

Science of Learning and Habits of Mind at Moirira Primary School





The Science of Learning



Why teach The Science of Learning?



Empowers Learners



Builds Resilience and Confidence



Aligns with Brain Development



Prepares for Future Learning

+
◦ · Science of Learning
at Moira Primary
School



Supporting Existing Practices



**GROWTH MINDSET
AND RESILIENCE
PROGRAMMES**



**FORMATIVE
ASSESSMENT AND
FEEDBACK**



**LEARNING
INTENTIONS AND
SUCCESS CRITERIA**



SELF-ASSESSMENT



**COLLABORATIVE
LEARNING**

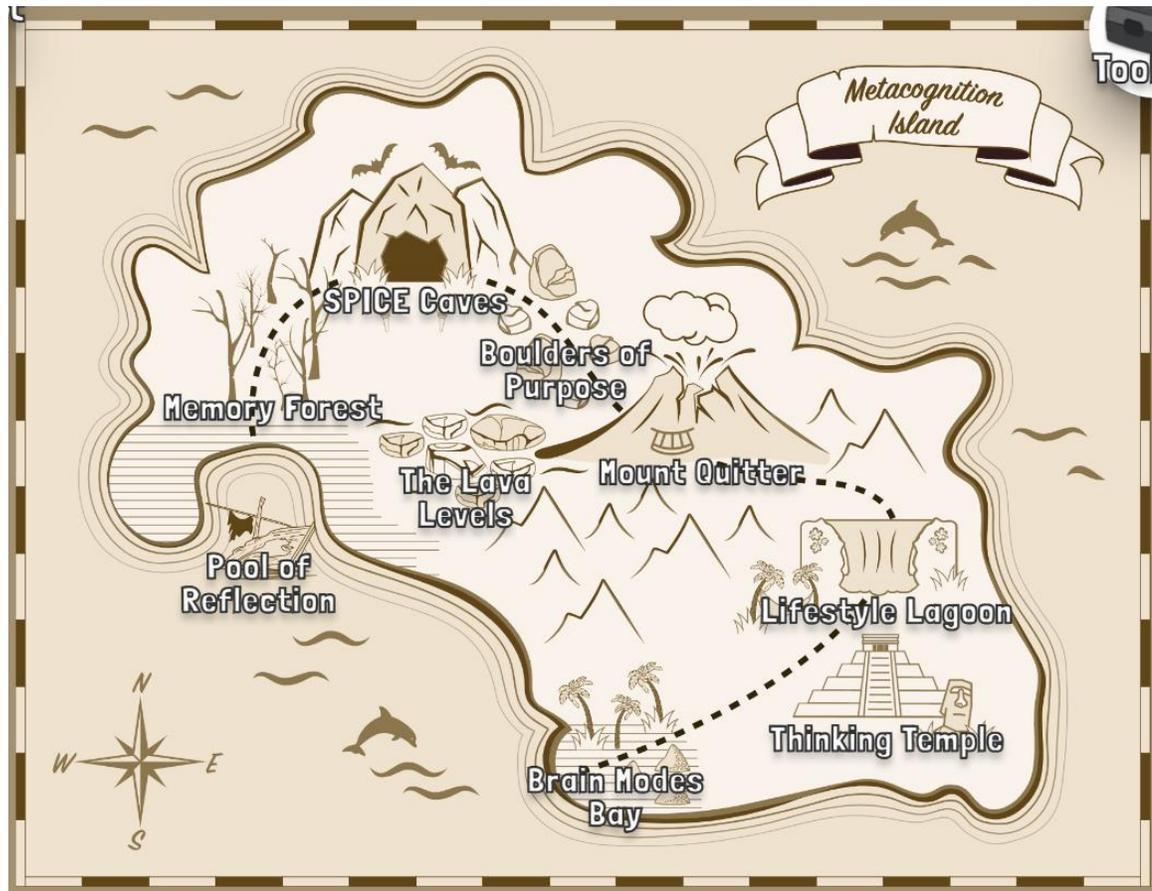


**CROSS-CURRICULAR
LEARNING**



Adventures in Metacognition

- ✓ Age-Appropriate
- ✓ Engaging Multimedia Format
- ✓ Practical, Reflective Activities





Buddy Ben

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Life is Beautiful
DWELL
in possibilities



Adventures in Metacognition

Adventure Modules

- How the Brain Works
- Improving Memory
- Boosting Cognition
- Building Better Learning Habits
- Becoming a 'Meta' Learner
- Transferring Learning

Science of Learning Topics

- Memory
- Deliberate Practice
- Motivation
- Brain Structure and Neuroplasticity
- Sleep, Diet, Exercise
- The Emotive Brain
- Modes of Thinking



Know your Knowing!

Being aware of your own thoughts, strategies, feelings and actions and their effects on others.



Persevering with a task through to completion; remaining focused. Searching for ways to reach your goal when stuck. Not giving up.



