



Rethinkers

Brains ready for tomorrow

3

THINKING SCHOOLS

Path 3

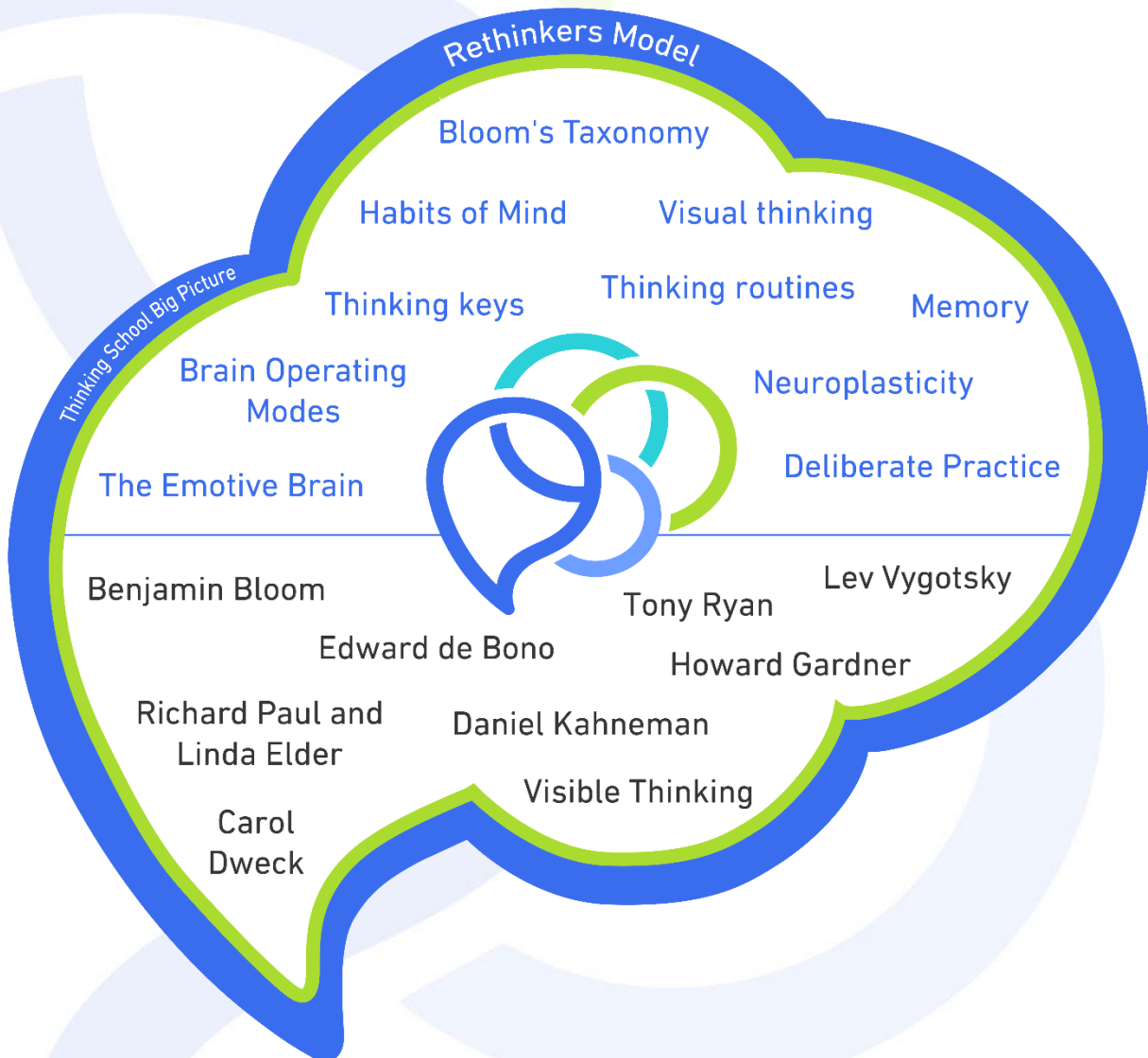
HABITS OF MIND

Rethinkers Model

Thinking School Big Picture

Thinking School Model

Methodology



The Third Path

Introduction to Habits of the Mind

The Importance of Thinking Methodology

Basic Guiding Principles:

