions using strategies developed through experience.

Identifies and responds to nonverbal cues of others, adapting approach to enhance engagement.

Intentionally attends to body language, tone, and style of others for added meaning and to inform own approach.

Organizes presentation of ideas to intentionally keep others engaged and attempts to control eye contact and posture.

Chooses effective mode of presentation, use of genre, and formal and informal language conventions to convey idea or purpose.

Chooses tone and figurative language and techniques to persuade audience.

Experiments with own style and technique to convey ideas.

### ADVANCED BEGINNER

Understands the impact of personal tendencies in communication, when identified by others.

Monitors engagement and considers ways to increase involvement.

Notices and tinkers with approaches used by others to manage emotions, change demeanor, and engage audience when message is not clear.

Considers possible interpretations within the expression of others.

Understands how different modes of communication require different skills and are appropriate for different occasions.

Grasps appropriate use of different communication modes and domain-specific language conventions with guidance.

Develops and enjoys discovering own unique approach to expression.

### EMERGING EXPERT

Breaks up own communication patterns with disciplined practice and transfers awareness to new tasks.

Optimizes own emotions in the moment to persuade audience or elicit a desired response.

Anticipates emotional response of others and improvises to make adjustments in presentation.

Perceives tendencies in style of familiar speakers that influence own interpretation of message.

Optimizes format and presentation of ideas stylistically to capture and maintain audience's attention.

Emphasizes message and confidence through purposeful eye contact, posture, and vocal pace and volume.

Applies understanding of conventions and techniques to express ideas fluidly across modes and domains.

Adapts style and technique to capitalize on genres and presentation format.







# SELF-DIRECTED AND LIFELONG LEARNER

## 4 Components

Learning requires managing emotions, motivation, and the process toward meeting learning outcomes. Self-Directed and Lifelong Learners also draw on curiosity to spark driving questions, fuel initiative, and seek opportunities to enhance learning in new and collaborative directions as reflected in the following components and progressions.

### INITIATIVE & OWNERSHIP:

Drawing on experience and curiosity to focus learning in new directions, shaping existing opportunities to fit interests. Taking responsibility for learning and progress, sharing oversight of direction as needed.

### GOAL SETTING & STRATEGIZING:

Developing meaningful learning goals and driving questions. Establishing short- and long-term objectives, assessing needs, and identifying strategies and resources.

### ENGAGING & EVALUATING:

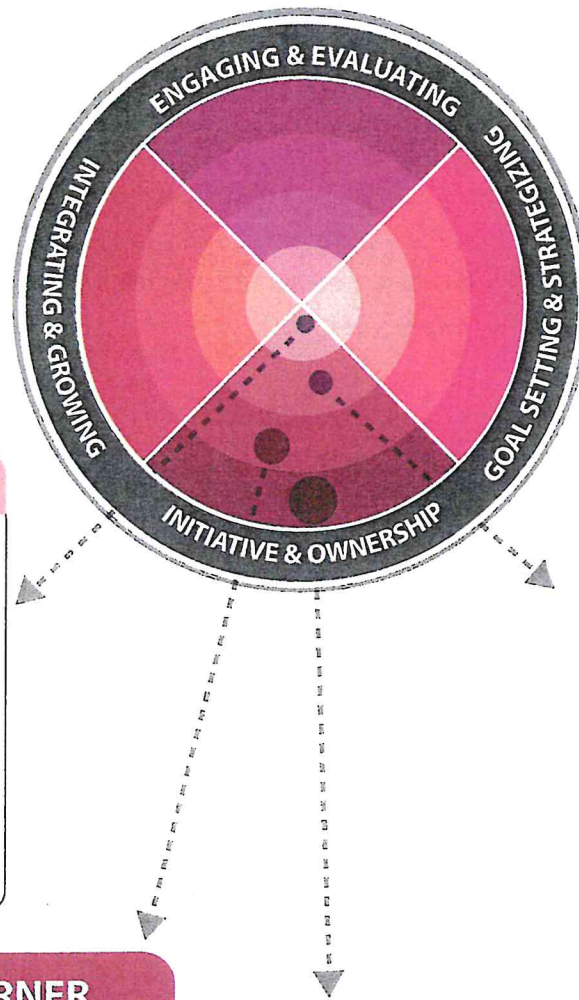
Persevering, managing time, adjusting pace and strategies, and seeking help when needed. Drawing on relevant high-quality resources to address driving questions and navigate challenges, collaborating along the way.

### INTEGRATING & GROWING:

Finding connections to prior ideas and integrating new learning and feedback to adjust understanding. Reflecting on process, finding satisfaction in growth, and considering new questions, interests, and aspirations.

# INITIATIVE & OWNERSHIP

*Drawing on experience and curiosity to focus learning in new directions, shaping existing opportunities to fit interests. Taking responsibility for learning and progress, sharing oversight of direction as needed.*



## BEGINNER

- Is willing to engage in new experiences, finding joy in learning.
- Explores personal interests through learning opportunities provided by others.
- Responds to opportunities to ask relevant questions.
- Considers constraints, resources, and expectations of others within learning task.

## ADVANCED BEGINNER

- Seizes opportunities that engage interests and is willing to learn from new, challenging experiences.
- Follows own curiosity to drive learning with little guidance.
- Finds problems and information of interest with support and insights from others.
- Recognizes own role in learning opportunities and outcomes.
- Seeks help proactively and asks questions when needed.
- Recognizes limitations, familiar resources, and externally set expectations.

## STRATEGIC LEARNER

- Purposefully pursues opportunities aligned to interests at appropriate challenge level and explores aspirations.
- Draws on experience and observations to steer learning in new directions.
- Finds value in learning opportunities different from own interests and goals.
- Takes responsibility for own learning objectives.
- Establishes and pursues driving questions to guide development and growth.
- Understands external expectations, constraints, norms, and seeks additional resources as needed.
- Cooperates with others to share control of learning directions when appropriate.