Take your time!

Thinking before acting; remaining calm, thoughtful and deliberative.



Check it again!

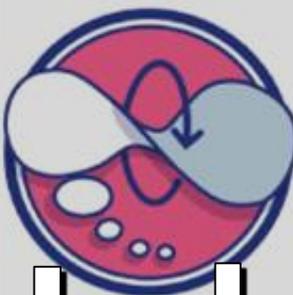
Doing your best. Setting high standards. Fact checking and finding ways to improve.



Listening with Understanding and Empathy

Understand others!

Devoting mental energy to another person's thoughts and ideas. Making an effort to perceive another's point of view and emotions.



Thinking Flexibly

Look at it another way!

Being able to change perspectives; generating alternatives, considering options.



Questioning and Posing Problems

How do you know?

Having a questioning attitude; knowing what data are needed & developing questioning strategies to produce the data. Finding



Thinking Interdependently

Work together!

Working with and learning from others in reciprocal situations. Teamwork.

Habits of Mind



Thinking & Communicating with Clarity and Precision

Be clear!

Striving for accurate communication in both written and oral form; avoiding over-generalizations, distortions, deletions and exaggerations.



Applying Past Knowledge to New Situations

Use what you learn!

Accessing prior knowledge; transferring knowledge beyond the situation in which it was learned.



Gathering Data Through All Senses

Use your natural pathways!

Paying attention to the world around you. Gathering data through all the senses: Sight, Sound, Smell, Taste, and Touch.



Creating, Imagining, and Innovating

Try a different or new way!

Generating possibilities; playing with new ideas.



Taking Responsible Risks

Venture out!

Being adventuresome;



Finding Humor

Laugh a little!

Finding the whimsical, incongruous and



Responding with Wonderment and Awe

Become intrigued!

Finding the world



Remaining Open to Continuing Learning

Learn to your life!

Having humility and



WHY TEACH THE HABITS OF MIND?

- ✓ **Builds a Foundation for Lifelong Learning**
- ✓ **Supports Emotional and Social Development**
- ✓ **Improves Problem-Solving and Creativity**
- ✓ **Encourages Growth Mindset**
- ✓ **Promotes Reflective Practice**



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How did we introduce the Habits of Mind at Moira Primary School?

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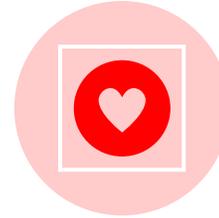
Whole School Assemblies



How did we help our pupils understand the Habits of Mind?



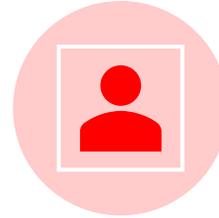
INTRODUCED THE VOCABULARY



MADE IT MEANINGFUL



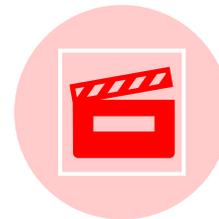
LINKED TO ASPIRATIONAL ROLE MODELS



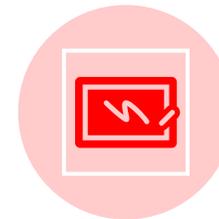
LINKED TO CHARACTERS



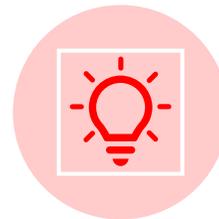
LINKED TO FUTURE JOBS



USED HABITS OF MIND VIDEOS



USED THINKING FRAMES



SHARED REALISTIC STRATEGIES

1. Introduced the vocabulary



What does it mean to take a **responsible** risk?

Responsible risks are risks we take after...

- Thinking through what could happen.
- Preparing yourself for the outcomes.
- Planning what you will do.

What does the word **impulsive** mean?

Don't Quit



Persistence

NEVER
GIVE UP

Just keep going.

Striving for accuracy!



2. Made it meaningful



Which child is
THINKING about their **THINKING!**

Child A

1. $234 + 8 =$
6 2
234 +6 240 +2 242 ✓

2. $135 + 8 =$
5 3
135 +5 140 +3 143 ✓

3. $289 + 5 =$
1 4
289 +1 290 +4 294 ✓

4. $287 + 9 =$
3 6
287 +3 290 +6 296 ✓

Child B

1. $234 + 8 = 242$ ✓

2. $135 + 8 = 142$ •

3. $289 + 5 = 295$ •

4. $287 + 9 = 295$ •

2. Made it meaningful



Thinking about our thinking

Extens
Fill in the miss



Challenge 1:

$$\begin{array}{r} 5 \quad 4 \\ + 2 \quad 8 \\ \hline 8 \quad 2 \end{array} \quad \checkmark$$
$$\begin{array}{r} 5 \\ + 6 \\ \hline 1 \quad 1 \end{array}$$

Even better if: 

I Rnew
my 4 times table

at went well: 

I done
well with remembering
the pound sign.