It's essential that the vision and values of thinking schools reflect the following principles, which have been defined by Rethinkers experts:

1. There is a need to focus on the student to improve thinking; student-centric means that the tools and strategies beyond knowledge are fluently taught by students.
2. Inclusivity - There is a fundamental belief that all students can think, and that the ability to think can be improved, and that all learners have innate abilities to think in diverse ways.
3. Providing evidence - Educational practices and policies are established on a strong evidence base from research and investigation.
4. Focus on progress - Acquiring and developing metacognitive strategies and smart learning behaviors leads to more effective learning if integrated into content planning.

The entire school community is committed to:

5. Using a common language of thinking and learning.
6. Making thinking and learning explicit. (Naming thinking skills and strategies and how they work clearly)
7. The genuine desire to nurture independent thinkers and learners.

Eight Starting Points for Thinking Schools In the chapter of effective thinking, there will be evidence of:

1. Thinking Skills - Explicit use of cognitive and metacognitive processes.
2. Tools and Strategies - Explicit use of tools and strategies to build ideas.

3. Smart Learning Behaviors - Students manage and are independent of themselves.
4. Knowledge as a basis for thinking - Thinking is instilled through relevant curriculum content.
5. Reflective Questioning - High-quality questioning and listening skills.
6. Collaborative Networks - Interconnected thinking.
7. A Stimulating Environment for Thinking and Learning - The physical environment and resources are organized to facilitate student independence.
8. Sustainability: Everything that is applied is preserved in subsequent stages to ensure continuity, repetition, and practice.

Thinking: The process of purposeful self-judgment. Students' ability to monitor, guide, and review their learning. Effective metacognitive strategies make learners think about their learning more clearly, usually by teaching them to set goals, monitor, and evaluate their own academic progress.

First Stage

Getting to Know Smart Learning Behaviors

Iceberg Model

- Skills - Acquired abilities; a person's ability to do something well.
- Knowledge - Information that a person has acquired in a certain field.
- Social Roles - Some behaviors are conditioned by people's perception of the roles they play and others' expectations from that role.
- Self-concept - A person's view of themselves, their identity, personality, and value.
- Traits - A typical aspect of a person's behaviors.
- Motivations - What drives one's behavior (a latent need for achievement, affiliation, power, and influence).

Habits of Mind

" Habits of mind are what smart people do when they are confronted with problems, the solutions to which are not immediately apparent. Habits of mind are a pattern of intellectual behaviors that lead to productive actions. They are a complex blend of many skills, attitudes, cues, experiences, and predispositions. These habits of mind are often used together in clusters of behaviors and are used in different situations."

Art Costa and Bena Kallick developed this model consisting of 16 habits or "intelligent behaviors" based on observations about what distinguishes the most successful student from the least successful one.

Getting to know the habits of the mind - Overview



1. Perseverance Commit to it! Persevering in the task until completion; maintaining focus. Look for ways to reach your goal when you're stuck. Don't give up.



2. Managing Impulsivity Take it easy! Think before acting. Stay calm, thoughtful, and deliberative.



3. Listening with Understanding and Empathy Understand others by devoting mental energy to listen to someone else's ideas. Make an effort to grasp others' perspectives and emotions.



4. Thinking Flexibly Look at it in another way! The ability to change perspectives, generate alternatives, and consider options.



5. Thinking About Your Thinking (Metacognition) Know your knowledge! Be aware of your thoughts, strategies, feelings, actions, and their effects on others.



6. Striving for Accuracy Check it again! Always give your best effort, set high standards. Continually check and find ways to improve.



7. Questioning and Posing Problems How do you know? Having a questioning attitude; knowing what data are needed and developing

questioning strategies to produce those data. Finding problems to solve.



8. Applying Past Knowledge to New Situations Use what you learn! Accessing prior knowledge; transferring knowledge beyond the situation in which it was learned.



9. Thinking and Communicating With clarity and precision. Summarize the pursuit of precise communication in both written and oral form; avoid excessive generalizations, distortions, omissions, and exaggerations.



