Implementing the Habits of Mind

Yarrambat Primary School

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Thinking and Learning in Concert

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Agenda

Focus on practices for implementing Habits of Mind

Review what we have discussed at the last meeting

Address your questions from last session

Discuss individual habits
  Metacognition
  Striving for Accuracy
  Listening with Empathy and Understanding

Investigate incorporating the Habits into lesson planning
Successful Practices

1) Current values about education have been made explicit.

2) Everyone uses a common language - the language of Habits of Mind.

3) Recognise and value current practice.

4) Teachers know they are supported as they strive to implement the habits.

5) The school has developed a strategy for the implementation of the Habits of Mind.

6) That strategy is reflected in all school documents from lesson plans to school improvement plans.
Signals In The School Environment:

- Mottoes
- Recognitions
- Acronyms
- Posters
- Reports
- Documents
- Plans
At your table construct a concept map for one of the following three Habits:

- Managing Impulsivity
- Listening with Empathy and Understanding
- Striving for Accuracy

Each Habit has a set of strategies - that you need to unpack. Habits develop over time, becoming more sophisticated with practice.
Review Development for Thinking Interdependently

(p2) In the beginning -
- Enjoys working in a group because she gets to work with friends
- Working in a group means taking turns
- Recognizes familiar situations in class when she works in a group

After some time working in groups -
- Understands working in groups is about having one outcome for the group.
- Group work is often about equal division of labor.
- Has difficulty working with people very different to herself

After some more time -
- Begins to incorporate other Habits of Mind like Listening with Empathy and Understanding while working in groups
- Is able to add to others ideas, and recognizes that the product of the group is more than the sum of the parts
- Can recognize situations at home, school and in the community where working in groups helps generate better results

After some more time -
- Can effectively employ a range of complex cooperative strategies
- Recognizes new and novel situations where it is appropriate to work cooperatively
- Values diversity in a group as a positive influence

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The big picture of growth and development of HoM

Schools that succeed with the Habits of Mind seem to recognize the process of continuous development of the Habits of Mind and take this into account in their implementation.

Novice
Simplistic understanding of a habit
Requires guidance
Applies one habit at a time
Limited tools and strategies
Poor or inappropriate selection
Difficulty recognizing habits

Expert
Recognizes the complexity of habits
Self-directed application
Integrates use of habits
Multiple tool and strategies
Appropriate and skillful selection
Recognizes situations to apply habits
Your questions (p2)

How much do students need to know about the habits, and when?

Which ones do I begin with and what should be the sequence?

How do I implement the habits in my classroom?

How do I fit yet more into an already crowded curriculum?

Is the language too difficult for young children?
How much do they need to know and when?

We want our students to become self aware, independent learners who understand how they learn best.
The students need to understand what a habit is.

The habits should be an explicit part of everything that happens in the classroom/school.

Each habit needs to be introduced and as you focus on it in your class you should refine and deepen their understanding by unpacking the habit with the students. This is best done by embedding the habits into your regular curriculum.

They must use the language and hear and see it used.
“Our experiences in the field have shown that habits of mind make the most sense when they are integrated as a part of the entire working process in a classroom.

Experience has shown, too, that clusters of habits go together naturally. Teachers will not – and should not – teach all 16 habits at once. Instead, they can elect which habits to incorporate based upon their assessment of the students’ needs, the content and context of the lesson, and other school priorities. Think of the habits as a smorgasbord: You have vast array from which to choose. Which of the habits pique your interest, and which of the habits are likely to satisfy your students’ hunger to learn?”

Costa & Kallick, Activating and Engaging the Habits of Mind
Which ones do I begin with and what should be the sequence?

Introduce the concept of a habit
Introduce all the habits
Decide on the ones to focus on with your class
The Habits are interrelated, not isolated
Implementing the habits in my classroom

In grade level groups look through the ‘Random Collection’ and identify six things that you could do in your class/school.
How do I fit yet more into an already crowded curriculum?

The habits are about ‘how’ rather than ‘what’.

Can you think of a habit that you do not already strive to encourage in your students?

By making them explicit your students will be able to do them better.
Is the language too difficult for young children?