2. Made it meaningful



Taking responsible risks



Reasons to audition

- I really want the part.
- I would feel proud if I got the part.
- It's a good experience.
- My family can come and watch me perform.
- I get to be creative.
- I get to do something I enjoy doing.
- I will gain confidence.
- I will become a better performer.

Reason not to audition

- I'm worried I'll not get the part.
- I would feel silly for trying if I didn't get it.

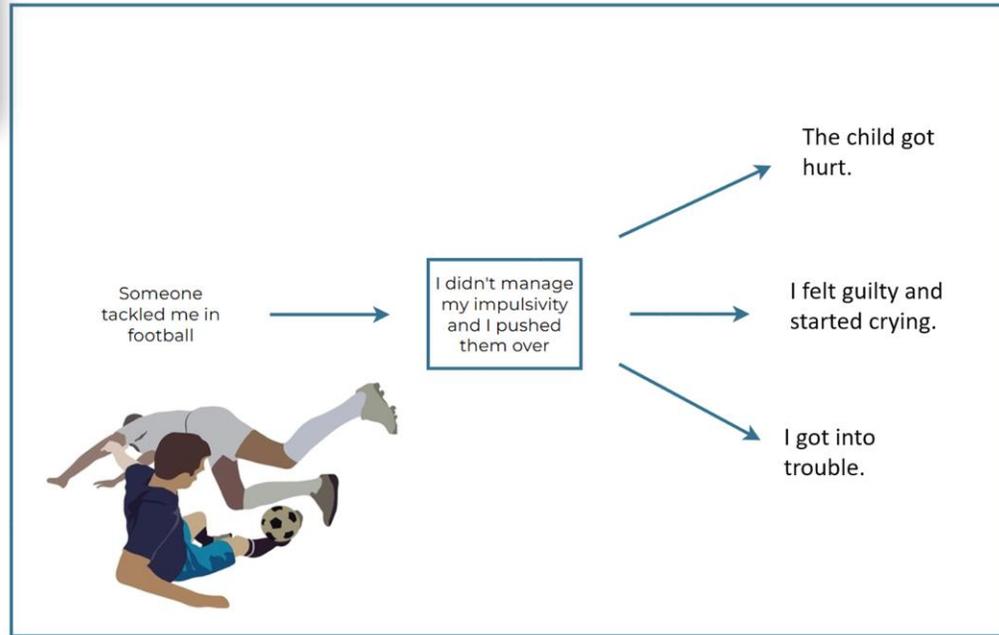
Is it worth taking the **responsible** risks?