10. Gathering Data Through All Senses Pay attention to the world around you. Collect data through all your senses. Taste, touch, smell, hear, and see.



11. Creating, Imagining, and Innovating Try a different way! Generate ideas and innovations that can be applied through novelty, originality, and fluency.



12. Responding with Wonderment and Awe Enjoy knowing it! Find joy and excitement in the world's exquisite and beautiful phenomena.



13. Taking Responsible Risks Venture. Live on the edge. Constantly try new things.



14. Finding Humor Laugh a little! Find the quirky and unexpected things, the ability to laugh with others and at oneself.



15. Interdependence and Cooperation Work together! The ability to work and learn from others in group situations.



16. Remaining Open to Continuous Learning I have so much to learn! Embrace humility and confidence; resist complacency with what we know.

Task:

What are the habits that can make the biggest difference for the largest number of students in your school if every student is capable of effectively demonstrating that?

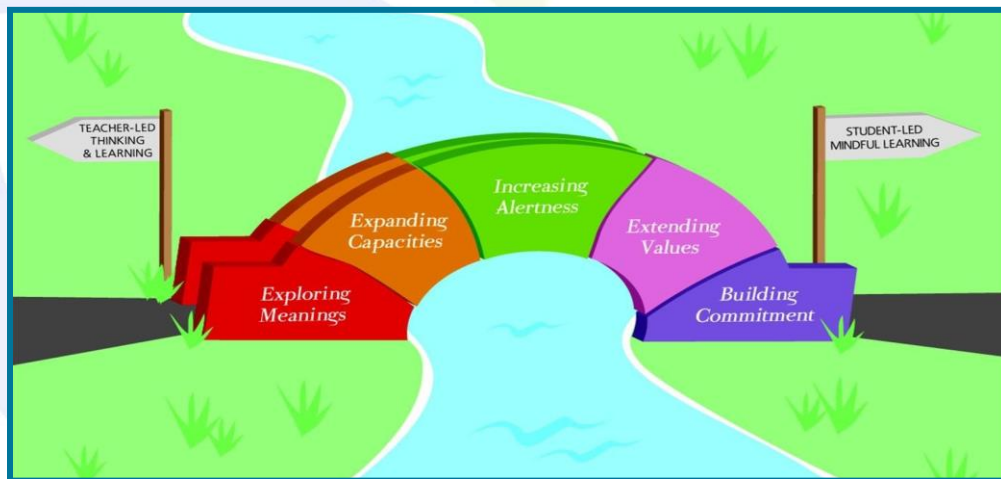
Stage Two:

Exploring the meanings and why these habits.

The journey of comprehension and continuous growth:

Have a conversation with yourself about each habit:

8. I do this occasionally.
9. I often recognize this behavior in myself.
10. I am good at this.



How schools support student development in the dimensions of habits of mind (Kallick and Costa, 2008):

1. Exploring meanings (Recognition): In this initial stage of the journey, teachers introduce students to habits of mind, their meanings, and associated concepts. Students are encouraged to connect their own experiences with habits of mind to deepen their understanding and consider their use and potential in different situations. Students begin practicing the use of habits of mind and reflecting on their value.
2. Expanding capacities (Use Multiple Habits and Skills Together): In the second stage, students become more skilled in selecting appropriate habits of mind and understand that habits of mind do not stand alone. They realize that habits of mind

are a composite of many other skills and strategies. Through thinking and discussion, students can apply different habits of mind to new situations and assimilate behaviors so that habits of mind become part of the process through which they see themselves.

3. Offering synonyms for habit meanings (Alternate Words): Alternate words are those that teachers and adults might use as synonyms for the meaning of a specific habit of mind. Students can identify their own starting words, but naming the habit is also important. The starting words or their alternate can be defined as a specific habit of mind, such as "Listen with Empathy," "Focus," "Listen," "Attentive."
4. Quotations, images, stories, important people, personal narratives, drama: Teachers use all of these to illustrate each habit of mind. They can be used to stimulate student dialogue and provide potential context and connection with the meaning of each habit of mind.