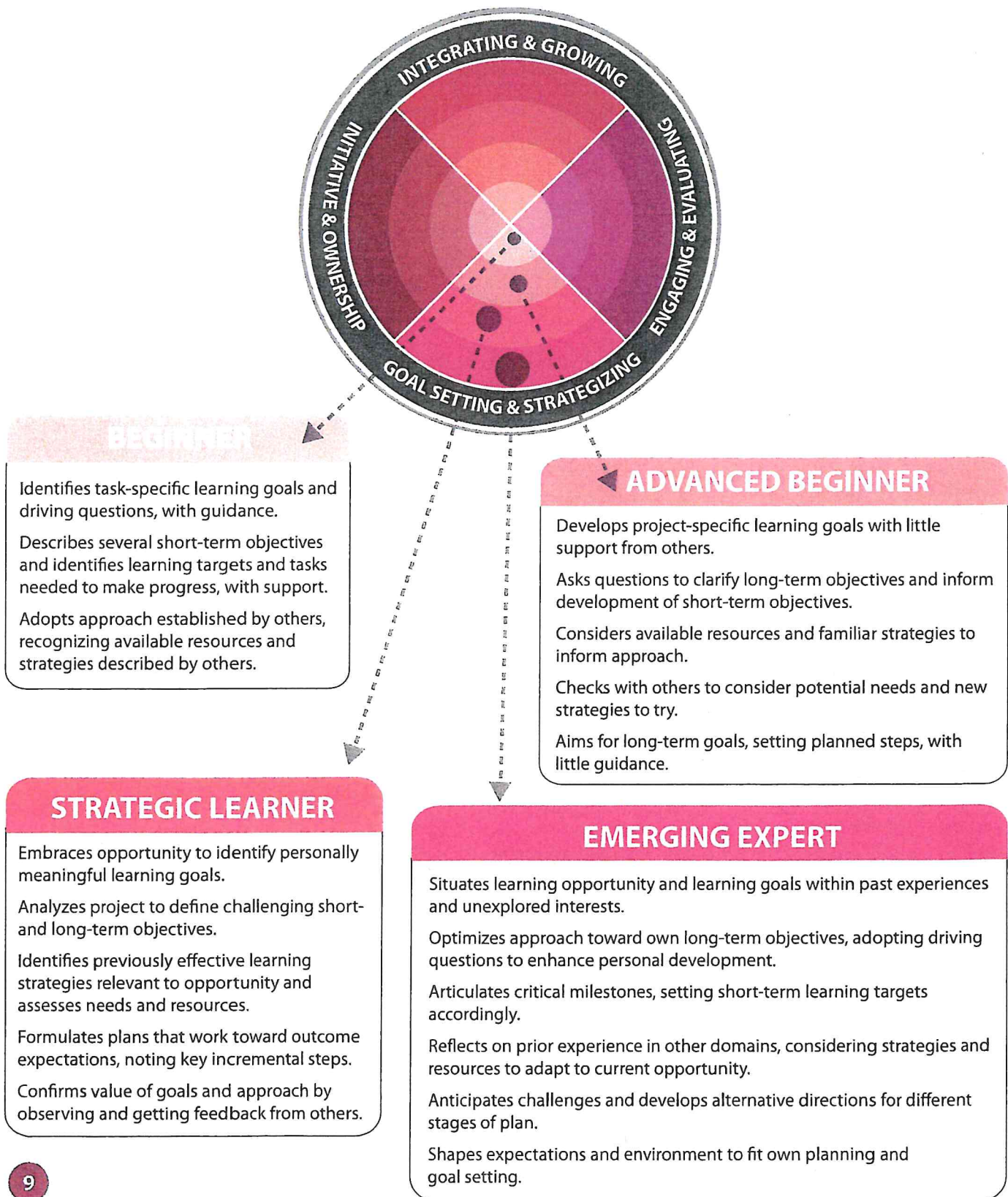
## EMERGING EXPERT

- Drives learning in new directions and independently seeks opportunities to pursue interests.
- Engages others to create opportunities aligned with own goals and aspirations.
- Redefines challenges to propel development forward in personally meaningful directions.
- Challenges constraints and pushes boundaries in ways that enhance learning opportunities effectively.
- Analyzes context and content of learning and applies own experience and curiosity to steer own growth.
- Evaluates degree of autonomy provided by learning context and environment.
- Capitalizes on a collaborative approach to learning through own efforts, outreach, and motivation.



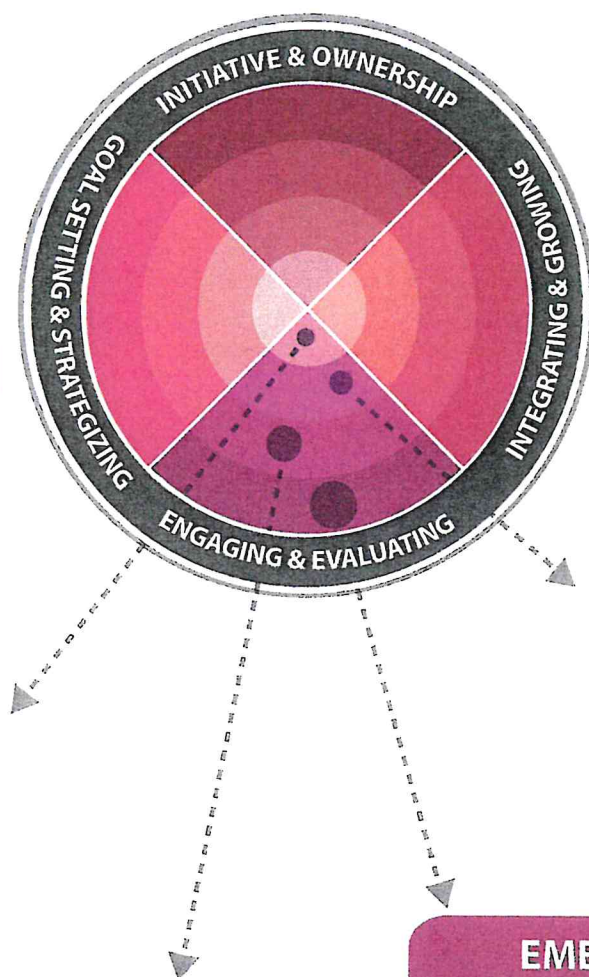
# GOAL SETTING & STRATEGIZING

*Developing meaningful learning goals and driving questions. Establishing short- and long-term objectives, assessing needs, and identifying strategies and resources.*



# ENGAGING & EVALUATING

*Persevering, managing time, adjusting pace and strategies, and seeking help when needed. Drawing on relevant high-quality resources to address driving questions and navigate challenges, collaborating along the way.*



## BEGINNER

- Remains engaged in learning, with encouragement from others.
- Uses external benchmarks and guidance to monitor progress toward short-term goals.
- Responds to prompts and suggestions to adjust pace, work quality, and/or approach.
- Imitates and explores learning strategies modeled by others.
- Uses feedback to check for understanding.
- Addresses frustration and works through struggles, when supported.

## ADVANCED BEGINNER

- Uses benchmarks to stay focused on plan and learning targets.
- Identifies when approach is not successful and adjusts, with support.
- Attempts to monitor time and effort, with support, and manages emotions to stay on course.
- Seeks feedback to meet progress markers and outcome success.
- Plays with and develops strategies to achieve learning expectations.
- Recognizes gaps in understanding and asks questions to clarify.

## STRATEGIC LEARNER

- Focuses on learning goals, draws on motivation, and uses familiar strategies to remain engaged.
- Evaluates progress based on short-term goals and makes necessary changes to stay on target.
- Manages time effectively to stay on course, avoiding procrastination with intentional strategies.
- Sets and maintains an appropriate pace to hit self-imposed and externally set learning targets.
- Assesses understanding, seeking additional relevant resources to address gaps and identifying alternative strategies.
- Perseveres through setbacks, embracing challenges.
- Strategically pursues assistance from adults and peers when problems arise.

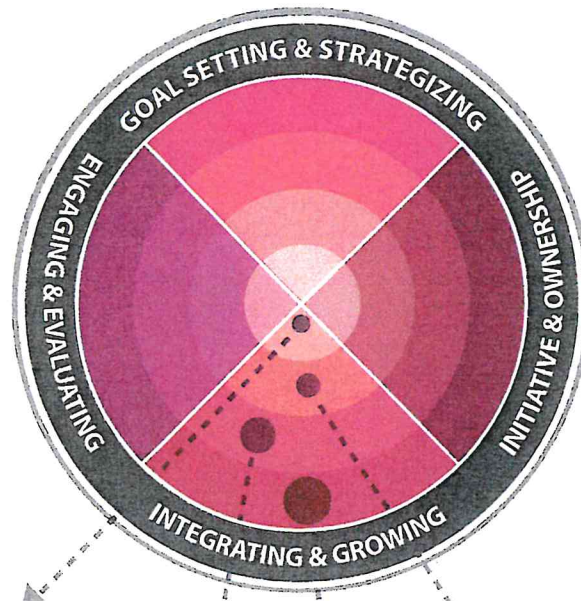
## EMERGING EXPERT

- Optimizes motivation by identifying value within or outside of own interests and long-term goals.
- Monitors cognitive challenge and success in meeting learning goals and personal growth.
- Adapts approach, pace, and plans regularly based on personal observation and feedback sought from others.
- Transfers learning strategies from different domains and experiences to innovate approaches to learning.
- Sets high standards of work quality, timeliness, and consistent focus, serving as an example for others to follow.
- Evaluates understanding of new information, identifying methods and strategies to modify.
- Reaches out to relevant experts, establishing a personalized network of support to verify and enhance own understanding.