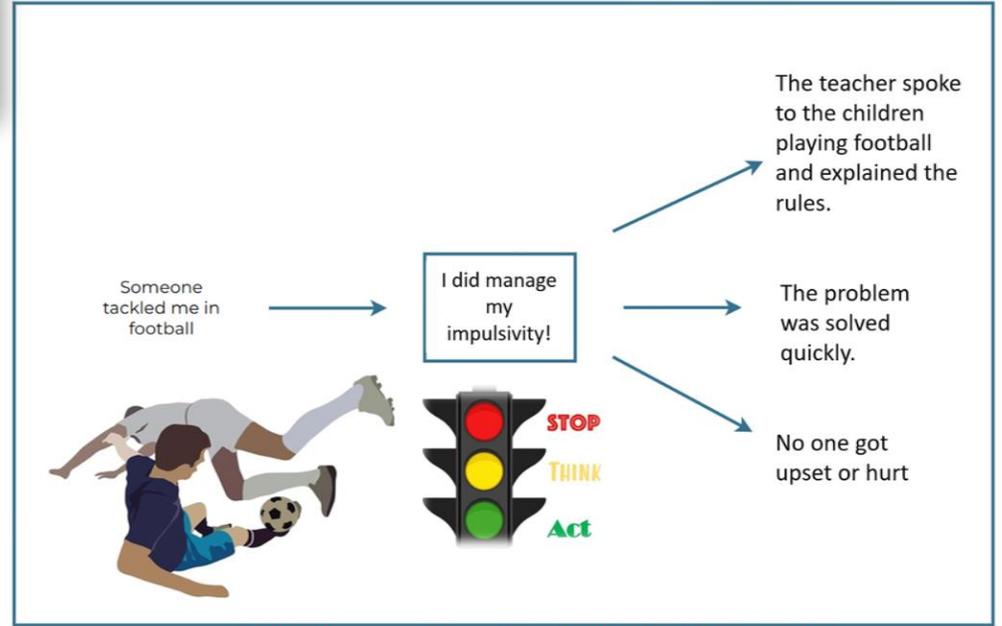
2. Made it meaningful



Cause Effect



Cause Effect

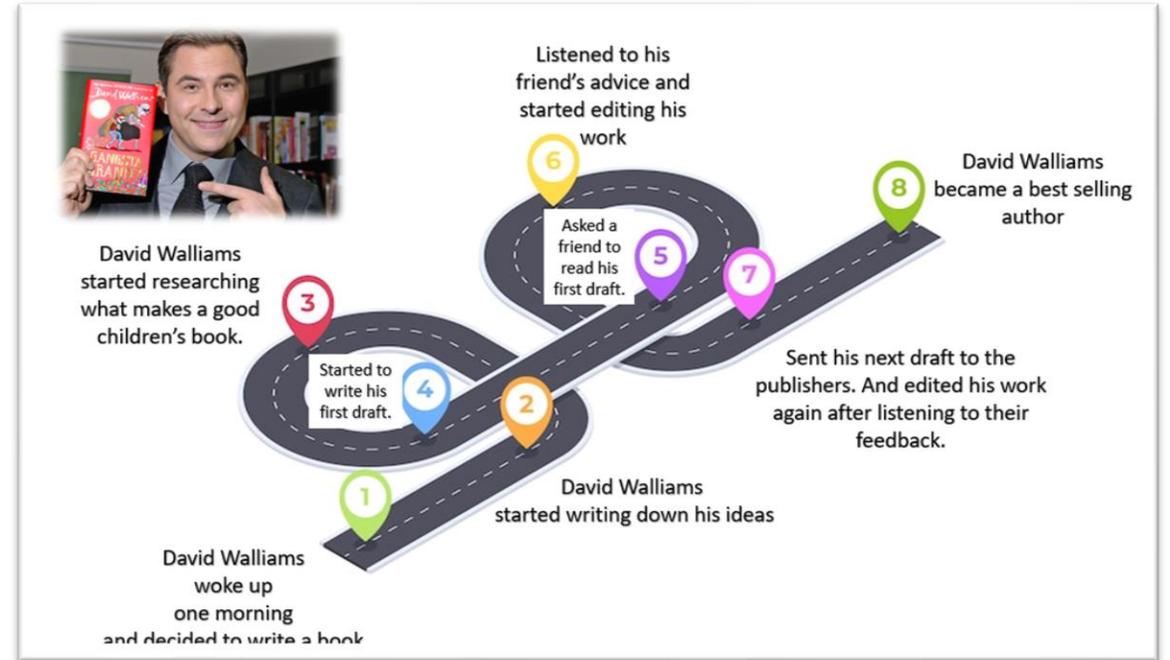


What does managing our impulsivity look like in school?

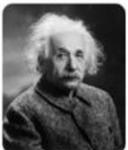
Managing impulsivity



3. Linked to aspirational role models



Successful people



Albert Einstein



JK Rowling



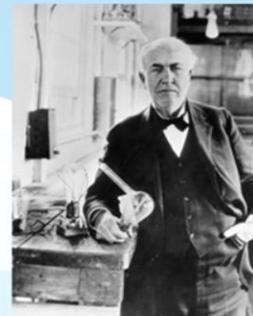
Walt Disney



Thomas Edison

What made these people successful?

How did these responsible risk takers change the world?



Thomas Edison



Nelson Mandela



Rosa Parks



Greta Thunberg



4. Linked to characters



Persistence



Striving
for
accuracy

They are ordinary people who dare to try!

Brave

They push themselves out of their comfort zone

What do all these characters have in common?



Triumph against the odds

Unlikely heroes

Take responsible risks!

5. Linked to future jobs



What types of things will you do to help you get your dream job and be successful when you're older?



Study



Pass tests



Experience it



Practice a skill



Read/research it



Thinking about their thinking



Striving for accuracy



Managing impulsivity



Taking responsible risk



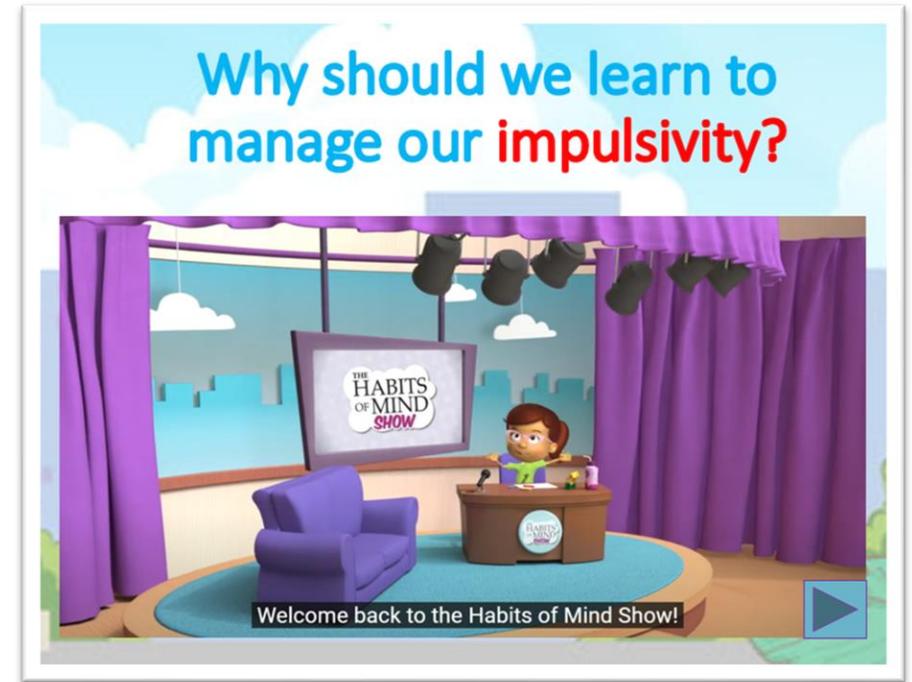
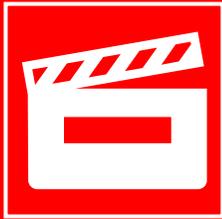
Finding humour