Teaching Habits of Mind:

Teachers use vocabulary in the classroom and "teach" habits of mind, for example:

- The habit of perseverance: "I am less concerned about the answer than about the amount of time and effort I will put into finding it."
- The habit of collaboration: "I will evaluate you based on the success of individuals in your group."
- The habit of thinking about your thinking: "I did that well. Go back and tell me how I did it."

Which habit do you think this teacher is hinting at?

Stage Three:

Expanding Capacities and Increasing Awareness

There are four levels of learners (beyond cognition) that can help teachers identify their students' position and the amount of support needed:

11. **Unconscious Learners:** They are unaware of their metacognition. They do not think about specific learning strategies and only accept whether they know something or not.
12. **Aware Learners:** These learners recognize some of the thinking processes they use, such as generating ideas, finding evidence, etc. However, their thinking is not necessarily intentional or planned.
13. **Strategic Learners:** These learners organize their thinking by using problem-solving, synthesizing, classifying, searching for evidence, making decisions, etc. They know and apply strategies that assist their learning.
14. **Reflective Learners:** These learners are not only strategic about their own thinking but also reflect on their learning as it happens, considering the success or failure of their strategies and revising them if appropriate.

However, in supporting students' development of metacognitive skills and self-regulation, our aim is for them to become more self-aware and self-monitoring.

One method that can be helpful is using self-surveys, which can be created by teachers or students themselves. For example:

1. I always do it.
2. I do it frequently.
3. I do it rarely.
4. I never do it.

No.	Statement				
1	When completing homework	1	2	3	4
2	When making a mistake in my work	1	2	3	4
3	During exams and tests	1	2	3	4
4	When I want something	1	2	3	4
5	Provide another suitable occasion or situation where the habit is used here	1	2	3	4

**What
Do I
Hear?**

**What
Do I
See?**

**Pick the Habit
That You Want**

**What
Do I Say?**

Stage Four: Creating Databases

The databases can be created by teachers or students. They can be generalized throughout the school or specified to a certain subject, age group, specific study unit, or particular event.

Schools may also choose to use an electronic file to support tracking the student's progress in specific smart learning behaviors, enabling parents to stay connected with the school as the child's interaction with the habit is documented.

Habit of Perseverance Model

Expert	Does not give up no matter how difficult it is to find answers and solutions. Values the use of a variety of strategies to stay on task.
The practitioner	Does not give up when attempting to find answers and solutions. Stay on task.
Advanced	They attempt to complete tasks when answers and solutions are not immediately clear, but they give up when the task becomes extremely challenging. They easily disengage from the task
Beginner	They give up easily and quickly in challenging tasks.

Creating and Breaking Habits

1. Breaking mental habits and forming new ones requires deliberate practice and continuous repetition. Neuroscience indicates that repeated behavior strengthens the neural pathway associated with it, making change easier over time. Therefore, we need to identify the habits we want to change or form and dedicate the necessary time and effort through consistent practice until they become part of our daily lives.

In terms of:

- Our ability to make judgments - it is the center of logical, rational, and deliberate decision-making.
- Controlling our motivations and emotional responses.

- The ability to focus and pay attention.
- Processing complex information.

2. Motivation based on neuroscience: Based on neuroscience, motivation through encouragement, stimulation, and reward leads to the release of happiness hormones upon achievement. This is the role of the cognitive teacher.

3. Focus: Learners should be aware of the importance of focus and be conscious of the work they are doing and the methods to maintain focus in achieving goals.

4. Previous thinking tools such as visual thinking and thinking keys: Connecting these tools with habits helps increase awareness of our thinking.

5. Feedback loop: Another technique that learners should employ in forming and breaking habits is the feedback loop within deliberate practice. This includes planning to monitor performance, setting personal goals, and utilizing deliberate practice, which involves setting achievable small goals to start with and taking steps towards a larger and more important goal.

6. Multidisciplinary journaling: Using multidisciplinary journals is an effective way for students to engage in critical thinking and learning. At the end of lessons, opportunities can be provided for projects and topics that serve the habits, offering them support.

Example:

- The only thing that surprised me today is...
- I was flexible around...
- I used all my senses when...
- When I think about how to solve this problem, I see that...
- The question I want to follow up on is...
- When I reviewed my work, I found...