## INTEGRATING & GROWING

*Finding connections to prior ideas and integrating new learning and feedback to adjust understanding. Reflecting on process, finding satisfaction in growth, and considering new questions, interests, and aspirations.*



### BEGINNER

- Explores connections to prior experiences and ideas, with prompting.
- Responds to opportunities to share observations and discoveries.
- Takes pride in personally meaningful realizations and recognizes own growth, with feedback and support of others.
- Considers new learning interests to explore, given opportunities and encouragement from others.

### ADVANCED BEGINNER

- Considers relationships between new learning and prior understanding or experiences.
- Interprets new learning in personally meaningful ways and communicates new perspective.
- Reflects on approach, considers feedback from others, and finds personal satisfaction in meeting learning objectives.
- Discovers emerging questions and interest to pursue and new learning strategies to apply.

### STRATEGIC LEARNER

- Builds new connections to prior understanding, considers discrepancies, and integrates new learning.
- Embraces new interests and growth in understanding, articulating insights to others.
- Applies strategies differently depending on setting.
- Celebrates learning and connections, reflecting on unanticipated outcomes, considering new strategies and alternative approaches to try.
- Notices patterns in interests and considers various aspirations.

### EMERGING EXPERT

- Situates learning opportunities and goals within past experiences and new interests to pursue.
- Evaluates and revises prior understanding and seeks connections to other domains, problems, or questions of interest.
- Formulates strategies both within and beyond the current learning context.
- Reflects on progress toward own personal development.
- Honors own learning accomplishments and contributions of others.
- Hones aspirations, keeping aware of key personal learning targets and timelines.





# CREATIVE AND PRACTICAL PROBLEM SOLVER

## 4 Components

Striking a balance between the uniqueness of ideas with demands of a problem and the constraints of a given context is at the center of being a Creative and Practical Problem Solver. Components and progressions below reflect the abilities and actions of problem solvers as they engage in a creative process.

### EXPLORING & FORMULATING:

Exploring a situation from multiple angles, seeking information to uncover issues and obstacles, and seeing how the situation relates to the larger system at work. Analyzing the situation and information to define an intriguing problem.

### CULTIVATING & SELECTING:

Reflecting on prior knowledge and experience, discovering relevant connections or analogies to imagine possible solutions. Evaluating options, incorporating insights from others, situating ideas within larger system, and selecting an approach.

### EXPERIMENTING & TOLERATING AMBIGUITY:

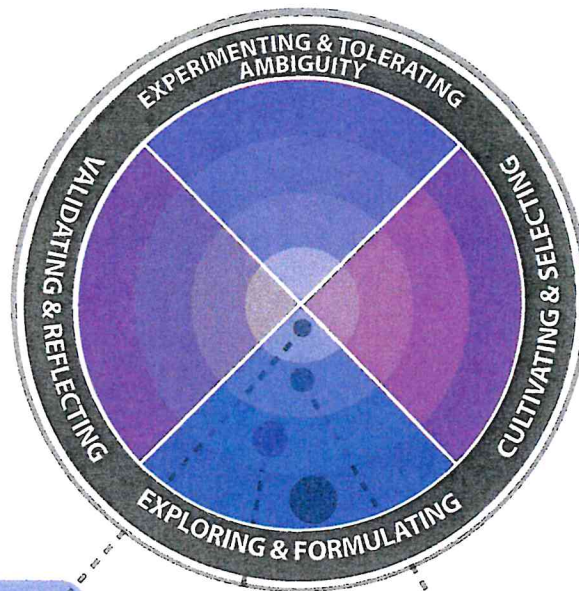
Planning an initial strategy. Creating, testing, simulating, learning, adjusting, and refining through iterative cycles. Taking risks, balancing novelty with constraints, and dealing with uncertainty and setbacks.

### VALIDATING & REFLECTING:

Reflecting on and evaluating the process and outcome. Building on new learning and responses from others to find new problems and consider next steps. Celebrating successes and growth.

## EXPLORING & FORMULATING

*Exploring a situation from multiple angles, seeking information to uncover issues and obstacles, and seeing how the situation relates to the larger system at work.*  
*Analyzing the situation and information to define an intriguing problem.*



### BEGINNER

- Selects and restates a problem among those defined by others.
- Gathers and explores information using a process identified by others.
- Explores own interpretations and grasps that individual problems or situations influence each other, with guidance.
- Describes an intriguing problem of personal interest to pursue, with support.

### ADVANCED BEGINNER

- Explores a situation, discovering a problem of interest, with support.
- Seeks relevant information to better understand the problem, sorting and examining, with support.
- Identifies ways that problems or situations may be interrelated within a system and relates to own experiences, with support.
- Builds on own experience to specify a challenging problem to tackle and grow from.

### STRATEGIC LEARNER

- Identifies a problem of personal importance independently.
- Uses familiar approaches to gather multiple perspectives on the issue and analyzes the information for patterns.
- Recognizes how problems fit within a feedback loop of cause and effect.
- Organizes an intriguing problem of interest to interpret in a personally meaningful way.
- Understands own preferences in learning environment that are conducive to finding and interpreting insights.

### EMERGING EXPERT

- Analyzes a situation, detects multiple root causes, and redefines a problem that is relevant to self and impactful to others.
- Perceives where interests and strengths complement each other best and capitalizes on these opportunities.
- Applies knowledge and strategies from one domain to another and draws on own insights, seeking new perspectives when needed.
- Models structures of the system in which the problem or situation fits in order to conceptualize problem fully.
- Establishes work setting to foster imagination and insight.



# CULTIVATING & SELECTING

*Reflecting on prior knowledge and experience, discovering relevant connections or analogies to imagine possible solutions. Evaluating options, incorporating insights from others, situating ideas within larger system, and selecting an approach.*

## BEGINNER

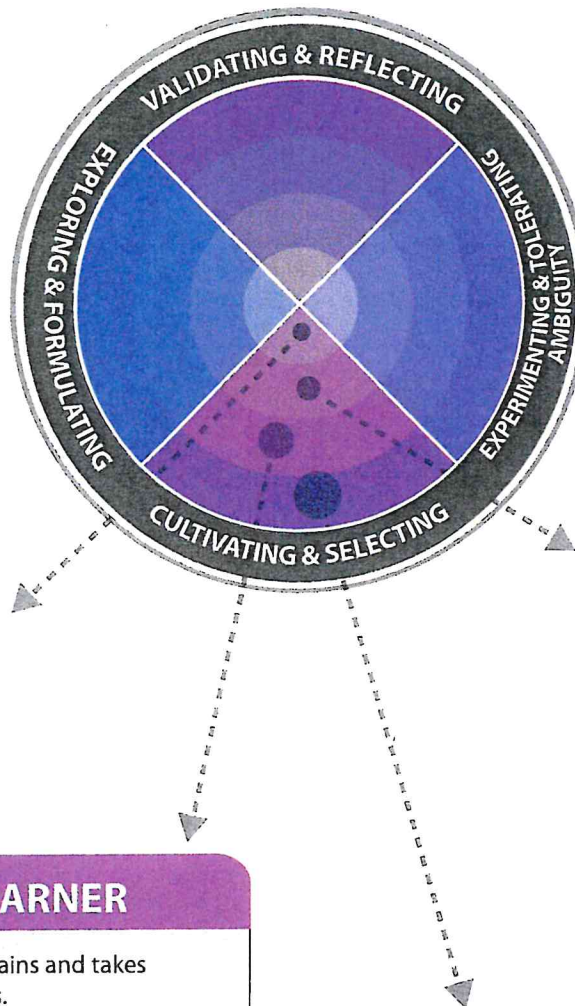
Refers to own experiences and knowledge to imagine possibilities, when prompted.