Persisting



6. Used Habits of Mind videos

Two cartoon girls, one with glasses and one with a headband, talking in a park setting.

If you laugh at your mistakes, you don't feel so bad about them anymore.

A photograph of Dr. Bena Kallick, an older woman with short white hair.

Finding humour gives the brain an opportunity to breathe and relax and it's an opportunity for us to have fun and laugh at ourselves

Dr. Bena Kallick
Co-Founder, Institute for Habits of Mind

A photograph of Dr. Art Costa, an older man with glasses and a mustache.

Finding humour is a sign of intelligence and a complex skill.

Dr. Art Costa
Co-Founder, Institute for Habits of Mind

A circular logo for Moira Primary School, featuring a tree and the school's name.

7. Used Thinking Frames



Cause Effect



What happens if I am **impulsive**?

Shouting out in class



You are not learning!

You are distracting others and stopping others from learning!

You are upsetting your teacher.



7. Used Thinking Frames



Examples of impulsivity

Not waiting your turn and shouting out.

Interrupting people

Getting frustrated and ruining your activity.

Snatching or not sharing

Pushing into a line

7. Used Thinking Frames



Sequencing



I want to learn to play the xylophone



What steps do you need to take? Set yourself a goal.



Learn about the instrument/ song.



Ask for help.
Get a tutor?



Be positive!
Persist even when
it gets hard!



Keep practising

7. Used Thinking Frames



instead of

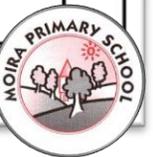
"Everyone finds things hard sometimes."

SAY

"This is tricky, but I'm really going to try my best!"

"This is too hard!"

"What's the point in even trying!"



8. Shared Realistic Strategies



Strategies to help us become **responsible** risk takers...

Ask yourself...

- What is the best possible outcome from this choice?
- What is the worst that can happen?
- How great would success feel?
- How bad would it feel to fail?

Allow yourself to feel **uncomfortable**.

Be brave enough to be wrong sometimes!

Do **research**, think things **through** and **be prepared** before you take a responsible risk.

Develop an encouraging inner voice

Say to yourself...
'If I don't try it, I will never know if I can do it'

Remember to find humour...

Laugh at yourself.

Allow yourself to feel **uncomfortable**.
Be brave enough to be wrong sometimes!

Look for the **positives**

Be **creative** think how this can be changed into a good thing

Strategies to help you **strive for accuracy!**

Check it **twice!**

Use **tools and strategies** that will make your work accurate- e.g. RULERS, DICTIONARIES FOR EDITING, IPADS.

Check it **one step at a time**- use your...

Top Tips

Research an example/
what a good one looks like

WAGOLLS

Have a **buddy check**, ask them to be honest!

Peer marking

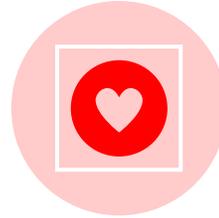
Take the time you need to do it right,
doing it over always takes longer!



How did we help our pupils understand the Habits of Mind?



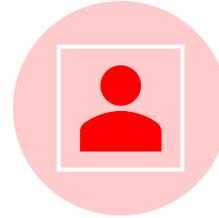
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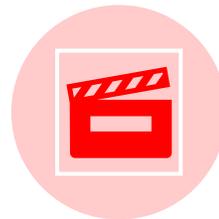
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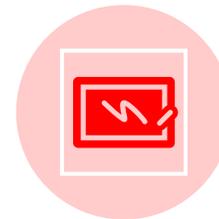
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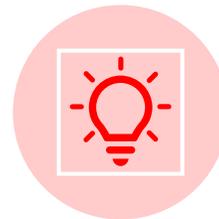
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USED HABITS OF MIND VIDEOS