Who knows a small child who is interested in dinosaurs ... and loves to show Grandpa how to spell tyrannosaurus rex and pterodactyl?

Research tells us that if a child understands a word, regularly hears it, sees it, and has opportunities to use it then it will become part of the child’s spoken and written vocabulary.
Using habits of mind language

Why did you just haul off and hit him?
How could you have managed your impulsivity better?

Sorry, that’s wrong.
How could you check your accuracy here?

Listen to what she says and see if you can add something to her ideas.
Let’s think interdependently.
Name the Thinking Skill

<table>
<thead>
<tr>
<th>Let’s look at these two pictures.</th>
<th>Let’s <em>compare</em> these two pictures.</th>
</tr>
</thead>
<tbody>
<tr>
<td>What do you think will happen when ...</td>
<td>What do you <em>predict</em> will happen when ...</td>
</tr>
<tr>
<td>Let’s work this problem.</td>
<td>Let’s <em>analyze</em> this problem.</td>
</tr>
<tr>
<td>Question</td>
<td>Response</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Do you know if that’s true?</td>
<td>What <em>evidence</em> do you have to support that?</td>
</tr>
<tr>
<td>How else could you use this?</td>
<td>In what situations might you <em>apply</em> this?</td>
</tr>
<tr>
<td>Do you think this is the best alternative?</td>
<td>As you <em>evaluate</em> these alternatives ...?</td>
</tr>
</tbody>
</table>

Name the Thinking Skill (p4)
Each of the habits involves a series of sub skills.

“I’d like to be persistent, but I don’t know how”

We need to understand the sub skills so we can help students to develop them.

What do I need to be able to do in order to persist?

What is involved in striving for accuracy?

How do I manage my impulsivity?
Metacognition

Thinking about your thinking

Know your knowing!

Being aware of your own thoughts, strategies, feelings and actions and their effects on others.
"Thinking is when your mouth stays shut and your head keeps talking to itself."
A simple question to illustrate metacognition.
Think Aloud Problem Solving

Pose challenging problems then:

Invite students to describe their plans and strategies for solving the problem.

Share their thinking as they are implementing their plan.

Reflect on and evaluate the effectiveness of their strategy.
If the day before yesterday was Saturday, what would the day after tomorrow be?
There are 3 separate, equal-size boxes and inside each box there are 2 separate small boxes. Inside each of the small boxes, there are 4 even smaller boxes. How many boxes are there all together?
Definition

Metacognition refers to the conscious application of an individual’s thinking to their own thought processes with the specific intention of understanding, monitoring, evaluating and regulating those processes.
1. Pose questions that cause the student to check for accuracy?
   • "How do you know you are right?"
   • "What other ways can you prove that you are correct?"

2. Pause and clarify but don't interrupt
   • "Explain what you mean when you said you 'just figured it out'".
   • "When you said you started at the beginning, how did you know where to begin?"

3. Provide data, not answers
   • "I think you heard it wrong; let me repeat the question..............."
   • "You need to check your addition."
4. Resist making value judgments or agreeing with students' answers.
   • "So, your answer is 48. Who came up with a different answer?"
   • "That's one possibility. Who solved it another way?"

5. Stay focused on thinking processes
   • "Tell us what strategies you used to solve the problem"
   • "What steps did you take in your solution?"
   • "What was going on inside your head as you solved the problem?"

6. Encourage persistence
   • "C'mon, you can do it!"
What you think about ...

<table>
<thead>
<tr>
<th>Objects of Metacognition</th>
<th>Objectives (reasons to metacognate)</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content</td>
<td>to monitor understanding of concepts or track progress in problem solving or formulating plans</td>
<td>Discipline</td>
</tr>
<tr>
<td>Cognition</td>
<td>to achieve the objective of one’s thinking and to sharpen thinking skills</td>
<td>List of types of thinking</td>
</tr>
<tr>
<td>Conduct</td>
<td>to develop the habits of a successful thinker</td>
<td>Habits of Mind</td>
</tr>
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</tr>
</tbody>
</table>
First Order Thinking
Processing Ideas
1. Treating facts or ideas as independent entities
   remembering
   accumulating facts
   generating new ideas
2. Simple analysis of collections of facts of ideas
   classify
   sequence
   compare/contrast
   analogy/metaphor
   parts/whole reasoning
   reacting to intellectual input
3. More complex analysis
   inference
   causal reasoning
   generalization
   prediction
   analogical reasoning
   summarizing
   deduction
   conditional (if ... then)
   categorical (some ... all)
   induction
4. Complex cognitive tasks (systematic thinking)
   decision making
   planning
   calculating
   problem solving
   assumptions,
   order of magnitude estimates
   speculating (What happens if ...?)
   modeling and simulation