Recognizes what makes some ideas or perspectives impractical, with support from others.

Uses techniques provided by others to explore possible solution paths.

Considers time and resources needed to develop best ideas to a complete solution, following the direction of others.

Chooses an idea that expresses interests and best addresses a root cause, with help.



## ADVANCED BEGINNER

Notices opportunities for small changes to accepted norms and practices.

Plays with possibilities, defers judgment on ideas, and keeps an open mind, with guidance.

Examines possible combinations of different concepts, drawing on work of others and own experience.

Identifies multiple possible directions, considers alternatives, and eliminates ideas that are not appropriate, with guidance.

Identifies multiple possible directions, considers alternatives, and eliminates ideas that are not appropriate, with guidance.

Relies on imitation to help discover opportunities and constraints.

## STRATEGIC LEARNER

Embraces interests in specific domains and takes advantage of untested possibilities.

Draws on opportunities in the environment for original ideas and looks for ways to apply new approaches in different contexts.

Questions assumptions to shift perspective and recognizes types of thinking that inhibit personally novel ideas.

Takes time to imagine possibilities and consider how alternative ideas can help discover a new way forward.

Considers ideas of others and incorporates some that challenge own.

Evaluates novelty and effectiveness of ideas against constraints, possibilities, and connections within the larger system at work.

Refines and elaborates on most impactful choice, gaining acceptance through persuasion.

## EMERGING EXPERT

Looks for inspiration across domains and synthesizes contrasting pieces of information to evolve ideas.

Questions accepted approaches to consider alternatives and to situate solutions within the structures of the system at large.

Uses analogic thinking and other strategies to generate insights and discover novel possibilities.

Builds off the ideas of others, establishing new unexplored questions.

Breaks boundaries by choosing untested ideas that fit into, but also challenge, social conventions, constraints of medium, and relevant work of others.

Tailors approach in different contexts to effectively convey personal insights and interpretations.

Adopts and markets idea to targeted audiences.



# EXPERIMENTING & TOLERATING AMBIGUITY

*Planning an initial strategy. Creating, testing, simulating, learning, adjusting, and refining through iterative cycles. Taking risks, balancing novelty with constraints, and dealing with uncertainty and setbacks.*

## BEGINNER

Follows steps planned by others.

Considers how existing resources, skills, and familiar techniques apply to task, with support.

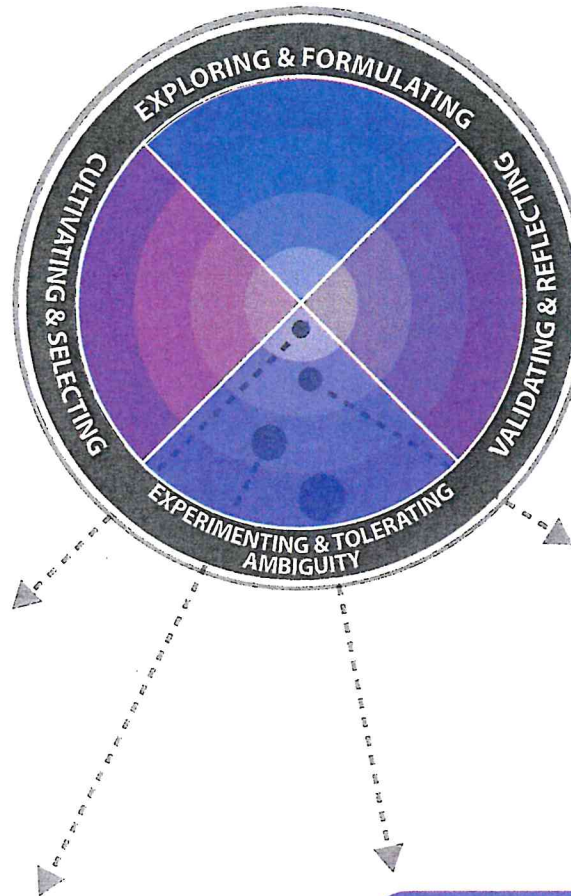
Reproduces an exemplar modeled by others and acknowledges when experimenting with new approaches helps or hinders the process.

Works through unfamiliar challenges, tries out new approaches, and takes risks with encouragement.

Tries to keep an open mind and deal with uncertainty during the learning process.

Reflects on "ah ha!" connections throughout process, with guidance.

Makes changes when struggling, using encouragement from others.



## ADVANCED BEGINNER

Describes process for the development of an idea or solution.

Discovers new resources, skills, and techniques needed to experiment with and communicate idea.

Adapts an exemplar modeled by others, driven by own ideas and insights.

Grasps that thinking innovatively is not optimal in some contexts and at some stages of the learning process.

Remains engaged after failed attempts and tries to persist when solution becomes challenging.

Tolerates less structure and delayed gratification in the learning process.

Monitors progress toward personal goals and reacts to and pursues new opportunities, with support.

Adapts and develops ideas, moving on to a new idea, when appropriate.

## STRATEGIC LEARNER

Plans approach and process for getting feedback.

Selects setting that fosters curiosity, conceptualization, and solution finding.

Follows unique solution path and produces a simulation, prototype, or draft.

Tests out prototype with planned process for getting feedback, knowing what feedback is needed.

Evaluates context, boundaries, and own inhibition, to pursue appropriate level of risk in work.

Becomes motivated by both successes and setbacks, learning from unintended consequences.

After experimenting, reflects on connections, relation to larger system at work, and ways to expand ideas further.

Tolerates ambiguity and uncertainty at different stages of the learning process.

Navigates between what is personally meaningful versus what is valued by others and nurtures confidence to follow intuition.

## EMERGING EXPERT

Capitalizes on the iterative cycle of experimenting with ideas, aware of most useful types of information and feedback.

Shapes environment to be most conducive to creative process and strategizes to minimize distraction and inhibition.

Evaluates contexts to identify norms, limitations, and cultural boundaries, assessing opportunities to apply personal insights.

Seeks out open-ended challenges without easy or obvious solutions.

Takes risks to capitalize on strengths and untested ideas.

Innovates from failure, bridges learning across domains, and recognizes new opportunities for innovation.

Allows ideas and work to go in radical directions, anticipating when a new approach may be detrimental.

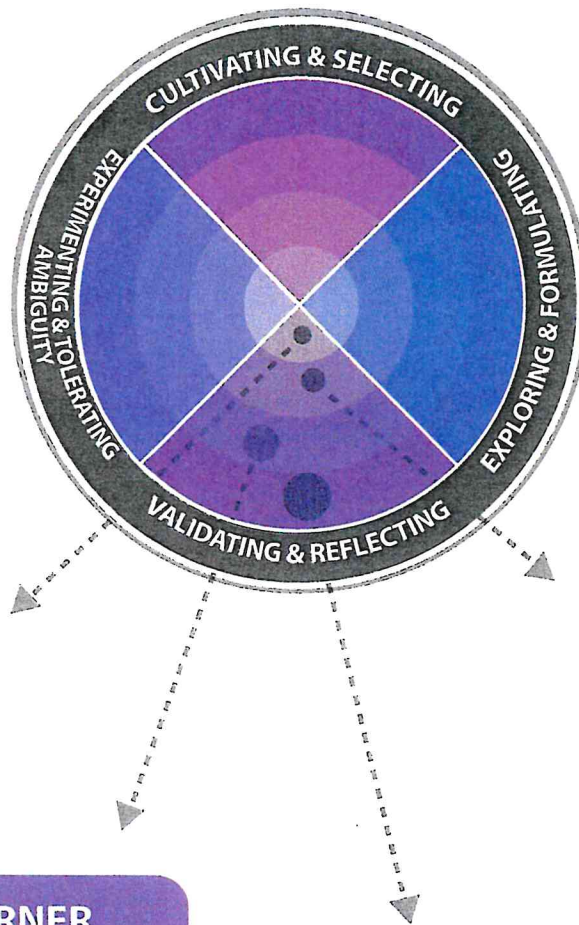
Achieves innovation and high standard of quality in work and products.

