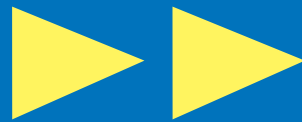


EMBRACING THE **F** WORD

Using **FAILURE** to build resilience
and motivation @ school.





ReachOut.com by Inspire Foundation

ReachOut.com by Inspire Foundation is the organisation behind ReachOut.com and the ReachOut.com Professionals service. An Australian non-profit ReachOut.com by Inspire Foundation was established in 1996 with a mission to help young people lead happier lives. The organisation exists because mental health difficulties are one of the biggest challenges of our time: 1 in 4 young people will experience a mental health disorder, and suicide is the leading cause of death for young people aged 15 to 24 in Australia.

ReachOut.com

ReachOut.com is Australia's leading online youth mental health service. It's the perfect place to start for young people who are not sure where to look. Every year it helps hundreds of thousands of young Australians with information, support and stories on everything from finding motivation, through to getting through really tough times.

With a mobile-friendly site and forums, young people can access help, information and support no matter where they are. Everything on ReachOut.com is created with experts and young people, so young people can be sure to find resources that are not only evidence-based but also relevant. It has tools and tips to make everyday life just a little easier and if young people can't get the help they need on ReachOut.com, it provides links to the key youth mental health services throughout Australia.

ReachOut.com Professionals

ReachOut.com Professionals provides recommendations and advice for education professionals and youth support workers on a range of online interventions, tools and resources that can be used to support young people experiencing mental health difficulties and to build young people's wellbeing and resilience.

Content and resources on ReachOut.com Professionals will help you to understand key mental health and wellbeing concepts, refer young people to appropriate services or online tools, and teach mental health and wellbeing skills in the classroom and in support work with young people.



► Professionals ◀

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Australian Curriculum General Capabilities Links	3
Australian Health and Physical Education Curriculum Links	4
Practical tools for developing a growth mindset - 6 lessons	5

Symbols used



Equipment needed
for lesson



Time indicator for activity



Take Home Activity



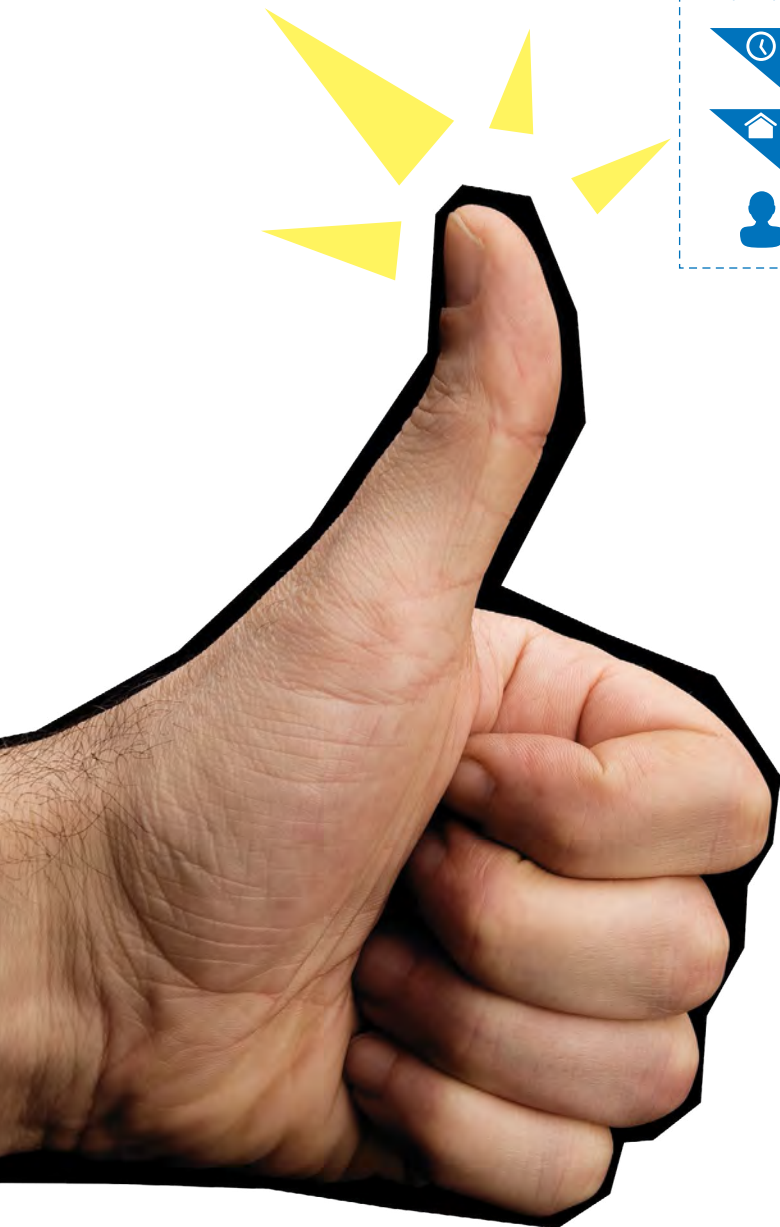
Growth Minset Ideas



Printable fact
sheet info



Printable
work sheet



Learning & Motivation through failing better

We need to teach students how to fail better and that learning happens through failure, effort and hard work. A growth mindset is the key to this process. This resource evidence is based on the work of Carol Dweck (Dweck, C.S. (2006). *Mindset: The new psychology of success*. New York: Random House Inc).

Fear of failure in students can be crippling, where students begin to avoid challenging work, tasks and reduce their motivation towards wanting to achieve. This results in poor outcomes all round. Students need to be taught that failure is the precursor to all success and a necessary component of learning. The only way to succeed with tasks, assignments, exams, physical activity, sport and life in general is through true grit, persistence and embracing and learning from failures.