- I listened and learned...

7. Reporting to parents: Teachers encourage parents to see success in more creative ways beyond the classroom, for example:

- "Her story is inspiring."
- "This report was thoroughly researched and constructed."
- She demonstrated self-control and perseverance in developing leadership skills.
- What habit do you think this teacher is hinting at?

The fifth stage: "Explaining Habits in Detail."

Dear teacher, here are the sixteen habits, along with a practical example for students in the classroom and a wise or famous quote:

- **Persistence:** Description: Committing to the task and not easily giving up. Practical Example: Completing a research project after facing difficulties in gathering and analyzing information. Quote: "Success is not just for the strong, but for those who persevere." - Napoleon Hill.
- **Impulsivity Managing:** Description: Exercising patience and thinking before making quick decisions. Practical Example: Delaying the response to a question in class to contemplate and reflect on the correct answer. Quote: "He who can control himself can control everything." - Robert Hirschfeld.
- **Listening with Understanding and Empathy:** Description: Showing interest and empathy towards others while listening. Practical Example: Actively listening to classmates and sharing their ideas and feelings without pre-judgment. Quote: "Listening is the most powerful tool for change." - Carl Rogers.
- **Flexibility Thinking:** Description: The ability to change perspectives and adapt to challenges. Practical Example: Adopting a different approach to solve a math

problem after unsuccessful attempts. Quote: "Still water becomes stagnant, and a mind that doesn't think flexibly becomes stagnant." - Anthony Robbins.

- **Thinking about Thinking, Metacognition:** Description: The individual's awareness of their own thinking and its impact on others and the environment. Practical Example: Evaluating personal performance and using past experiences to improve future outcomes. Quote: "Thinking about your thinking empowers you to take control of your life." - Brian Tracy.
- **Striving for Accuracy and Precision :** Description: Striving for accuracy and excellence in work. Practical Example: Paying attention to details and verifying answers accurately before submitting them in the test. Quote: "The details are not the details; they make the design." - Charles Eames
- **Questioning and Posing Problems:** Description: The ability to ask questions and discover problems. Practical Example: Asking exploratory questions about a specific topic and expanding knowledge. Quote: "He who can ask the right questions is half the battle won." - Leonardo da Vinci
- **Situations New to Knowledge Past Applying:** Description: Utilizing previous knowledge and experiences to face new challenges. Practical Example: Applying past mathematical concepts to solve new problems. Quote: "Knowledge is power, and its application is the key to success." - Malcolm Forbes
- **Thinking and Communicating with Clarity and Precision:** Description: Expressing ideas and concepts clearly and precisely for effective communication. Practical Example: Using accurate and clear language in presentations or classroom explanations. Quote: "Words are the most powerful tools of influence on minds, so use them carefully." - Dalai Lama
- **Gathering Data Using All Senses:** Description: Utilizing all our senses to gather information and experience the world around us. Practical Example: Exploring a scientific museum and using different senses to comprehend knowledge. Quote: "Our senses are our windows to the world, so let us use them with understanding and appreciation." - Helen Keller
- **Innovating, Imagining, Creating:** Description: Envisioning new solutions and innovating in various fields. Practical Example: Developing a new artistic design or inventing an innovative method to solve a problem. Quote: "Creativity is the key to changing the world and achieving progress." - Steve Jobs

- Responding with Wonder and Awe: Description: Seeking to discover the beauty and marvel at the wonders of the world around us. Practical Example: Exploring nature, experiencing fascinating science, and enjoying the arts. Quote: " A person truly possesses nothing until they feel wonder and awe.." - Albert Einstein
- Taking Responsible Risks: Description: Venturing and challenging ourselves in ways that allow us to grow and learn, but in a responsible manner. Practical Example: Participating in a group discussion and confidently expressing different perspectives. Quote: "Courage is the gateway to success, so do not fear the risks of life." - Nelson Mandela
- Humor Finding: Description: Discovering the fun and humorous side of life and sharing laughter. Practical example: Adding comedic elements to student presentations or engaging in witty jokes. Quote: "Laughter is the best medicine for the soul, so let's smile and share joy with others." - Mark Twain.
- Interdependently Thinking: Description: It refers to thinking and collaborating with others, respecting their opinions, and benefiting from them. An applied example would be teamwork and fruitful discussions to solve a specific problem. Quote:" The power of collaboration brings success, so let us be a part of a team that works with the spirit of unity." -Hilary Clinton
- Continuously Learning: Description: It refers to the continuous growth and development achieved through actively seeking opportunities for ongoing learning. An applied example would be reading new books or attending additional educational courses. A wise saying related to this concept is, "Continuous learning is the key to success and progress in our personal and professional lives." - Albert Einstein