Integrates competing values and contradictory perspectives from own experiences and those of others.



# VALIDATING & REFLECTING

*Reflecting on and evaluating the process and outcome. Building on new learning and responses from others to find new problems and consider next steps.  
Celebrating successes and growth.*



## BEGINNER

- Produces work that is new and original to them, with encouragement from others.
- Considers success of solution, based on feedback from others.
- Listens to feedback from others and considers how to make improvements, with guidance.
- Develops new skills and knowledge to consider new problems to explore.
- Identifies personal growth and limitations, with guidance.
- Takes pride in final product.

## ADVANCED BEGINNER

- Explores own interpretation of root cause and solution in work.
- Evaluates fit and relevance of solution with guidance.
- Seeks out and uses the feedback of others to think about next stage of learning process.
- Develops personal purpose throughout the stages of the work.
- Develops confidence and intention through practice in work.
- Considers how ideas and solutions affect others.

## STRATEGIC LEARNER

- Demonstrates originality and personal style in work.
- Illustrates or communicates creative process, evolution of ideas, and how solution fits into the larger system at work.
- Demonstrates passion and motivation that drives work.
- Analyzes own work to find meaning and refine and improve solutions and approach.
- Prioritizes choices during creative process based on personal goals and criteria for success.
- Collaborates with others to integrate new ideas in work and identify next steps.
- Perceives how own ideas and work affects personal growth and progress of others.

## EMERGING EXPERT

- Blends personal style and technical knowledge and skills to establish a unique, meaningful narrative in work.
- Models how solution effectively changes system structures to achieve desired results.
- Balances precision with creativity in completing work and communicating solution.
- Personalizes processes and owns final products.
- Elaborates solution fully in order to access perspectives and knowledge of others to get feedback and validate success of solution.
- Situates patterns in own work both within and beyond the specific domain, intuitively.
- Synthesizes new knowledge with old ideas to invent new possible directions.
- Anticipates and acts on the impact that ideas and work have on others.





# RESPONSIBLE AND INVOLVED CITIZEN

## 4 Components

The success of any community depends on the contributions of its members, whether at the family, school, regional, global, or other levels in between. Driven by a sense of belong and a responsibility to contribute to the common good, members support the health of their communities with greater effect by drawing on the following components of A Responsible and Involved Citizen.

### AFFINITY & OWNERSHIP:

Feeling a sense of belonging and a responsibility to contribute to the community. Recognizing the benefits of being part of a community and taking responsibility for own impact on others.

### AWARENESS & UNDERSTANDING:

Being concerned for rights of others and understanding common good. Thoughtfully building understanding by obtaining information and recognizing and engaging with diverse perspectives. Understanding, accepting, and valuing diversity.

### COMMUNITY COLLABORATION:

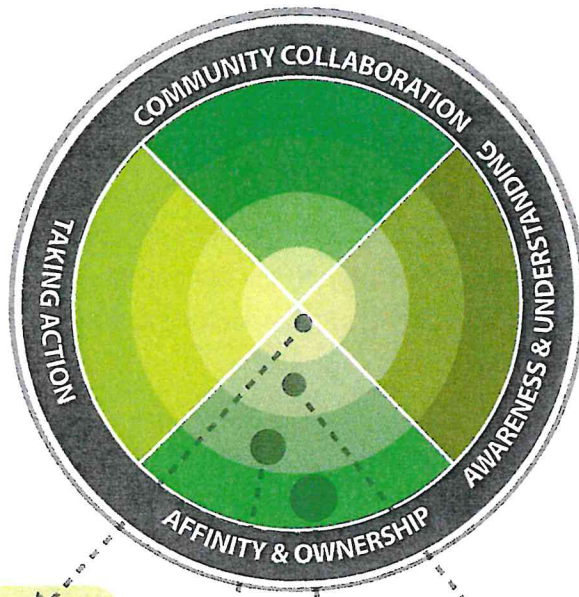
Participating positively in communities by engaging in civil discourse, collaborative decision making, and civil and community responsibilities.

### TAKING ACTION:

Understanding and acting on issues of local, regional, or global significance. Persistently engaging in appropriate actions or investigations to design and create solutions and make a positive impact. Acting thoughtfully, responsibly, and respectfully.

## AFFINITY & OWNERSHIP

*Feeling a sense of belonging and a responsibility to contribute to the community. Recognizing the benefits of being part of a community and taking responsibility for own impact on others.*



### BEGINNER

- Feels appreciated through positive interactions with community members.
- Reflects on support provided by others and own efforts to help community members, when modeled.
- Considers familiar community resources, with support.
- Recognizes how own actions have had a positive or negative impact, when identified by others.

### ADVANCED BEGINNER

- Develops a sense of belonging through recognition from others for own contributions.
- Recognizes how members of a community rely on each other, considering own role with guidance.
- Recognizes benefits of sharing resources and responsibilities compared to what a person would need to do alone.
- Takes pride in having a positive effect on others, while accepting the consequences of affecting others in a negative way.

### STRATEGIC LEARNER

- Appreciates the community's identity, finding shared interests and values.
- Embraces capacity to advocate for and contribute to community progress.
- Shows appreciation for community services, opportunities, and supports that have had a positive impact personally.
- Situates own contributions within the function of the community, thinking of ways to strengthen own role.
- Learns from unintended consequences of own actions on others, looks for ways to mitigate effects.

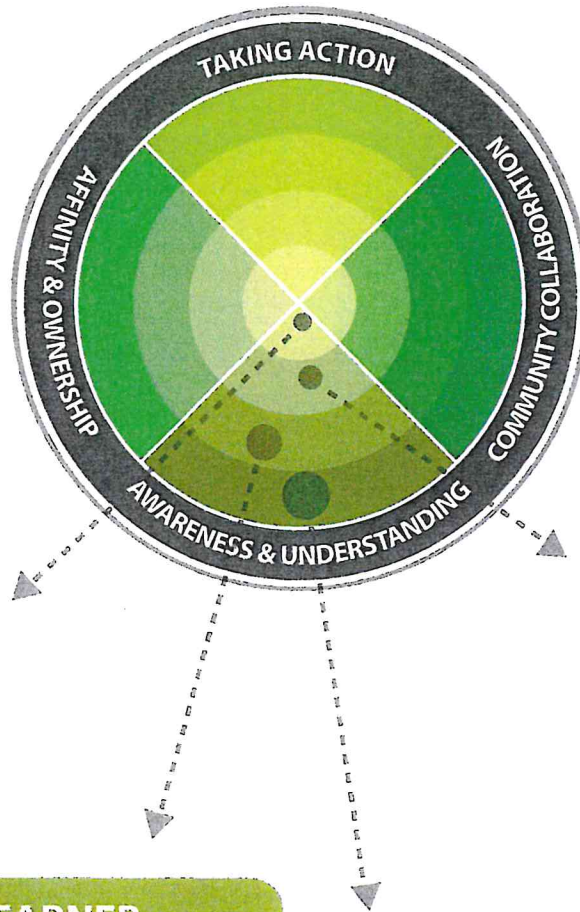
### EMERGING EXPERT

- Fosters a sense of belonging in others, showing appreciation for their contributions.
- Synthesizes own interests and needs with those of other members. Looks for ways to build or enhance a shared community identity.
- Values community resources of personal benefit, while realizing the necessity of these and additional resources to meet the needs of less advantaged community members.
- Discerns different approaches taken to address community issues locally and globally.
- Gauges power dynamics within a community and acts from an understanding of own role and place in that system.