Second Order Thinking
Evaluating Ideas
1. Assessing the reasonableness of ideas
   assessing the reliability of information
   accuracy of observation
   reliability of sources
2. Evaluating the utility of ideas
3. Testing conclusions with reality
   uncovering and evaluating assumptions
   hypothesis and testing
   identifying reasons and conclusions
4. Reformulating ideas based upon assessment
5. Evaluation of the human element in thinking
   with others -- consensus
   with self - intuition
   personal feelings
   (affective domain)
6. Self-directed inquiry
   curiosity based learning

Third Order Thinking
Metacognition
1. Understand -- Being aware of the kind of thinking you are doing.
2. Monitor -- Knowing the thinking strategy you are using.
3. Evaluate -- Evaluating the effectiveness of your thinking.
4. Regulate -- Planning how you will do the same kind of thinking the next time it is needed.

Definition of thinking:
“The deliberate exploration of experience for a purpose.” Edward de Bono

Levels of Thinking
Adapted from the work of Arthur Costa and Bena Kallick, developers of “Habits of Mind” and Robert Swartz, director of the National Center for Teaching Thinking

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<table>
<thead>
<tr>
<th>Understand</th>
<th>Monitor</th>
<th>Evaluate</th>
<th>Regulate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do I recognize that I am thinking about my thinking?</td>
<td>Am I able to check the reasonableness of my ideas and the progress of my thinking?</td>
<td>Do I understand well enough? Is the result correct and consistent with my other knowledge?</td>
<td>Can I now act on or use this knowledge? If not what need I do?</td>
</tr>
<tr>
<td>Do I recognize the thinking skills I am using?</td>
<td>Am I using the right mix of thinking skills?</td>
<td>Am I using these skills effectively enough?</td>
<td>Did I use this skill well? Can I improve on my thinking the next time I use these skills?</td>
</tr>
<tr>
<td>Do I recognize the behaviors that contribute to the success or failure of my thought and its consequences?</td>
<td>Am I using the right habits of mind? What other behavior should I bring to bear?</td>
<td>Am I using these habits well enough to achieve my objectives?</td>
<td>In future, when facing similar problems how should I behave?</td>
</tr>
</tbody>
</table>
What about the preps?

Lesson: sorting tiles into groups based on shape

Questions to ask:

Content – what are you thinking about?
As you look at the tiles, what are some of the differences can you see?

We are just going to be sorting shapes.
What will you be looking for as you sort your tiles? Different shapes.

Cognition – what types of thinking are you using?
As children sort at their tables teacher repeatedly asks “How will you decide where to put this tile?”

Conduct – which Habits of Mind helped you?
When children return to the mat the teacher asks about the HoM they used eg learning from the person next to them (thinking interdependently) checking each group (striving for accuracy) keeping fingers off other people’s tiles (managing impulsivity)
Using the language appropriately

Examine the table on page 8 of your interactive notes.

Discuss some of the steps you might take to make those questions appropriate for the grade level you teach.

What are some of the ways you could phrase questions to encourage your students to understand, monitor, evaluate and regulate their thinking?

Keep in mind content, cognition, conduct.
A Habits of Mind Lesson

As you watch this video think about what habits the teacher is intending to incorporate into his lesson ...

... and what habits the students display.
Striving for Accuracy

Check it again!

Always doing your best.

Setting high standards.