These are the sixteen mental habits along with applied examples and accompanying wisdom for each. You can use these habits in the classroom to develop students' abilities, enhance their positive thinking, and foster their personal growth

Dear teachers, here are some suggested figures (historical, scientific, social, artistic), and you can replace them as you see fit:

1. Persistence: We meet a famous figure like Thomas Edison, the American inventor, who developed the electric light bulb after numerous attempts and failures. I chose him because he exemplifies persistence in facing challenges and never giving up.

2. **Impulsivity Managing:** A good example is Martin Luther King Jr., the American leader in the civil rights movement. I chose him because he relied on thoughtfulness and careful thinking before making decisions and speaking passionately and powerfully.
3. **Empathy and Understanding with Listening:** Malcolm X, the American civil rights activist, represents this habit. I chose him because he had the ability to listen, understand others' perspectives with an open mind, and express empathy towards their issues.
4. **Flexibility Thinking:** Elon Musk, an entrepreneur and founder of companies like Tesla and SpaceX, embodies this habit. I chose him because he demonstrates flexibility in his thinking and the ability to adapt to changes and explore new ways of improvement.
5. **Metacognition, Thinking about Thinking:** Albert Einstein, the scientist and theoretical physicist, represents this habit. I chose him because he possessed the ability to deeply reflect on the process of thinking itself and how to benefit from it.
6. **Precision and Accuracy for Striving:** Leonardo da Vinci, the Italian scientist and artist, embodies this habit. I chose him because he always strived for precision and attention to detail in his scientific and artistic works.
7. **Problems Posing and Questioning:** Malcolm Gladwell, the American journalist and author, represents this habit. I chose him because he excelled in posing challenging questions and analyzing complex problems.

These famous personalities represent different mental habits and highlight their practical application in various fields. My choices reflect my belief that these individuals excellently embody those habits and have inspired the world with their thinking and actions.

1. **Persistence:** A famous figure representing this habit is Neil Armstrong, the American astronaut. I chose him because he achieved his dream of reaching the moon through intense commitment and persistence in pursuing his goal.
2. **Impulsivity Managing:** A famous figure representing this habit is Nelson Mandela, the South African political leader and human rights activist. I chose him because he was able to control his anger and think before making important decisions.

3. Empathy and Understanding with Listening: A famous figure representing this habit is Malcolm X, the American civil rights activist. I chose him because he had the ability to listen, understand others' perspectives with an open mind, and express empathy towards their issues.
4. Flexibility Thinking: A famous figure representing this habit is Stephen Hawking, the British scientist and theoretical physicist. I chose him because he was able to develop new ideas and propose revolutionary theories about the universe despite his physical disabilities.
5. Metacognition, Thinking about Thinking: A famous figure representing this habit is Albert Einstein, the German scientist and theoretical physicist. I chose him because he possessed the ability to deeply reflect on the process of thinking itself and how to benefit from it.
6. Precision and Accuracy for Striving: Leonardo da Vinci, the Italian scientist and artist, represents this habit. I chose him because he constantly sought precision and attention to detail in his scientific and artistic works.
7. Problems Posing and Questioning: A famous figure representing this habit is Albert Einstein, the German scientist and theoretical physicist. I chose him because he considered bold questions and intellectual challenges as keys to scientific progress.
8. Situations New to Knowledge Past Applying: Marie Curie, the Polish-French scientist and Nobel laureate in physics and chemistry, represents this habit. I chose her because she used her previous knowledge in science to solve new problems and develop innovative theories.
9. Precision and Clarity with Communicating and Thinking: Winston Churchill, the British politician and military leader, represents this habit. I chose him because he relied on clear thinking and precise communication in his speeches and public interactions.
10. Senses all Through Data Gathering: Leonardo da Vinci, the famous Italian artist and inventor, represents this habit. I chose him because he used his multiple senses to observe the world around him and gather data that he utilized in his artistic and scientific works.
11. Innovating and Imagining Creating: Steve Jobs, the famous entrepreneur and co-founder of Apple, embodies this habit.