USED THINKING FRAMES



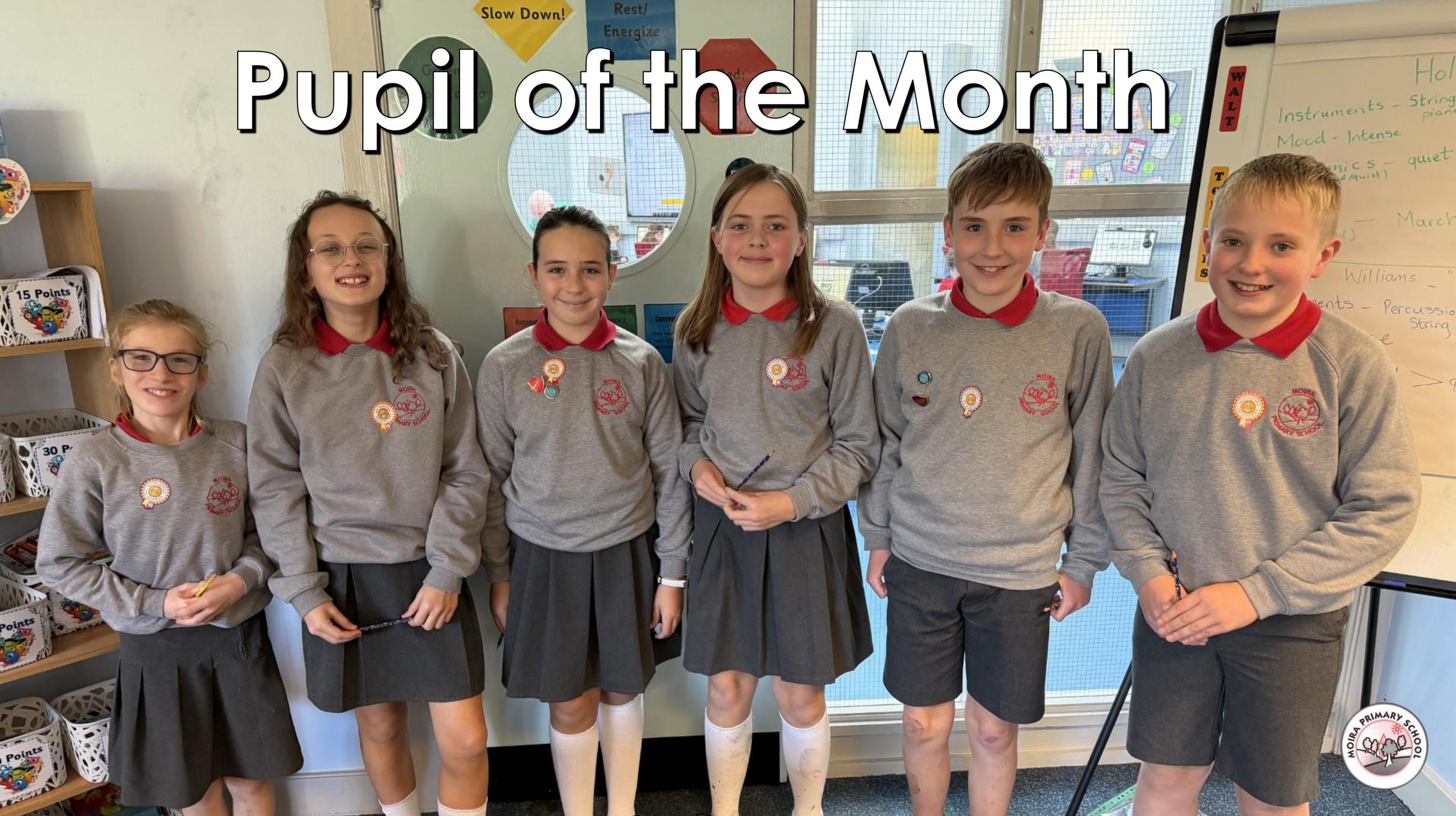
SHARED REALISTIC STRATEGIES

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Habits of Mind at Moirira Primary School



Pupil of the Month



divide unequally

Top Tips

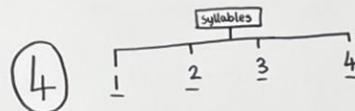
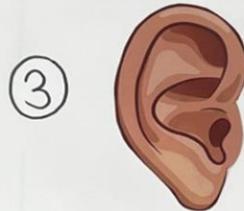
1. Find who gets more *A =
* person with more e.g. B =



2. Total - difference
3. Half your answer from 2.
Give this to the person with less.
4. Add the difference to the answer for 3.
Give this to the person who has more.
5. Check - Do your amounts make the total?
Is your difference the same as in the question?