Checking and finding ways to improve constantly.
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The Heart of Striving For Accuracy

Striving for accuracy is about:

Setting a high achievement standard that demonstrates improvement

Having a clear picture of what this standard will look like when it is achieved

Developing strategies that involve checking progress against the standard
How will students learn to strive for accuracy if:

- I accept mediocrity?
- I set the standards of success?
- I allow my errors to go uncorrected?
- students don’t have the opportunity to resubmit?
- the expectations I set are not high?
- the expectations are the same for all students?
Pedagogy Tips

There are 3 mistakes on this page. Please come back when you find them.

Ask 3 before me.
Listening with Empathy and Understanding

Understand Others!

Devoting mental energy to another person’s thoughts and ideas.

Make an effort to perceive another’s point of view and emotions.
Listening Sequence

P P P

Pause
Paraphrase
Probe
What Research Show Us

- Teachers tend to call on high achievers most frequently
- Teachers ask a lot questions (around 50 in 30 minutes)
- Students ask very few questions (around 2 in 30 minutes)
- Most teacher questions are at low cognitive level – facts, recall, knowledge
- Not all students are held accountable to respond to all questions – volunteers are a very select group
- Teachers typically wait less than 1 second after asking a question before calling on a student (wait time 1)
- Teachers typically wait even less time before moving on after a student has answered
- Teachers accept wrong answers without probing
- Students ask very few content related questions
Questions for Cognitive Operations

Input
What are some of the things you can see happening in this picture?? (describe)
What word goes with this picture? (identify)
What are some of the things you see happening when the goldfish is eating? (observing)

Processing
What information might help us solve this problem? (analyzing)
What other machines might operate the same way as this one? (compare)
What suggests to you that Columbus believed that he could reach the orient by sailing west? (explaining)

Output
What are some of the things that might happen if you mixed these two colors? (predicting)
What might be some fair solutions to this problem? (evaluating)
What do you think might happen if we put a saltwater fish in freshwater? (hypothesizing)
Questions for HoM

What are some other ways you could solve this problem? (thinking flexibly)

How do you know this answer is correct? (striving for accuracy)

If you were John how would you react to what you said about him? (listening with empathy and understanding)

When you find yourself tempted to respond emotionally to a situation, what alternatives do you consider? (managing impulsivity and thinking flexibly)

As you read, what do you do when your mind wanders but you want to remain on task? (managing impulsivity and metacognition)
Where do the Habits of Mind fit into my lesson planning?

Suggested planning pro forma
Lesson Plans

• Collection from ANSN
  - Collected_work_of_the_HOM_Hub_2005
  - Mindmappinglesson.doc (#10)

• Example from Art Costa
Discuss the 16 habits of mind with the students, give examples or simplify the habits they are unsure of.
*Ask students to rule 3 columns in their workbooks.
*Give out the Habits of Mind charts/placemats.

<table>
<thead>
<tr>
<th>Card no.</th>
<th>What does the card show?</th>
<th>Which Habits of Mind can you identify in the cartoon?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

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## EXPLORING THE FOREST FLOOR
**A First Grade Science Unit of Study**
Designed by Alison K. Billman
Rye Neck Union Free School District

### PROCESSES AND SKILLS:
**PLANNING TO FIND THE ANSWER:**

<table>
<thead>
<tr>
<th>HABITS OF MIND</th>
<th>ACTIVITIES</th>
<th>LEADING QUESTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. THINKING FLEXIBLY</td>
<td>Through a series of small and whole group discussions students will create a collection of strategies for gathering information about the forest floor habitat.</td>
<td>1. What questions could we ask to find the answer to &quot;What is a northern woodlands forest floor habitat?&quot;</td>
</tr>
<tr>
<td>2. APPLYING PAST KNOWLEDGE TO NEW SITUATIONS</td>
<td>The teacher will guide the discussion with leading questions to help students access personal background knowledge and to ensure a variety of means and sources for gathering information</td>
<td>2. What are some facts we already know about a forest?</td>
</tr>
<tr>
<td>3. PERSISTING</td>
<td></td>
<td>3. Where are some places we could find out more information about the forest?</td>
</tr>
</tbody>
</table>

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... promoting the harmonious integration of skillful thinking and learning

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