# AWARENESS & UNDERSTANDING

*Being concerned for rights of others and understanding common good. Thoughtfully building understanding by obtaining information and recognizing and engaging with diverse perspectives. Understanding, accepting, and valuing diversity.*



## BEGINNER

Assimilates the perspectives, values, and beliefs on issues, situations, and events of influential others, unconsciously.

Shares own views and beliefs, when prompted.

Grasps the concept that people should treat one another with respect and be concerned about the welfare of others, when modeled.

Converses with those who have values similar to own.

Is willing to hear and try to understand perspectives and experiences that differ from own, when supported by others.

## ADVANCED BEGINNER

Recognizes shared perspectives with those who play a large role in own life.

Describes own perspective, values, and beliefs, unaware of context.

Understands how the good or harm done unto others affects one's own life and the world around them.

Participates in discussions initiated by others who have different perspectives.

Asks questions and tries to listen to better understand views that differ from own, remaining open and regulating emotions, with some guidance.

Understands the role that access to resources and knowledge plays in forming views, with guidance.

## STRATEGIC LEARNER

Realizes sources of influence on own beliefs, noticing changes in own perspective through exposure, experience, and access to knowledge.

Situates own perspective within an issue or event, drawing on motivation to work toward common good.

Notices when own values or behavior uphold or endanger the rights of others.

Engages others with different values and beliefs, recognizing how values and beliefs shape choices, views, and behaviors.

Analyzes the perspectives and arguments expressed by others, compares to own.

Tempers emotional response in debates on sensitive issues by constructing a sound position based on deep understanding.

## EMERGING EXPERT

Reflects on the development of own values and beliefs, allowing new perspectives, knowledge, and understanding to clarify values and beliefs further.

Embraces opportunities to exchange views with others, validating and challenging perspectives, gracefully.

Comprehends how own values, action, and inaction interact with the larger system, rights of others, and the common good.

Tailors approach for specific context and audience to convey own views effectively.

Examines diverse perspectives and their influences, and seizes opportunities to challenge and refine own views.

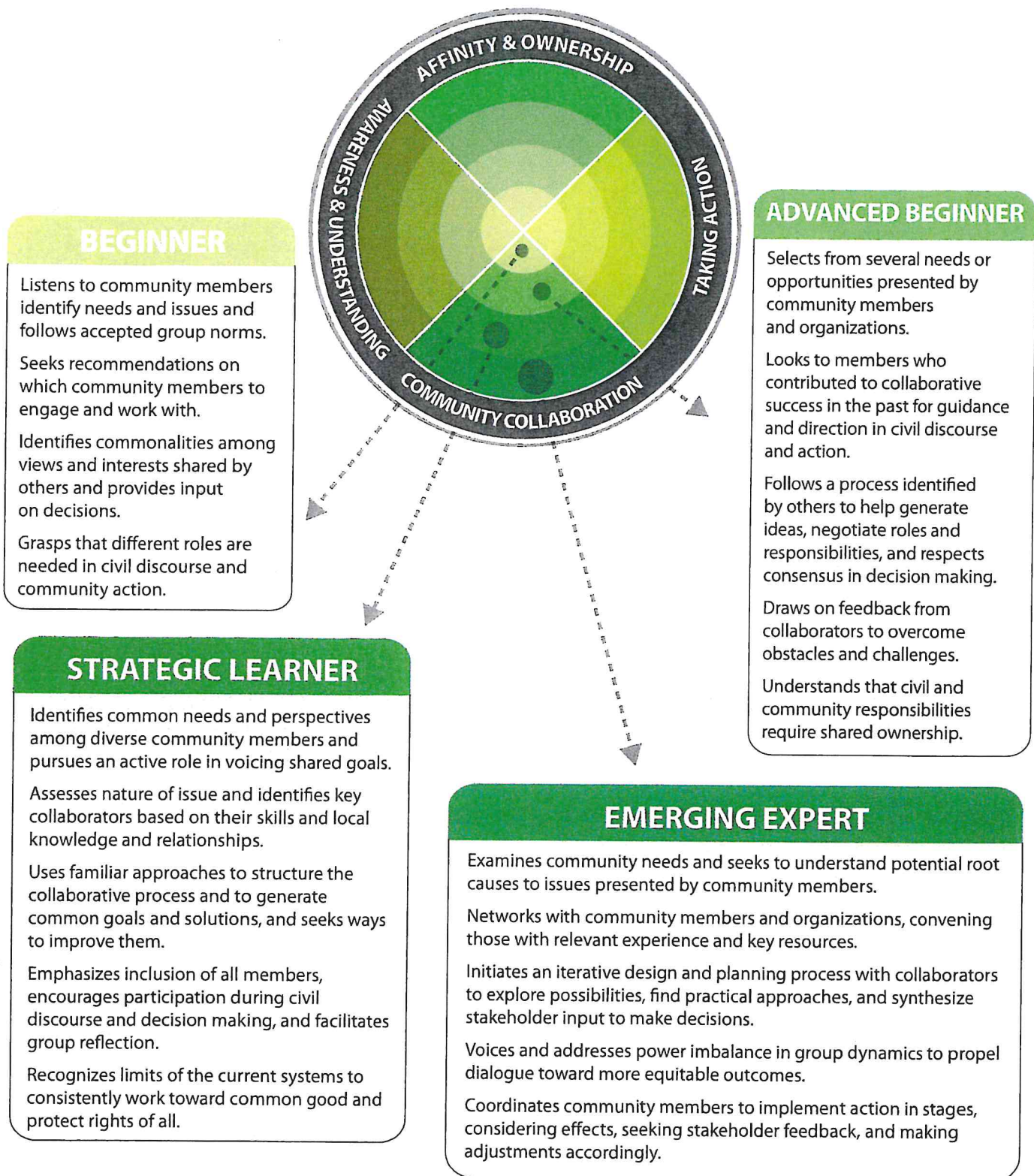
Evaluates the strength of own position and those of others, valuing new personal insights that diverse views can help to shape.

Observes and articulates how power, access, culture, and values influence the formation and spread of knowledge.



# COMMUNITY COLLABORATION

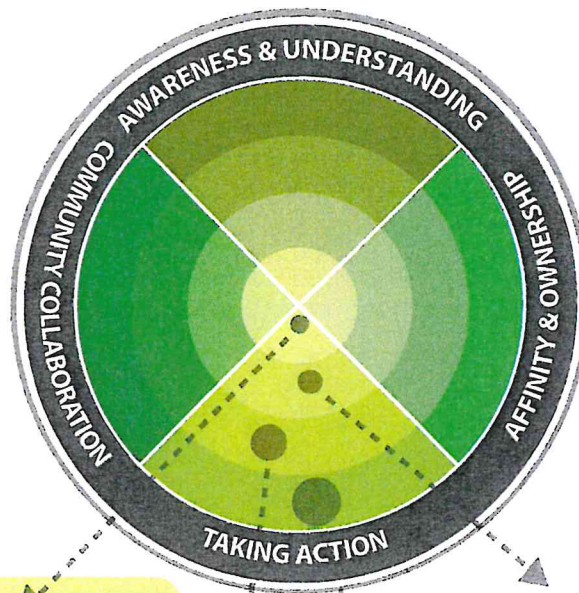
*Participating positively in communities by engaging in civil discourse, collaborative decision making, and civil and community responsibilities.*





## TAKING ACTION

*Understanding and acting on issues of local, regional, or global significance. Persistently engaging in appropriate actions or investigations to design and create solutions and make a positive impact. Acting thoughtfully, responsibly, and respectfully.*



### BEGINNER

- Participates in social or community improvement activities organized by the community.
- Discovers ways to help community members through own observations and insights from others.
- Takes action, following approaches to be responsible and respectful, when modeled by others.
- Grasps how own actions affect others positively and negatively, with guidance.