(syllables) Top Tips



see

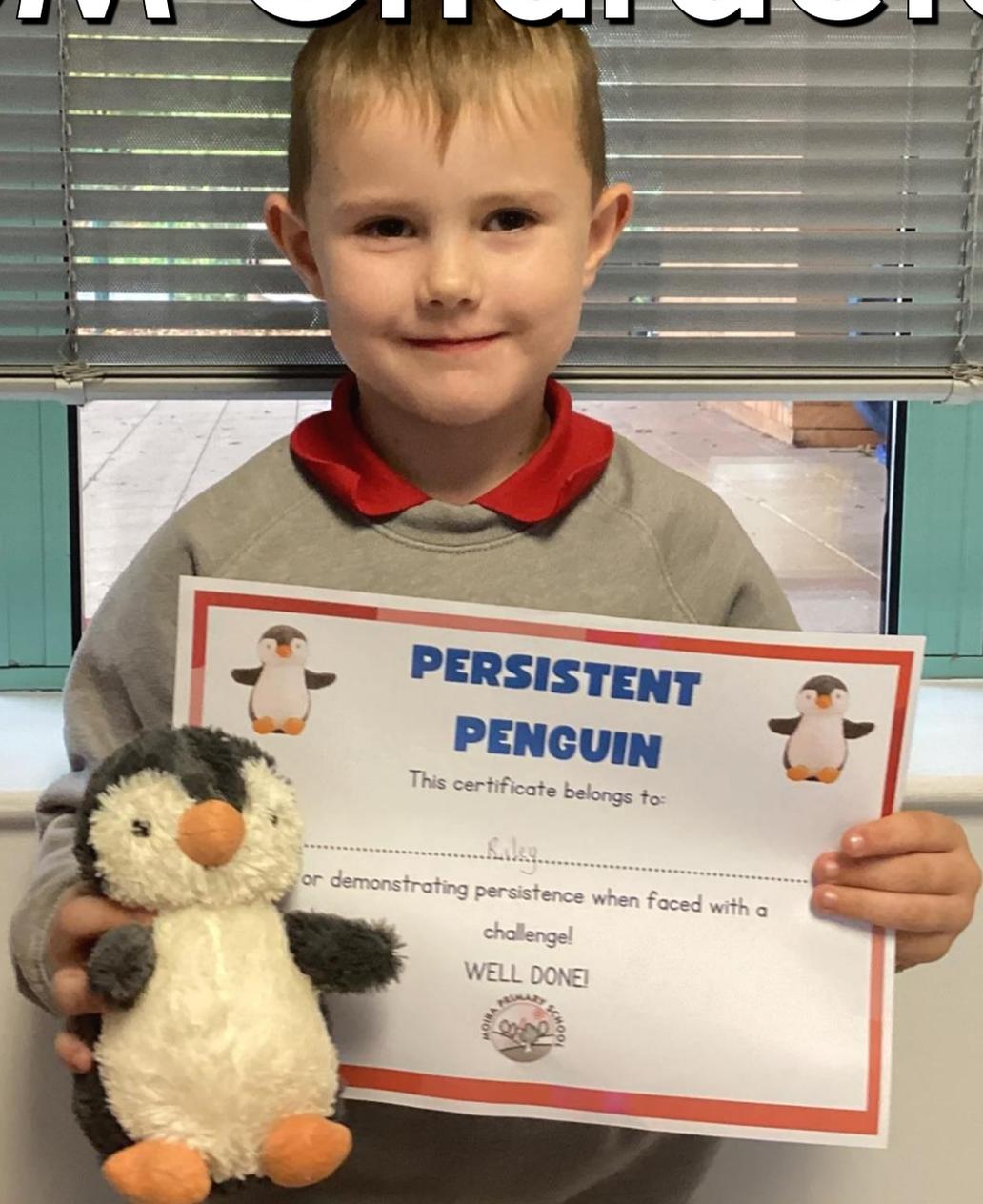




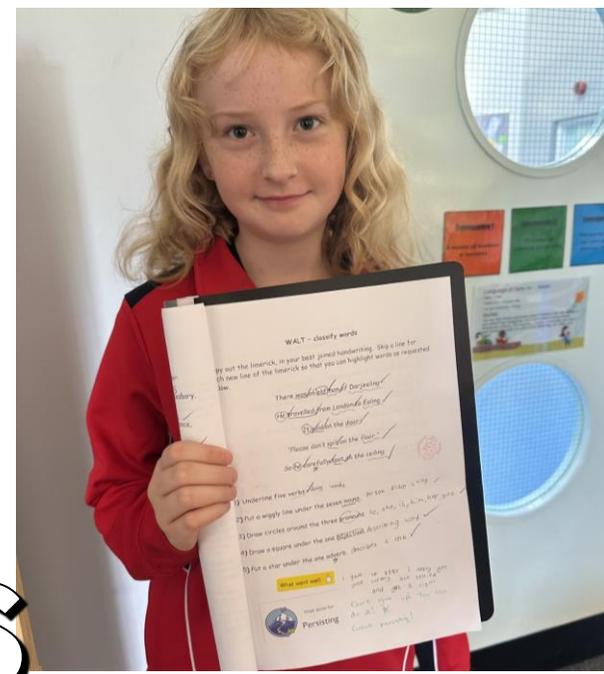
Displays



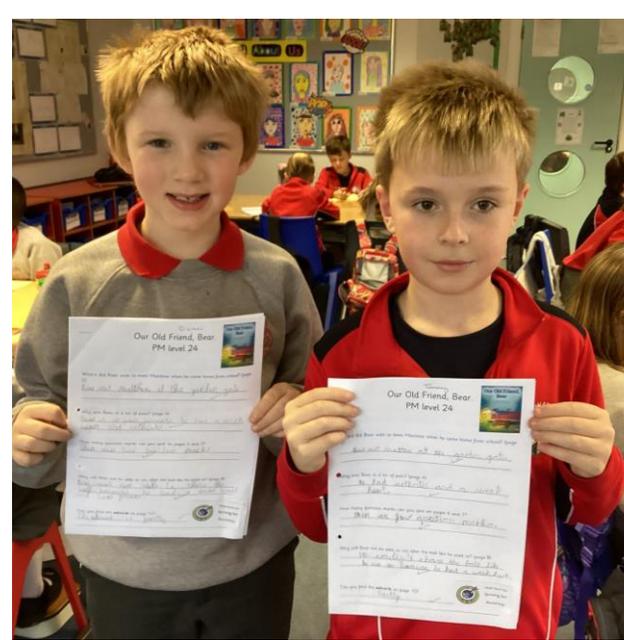
HoM Characters







Homework Stickers





you can fly



Fire door
keep shut



KUKRI



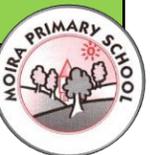
Pupil Council





Habits of Mind Self-Assessment Rubrics

STRIVING FOR ACCURACY 			
Criteria	I Need Help	I'm Getting More Careful	I'm an Accuracy Ace
I check my work carefully	<i>I don't check my work and often leave mistakes.</i>	<i>I sometimes check my work but might miss a few things.</i>	<i>I always check my work and make sure everything is correct.</i>
I fix mistakes when I find them	<i>I leave mistakes and don't try to fix them.</i>	<i>I try to fix some mistakes when I notice them.</i>	<i>I fix mistakes right away and learn from them.</i>
I take my time to do my best	<i>I rush through my work and don't do my best.</i>	<i>I try to be careful but sometimes rush.</i>	<i>I work slowly and carefully to do my best.</i>
I ask for help when I'm not sure	<i>I don't ask for help even when I'm stuck.</i>	<i>I sometimes ask for help but not always.</i>	<i>I ask for help when I need it and listen carefully.</i>
I try again to improve my work	<i>I don't try again and stop when it's hard.</i>	<i>I sometimes try again but give up easily.</i>	<i>I always try again to make my work better.</i>



Persistence



Criteria	I Need Help	I'm Getting Better	I'm a Persistence Star
I keep going	<i>I often give up when things are hard.</i>	<i>I try to keep going but sometimes stop when it gets tricky.</i>	<i>I always keep trying, even when things are hard.</i>