12. Awe and Wonder with Responding: Jane Goodall, the biologist and marine life explorer, represents this habit. I chose her because she reflects a sense of awe and wonder in exploring the natural world and a deep respect for nature.
13. Continuously Learning: Bill Gates, the American business magnate and billionaire, represents this habit. I chose him because he demonstrates dedication to continuous learning, exploration, and technological advancement.
14. Risks Responsible Taking: Marie Curie, the Polish-French scientist and Nobel laureate, represents this habit. I chose her because she embodies the courage to explore the field of science and take risks in pursuit of things that serve humanity.
15. Humor Finding: Charlie Chaplin, the American comedian and actor, represents this habit. I chose him because he reflects the ability to discover humor and bring laughter in challenging times, bringing joy to people's lives.
16. Interdependently Thinking: Nelson Mandela, the South African political leader and human rights activist, represents this habit. I chose him because he embodies collective thinking and teamwork.

Stage Six:

Planning with Mental Habits.

The Interconnected Art Costa Model demonstrates how mental habits are integrated into regular classroom practice. Here are some questions that teachers may think about during their lesson planning and topics.

1. When I think about the content:
 - What habit will be essential for understanding this content or knowledge?
 - What habit might better support the student in developing this understanding?
2. What thinking skills will the student depend on in this "lesson"?
 - What habit will support these skills more effectively?
3. What types of rich cognitive tasks will I assign to the students?
 - What habit will the student need to use to complete the task(s)?
4. How will I engage the students in thinking about the mental habits they will need to use or have used during the lesson?
5. Will they be able to identify the complex blend of habits they have utilized?

Ideas for implementing mental habits

Stage One:

- Decide in what order you will introduce the habits.
- Determine the week in which the first habit will be introduced.
- Identify the teacher(s) who will explain the meaning.
- Ask the students to reflect on introductory words and self-assessment of the practical habit.
- Clarify the meaning of the habits.
- Utilize visual graphics.
- Share stories about individuals who exemplify these habits.
- Display pictures, quotes, and sayings throughout the school.
- After a period of time, introduce the next habit. Gradually, students will gain an understanding of how and why these habits are essential for success.

Exploring meanings and expanding capacities: Stage Two

- Ask teachers to share their own stories of success in practicing these habits and why.
- Provide feedback to students during their demonstration and application of the habits, and reinforce their use.
- Ask students to bring in excerpts, stories, and family narratives about the habits.
- Write letters to parents using the vocabulary of these habits.
- Introduce the concept of a thinking journal.
- Create topic-specific databases.

Stage Three

- Begin by sharing teachers' ideas on how to expand the scope of the habits and deepen student understanding.
- Discuss strategies for self-motivation in practicing the habits.
- Guide students to use their self-awareness and reflective thinking about the habits in different situations.

How will the impact of the habits of mind affect individual students and the school culture as a whole?

Think about the impact you want to see on student outcomes and on the school culture when the habits of mind are explicitly taught throughout the school and become a focus of attention for cognitive coaches (teachers).

The goal is for students to become self-regulated learners, and for the entire institution to engage in self-assessment and self-evaluation of its system.

Model SPARE: Planning, Monitoring, and Impact Evaluation.

As you contemplate today, the bigger picture of Rethinkers and the ways you are already undertaking to develop cognitive capacity, what are the necessary strategic actions that must be taken to cultivate these important habits of the mind?

The SPARE model emphasizes the following steps:

- Setting the objective
- Planning
- Execution
- Monitoring the results
- Evaluation

THE END

THINKING SCHOOLS

Path 3

HABITS OF MIND



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