### ADVANCED BEGINNER

- Engages in opportunities to connect with other members and those who influence how the community functions.
- Discovers organizations or ongoing opportunities aligned with own interests that help community members and address local and regional issues.
- Considers different perspectives and approaches presented by others, before acting.
- Reflects on the impact of own actions on others, holds self accountable for results.
- Voices concerns about acting responsibly and respectfully.

### STRATEGIC LEARNER

- Contributes to investigating, planning, and implementing actions that foster discourse or provide members a voice and lead to solutions for community issues.
- Notices a need in the local, regional, or global community that resonates personally and looks for ways to affect positive change.
- Considers options and the potential positive impact of each based on understanding of past efforts and different approaches.
- Acts on own ideas or solutions of others, while respecting the rights and needs of community and collaborators.
- Reflects on process and outcome of action and evaluates if action respected the will of the community and served their needs and wishes responsibly.

### EMERGING EXPERT

- Pursues leadership opportunities to enhance the strength of the community and its ability to serve and support all members.
- Articulates the need for action in a balanced way by expressing the perceptions, needs, and vision of diverse stakeholders.
- Draws attention to pressing, unmet needs and seeks approaches to provide sustainable support through collective efforts and empowerment.
- Applies an informed view of community assets, potential impact, sustainability, and community ownership to plan action.
- Takes action in line with own perspective and values, while respecting and representing rights and needs of others, anticipating where conflict might exist.
- Anticipates consequences of actions, considers potential unintended effects before acting, and adjusts accordingly.





# INTEGRATIVE AND INFORMED THINKER

## 4 Components

The ability to analyze, evaluate, and synthesize information informs an individual's understanding. An Integrative and Informed Thinker also sees relationships, situates information within a broader system, negotiates discrepancies to enhance their perspective, and applies this new understanding to make decisions, solve problems, and find connections to other contexts.

### CURIOSITY & COMMITMENT:

Having an inquisitive thirst for knowledge and understanding. Committing to engage in quality thinking and willing to put forth the effort.

### FLEXIBILITY & INTEGRITY:

Viewing understanding as something that evolves. Seeking alternative perspectives to challenge and enhance own. Holding consistent and equitable standards when evaluating own views and those of others.

### ANALYSIS & EVALUATION:

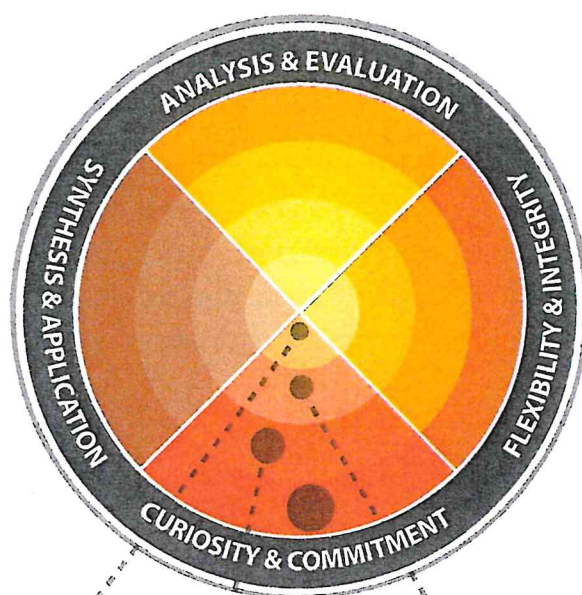
Analyzing information to find patterns, distinctions, and relationships. Evaluating the relevance and value of arguments, evidence, and claims, and considering potential bias.

### SYNTHESIS & APPLICATION:

Examining interactions among parts and whole, building connections and negotiating discrepancies to enhance prior understanding. Applying an integrated lens to make decisions, solve problems, and facilitate transfer to other contexts, disciplines, and real-world situations.

# CURIOSITY & COMMITMENT

*Having an inquisitive thirst for knowledge and understanding. Committing to engage in quality thinking and willing to put forth the effort.*



## BEGINNER

- Is eager to ask questions and learn more about topics of personal interest.
- Is willing to explore different thinking approaches, with support from others.
- Is willing to engage in learning opportunities provided by others that differ from own interests.

## ADVANCED BEGINNER

- Is driven to uncover the *why* and *how* in any learning opportunity.
- Seeks to engage own interests, while embracing other opportunities for discovery.
- Recognizes the value in having a reason behind opinions, and is willing to engage opportunities to enhance own view.
- Recognizes learning as an ongoing process, looks for ways to enhance own approach.

## STRATEGIC LEARNER

- Pursues a path of inquiry initiated by personal connections to new information or experiences.
- Poses critical questions when appropriate and in situations where they are necessary for the benefit of self and others.
- Appreciates different methods that support critical questioning, thinking, and analysis of ideas.
- Embraces responsibility to enhance own perspective and analyzes own views in response to those of others.

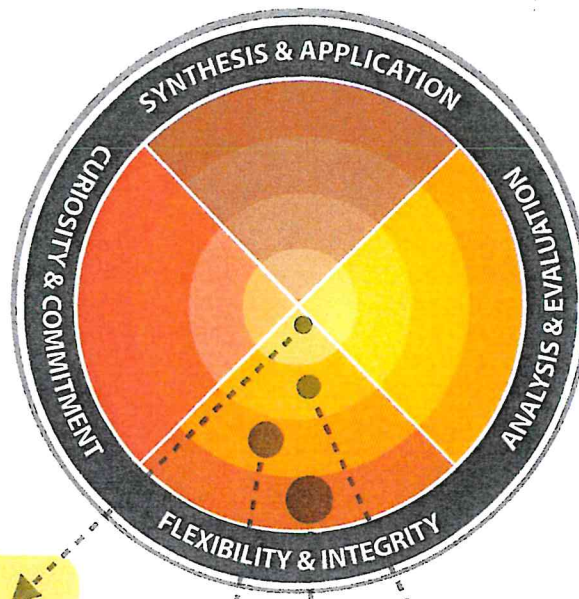
## EMERGING EXPERT

- Draws on familiarity and expertise in area, noticing unexplored areas and uncovering more questions with every answer.
- Challenges own assumptions about own understanding to uncover additional lines of inquiry to pursue.
- Creates opportunities to enhance learning possibilities for self and others.
- Thrives on unpacking complex ideas to clarify, refine, and elaborate own views.
- Intuitively reflects and considers fit of new perspectives with own, and values understanding as an iterative and evolving process.



## FLEXIBILITY & INTEGRITY

*Viewing understanding as something that evolves. Seeking alternative perspectives to challenge and enhance own. Holding consistent and equitable standards when evaluating own views and those of others.*



### BEGINNER

Considers how own preferences or ideas have changed over time, when modeled by others.

Selects sources of information among those provided by others.

Recognizes emotional response to ideas that differ from own, when identified by others.

Is willing to consider alternative perspectives, with support.

### ADVANCED BEGINNER

Recognizes own growth, seeing how ideas were challenged and enhanced over time, when given opportunities to reflect.

Gathers information to further thinking by using a process established by others.