I try new ways	<i>I stick to one way and don't try other ideas.</i>	<i>I sometimes try new ways when my first idea doesn't work.</i>	<i>I find different ways to solve problems.</i>
I stay calm	<i>I get upset and stop working when things go wrong.</i>	<i>I get a little upset but try to calm down and keep going.</i>	<i>I stay calm and don't get upset when things go wrong.</i>
I work toward my goal	<i>I don't have a goal or stop working before I finish.</i>	<i>I have a goal but sometimes forget or stop working on it.</i>	<i>I know my goal and keep working until I reach it.</i>
I learn from mistakes	<i>I don't learn from mistakes and keep making the same ones.</i>	<i>I sometimes learn from mistakes but need reminders.</i>	<i>I learn from my mistakes and try to do better next time.</i>



Past Pupils



WALT : identify the habits of mind displayed by the characters in our class novel - The Iron Man by Ted Hughes

Across the Curriculum

	The Iron Man	Hogarth	The Farmers	Space-Bat-Angel-Dragon
displayed the habit of mind ...	persisting	listening with understanding and empathy	thinking interdependently	remaining open to continuous learning
when ...	he rebuilt himself piece by piece.	he helped the Iron Man and told the townspeople to stop harming him.	they worked together to trap the Iron Man.	he changed his behaviour after being challenged by the Iron Man.



Impact

IMPROVED ACADEMIC ACHIEVEMENT



- ✓ PTE and PTM rise
- ✓ Pupil Independence
- ✓ Transferrable Skills

ENHANCED EMOTIONAL WELLBEING



- ✓ PASS Survey
- ✓ Resilience and Empathy
- ✓ Growth Mindset

SHARED LANGUAGE FOR LEARNING



- ✓ Home and School
- ✓ Consistency
- ✓ Strong Learning Culture