Screens resources for a range of perspectives.

Looks for value in different perspectives expressed by others.

Remains open to revising own understanding by incorporating some views that challenge own.

### STRATEGIC LEARNER

Sees the benefits of having own ideas challenged as a process that leads to a richer personal understanding.

Uses context-specific criteria and familiar strategies to find quality information and represent various angles.

Places added emphasis on finding views that differ from own.

Regulates reactions to perspectives that trigger an emotional response.

Questions own perspective, and finds opportunities for continued learning.

### EMERGING EXPERT

Values own understanding as a personal interpretation of the world, and a fluid, evolving perspective.

Draws on own increased expertise with a field to find work from established experts that convey different views.

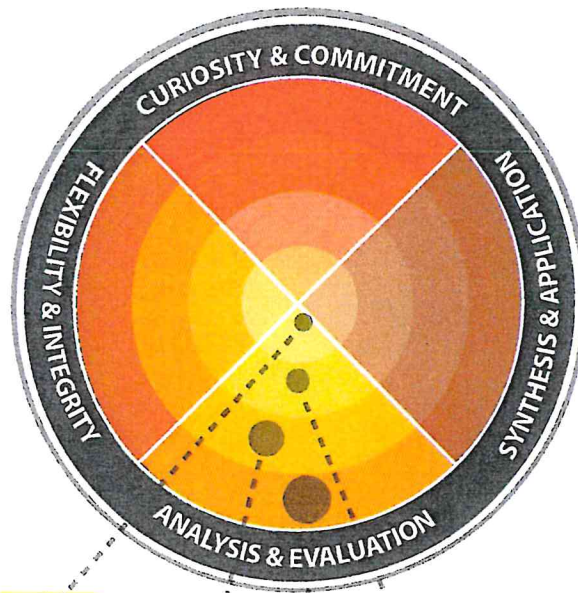
Intentionally seeks less privileged perspectives to broaden and enrich own.

Notifies and accounts for personal biases at play when considering perspectives of others.

Embraces opportunities to diagnose own assumptions and to find ways to reconsider and enhance own view.

## ANALYSIS & EVALUATION

*Analyzing information to find patterns, distinctions, and relationships. Evaluating the relevance and value of arguments, evidence, and claims, and considering potential bias.*



### BEGINNER

Participates in guided discussions to better understand points made by different sources.

Explores a strategy modeled by others, discovering similarities and differences between views, with support.

Shares opinions on the claims of others by expressing likes/dislikes or level of agreement, when prompted.

### ADVANCED BEGINNER

Identifies explicit arguments and claims, using steps provided by others, and asks questions for clarification.

Tinkers with graphic organizers or other strategies, to find patterns among ideas from different sources.

Uses personal perspective as evidence and point of reference when evaluating claims.

Considers how different perspectives and different forms and sources of knowledge may be related to the interests of sources, with guidance.

### STRATEGIC LEARNER

Uncovers implicit messages among arguments and claims.

Draws on familiar and effective strategies to uncover complex patterns, relationships, and interactions among arguments, evidence, and sources.

Considers possible implications of patterns among arguments, positions, evidence, and sources.

Applies strategies to examine biases and strength of support behind the arguments and positions of others.

Thinks through ramifications of potential biases of others on the validity of own interpretation.

### EMERGING EXPERT

Draws on familiarity with topic, and attends carefully to unique perspectives among familiar arguments.

Examines information and looks for implicit relationships, possible causes, and overarching structures.

Situates arguments within a broader perspective and reframes the conversation.

Intuitively considers the source of information, intended audience, intentions, and other contextual factors when evaluating arguments, evidence, and claims.

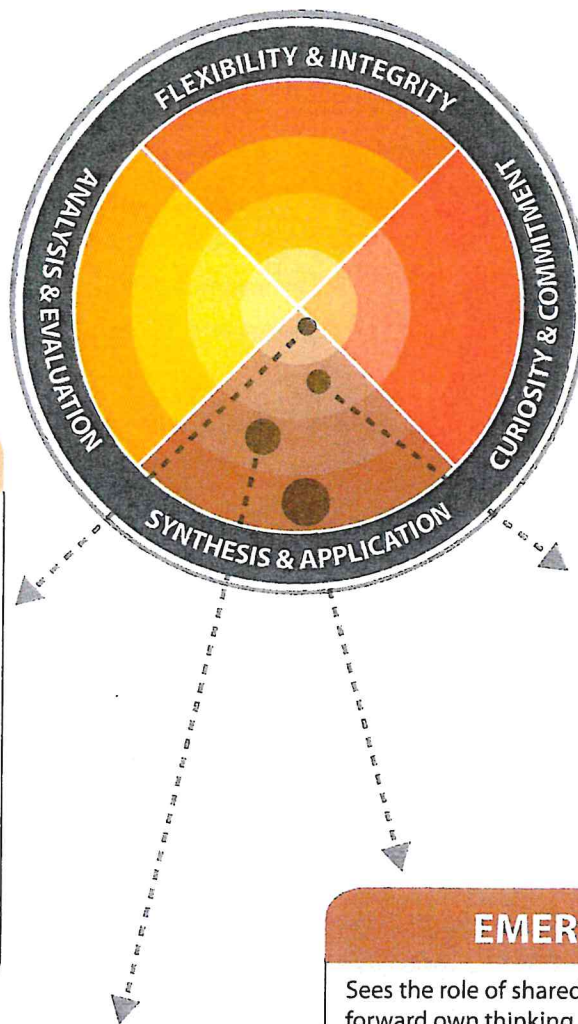
Identifies broader issues and unaddressed areas, and considers potential implications of bias in existing information.

Reflects and considers own bias in the evaluation process.



# SYNTHESIS & APPLICATION

*Examining interactions among parts and whole, building connections and negotiating discrepancies to enhance prior understanding. Applying an integrated lens to make decisions, solve problems, and facilitate transfer to other contexts, disciplines, and real-world situations.*



## BEGINNER

Considers ways that individuals contribute ideas to help a group better understand a topic, with guidance.

Reflects on and shares relevant prior experience or knowledge, when modeled and prompted by others.

Accepts some new ideas as presented, even if different from prior position or perspective.

Considers how new learning relates to other situations and problems, with guidance.

## ADVANCED BEGINNER

Notices how different perspectives and ideas can add to or complicate own understanding.

Looks for relevant connections to past experience and own ideas.

Discovers that parts of a system are interdependent and interrelated, with support.

Notices discrepancies with own perspective and asks questions to enhance understanding.

Reflects on new perspective when approaching a related task and finds connections, with support.

## STRATEGIC LEARNER

Analyzes different views on a topic and their contributions to a broader discussion or issue.

Analyzes degree of alignment between new information and own perspective.

Understands the interdependence of parts in a system and applies this view to own thinking.

Selectively adjusts perspective when new information is seen as well founded according to context-specific criteria.

Draws on enhanced views to inform decision-making and problem-solving approaches.

Seizes connections between knowledge and skills in content areas and real-life demands.

## EMERGING EXPERT

Sees the role of shared and dissenting views to move forward own thinking and the broader conversation.

Selectively questions existing perspectives in area of growing expertise to improve the larger body of work or its direction.

Synthesizes understanding of components to articulate and describe the dynamics of a system.

Intuitively holds new information up against own experience and knowledge, and selectively revises own interpretation.

Continuously seeks opportunities to refine own understanding through the experiences and arguments of others.

Instinctively compares own understanding against alternative perspectives and thoughtfully expands, revises, or maintains own views.

Tests out new perspectives in a variety of situations and uncovers distinctions across contexts.

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## CREATIVE AND PRACTICAL PROBLEM SOLVER

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