The development of a growth mindset is about learning how to fail well, the language to get there, how to get over it, cope with it and move on to succeed. A growth mindset can be best summed up and understood by the phrase, 'I can't do that...YET!'.

Everyone may not have the same intelligence but everyone can get smarter. In order to help students go from a fixed mindset to a growth mindset, we need to praise their effort and not just the final product.

As educators we must understand that failure is a necessary part of learning for ourselves also, and embrace this *modus operandi* in our classrooms as practitioners. Only when we too model a growth mindset, can we better lead students in learning about using their failures as motivation for learning and ongoing achievement.

Teachers can foster the development of a growth mindset in students through:

- Teaching about the differences between a fixed and a growth mindset
- Teaching about the brain, its malleability and how it creates new pathways and connections for learning
- Creating a supportive classroom environment where persistence, effort and mistakes are embraced, analysed and celebrated
- Setting learning goals with students and monitoring their progress
- Making growth mindset language a part of everyday teaching, not as an added 'extra' or something specific to certain subjects or themes
- Praising effort, struggle, persistence, choosing difficult tasks, learning, strategies, choices and improving,
- Embracing a whole school approach to developing growth mindset language across all subjects
- Participating in whole school activities that promote the benefits of developing a growth mindset

Where to use this resource

This resource provides links to the Australian Health and Physical Education Curriculum across both strands, Personal, social and community health and Movement and physical activity. In addition, this resource is also mapped to the Australian General Capabilities and has been designed to be used in Health classes and through pastoral care sessions.

Learnings from this resource are also applicable to education professionals in their own work.

LINKS TO REACHOUT.COM
Head to ReachOut.com for fact
sheets and stories on developing a
growth mindset and failing well



The 6 x 50 minute lesson plans with accompanying activity sheets are designed to introduce your students to a growth mindset through various activities. The activities have been designed to explain to students what mindsets are, how to establish what mindset you have and to practice skills around developing and using a growth mindset in order to build resilience, face tough challenges, embrace failure as learning and to learn and grow in knowledge and personal skills

Australian Curriculum General Capabilities Links

Self-awareness

Self-awareness involves students reflecting on and evaluating their learning, identifying personal characteristics that contribute to or limit their effectiveness, learning from successes or failures, and being able to interpret their own emotional states, needs and perspectives. In developing and acting with personal and social capability, through this resource, students learn to:

- recognise personal qualities and achievements
- understand themselves as learners
- develop reflective practice

Self-management

This element involves students effectively regulating, managing and monitoring their own emotional responses, persisting in completing tasks and overcoming obstacles. This is achieved through developing the skills to; work independently and to show initiative, learning to be conscientious, delaying gratification and persevering in the face of setbacks and frustrations. In developing and acting with personal and social capability through this resource, students learn to:

- develop self-discipline and set goals
- work independently and show initiative
- become confident, resilient and adaptable

Social management

This element involves students interacting effectively and respectfully with adults and peers. Students learn to negotiate and communicate effectively with others; work in teams, positively contribute to groups and collaboratively make decisions, resolve conflict and reach positive outcomes. In developing and acting with personal and social capability through this resource, students learn to:

- communicate effectively
- work collaboratively
- make decisions



Australian Health and Physical Education Curriculum Links

Year 7 & 8

Strand: Personal, social and community health

Sub Strand: Being healthy, safe and active

Content description:

Evaluate strategies to manage personal, physical and social changes that occur as they grow older

Elaboration:

- Evaluating and practising coping, communication and problem-solving skills to manage changes and emotions associated with puberty and getting older

Sub Strand: Communicating and interacting for health and wellbeing

Content description:

Analyse factors that influence emotions and develop strategies to demonstrate empathy and sensitivity

Elaboration:

- Recognising and interpreting emotional responses to stressful situations and proposing strategies for managing these responses

Strand: Movement and physical activity

Sub Strand: Learning through movement

Content description:

Evaluate and justify reasons for decisions and choices of action when solving movement challenges

Elaboration:

- Identifying factors that enabled them to achieve success in movement activities and explaining how these factors can be transferred to other learning contexts

Year 9 & 10

Strand: Personal, social and community health

Sub Strand: Being healthy, safe and active

Content description:

Examine the impact of changes and transitions on relationships

Elaboration:

- Practising skills to deal with challenging or unsafe situations, such as refusal skills, communicating choices, expressing opinions and initiating contingency plans
- Asserting their stance on a situation, dilemma or decision by expressing thoughts, opinions and beliefs that acknowledge the feelings of others

Sub Strand: Contributing to healthy and active communities

Content description: Plan, implement and critique strategies to enhance the health, safety and wellbeing of their communities

Elaboration:

- Developing and implementing proposals to enhance the wellbeing of staff and students in the school
- Investigating community-action initiatives young people have instigated that have had a positive influence on the health and wellbeing of their communities

Strand: Movement and physical activity

Sub Strand: Learning through movement

Content description: Devise, implement and refine strategies demonstrating leadership and collaboration skills when working in groups or teams

Elaboration:

- Using self-talk and encouragement to motivate themselves and team members to continue to participate and improve performance
- Creating and implementing self-assessment and peer-assessment tools to evaluate performance in a variety of roles

Content description: Transfer understanding from previous movement experiences to create solutions to movement challenges

Elaboration:

- Drawing parallels between successful movement strategies in one sporting situation and how similar strategies could be used effectively in a different sport
- Speculating on possible outcomes of innovative solutions to movement challenges based on past experiences
- Reflecting on successful movement solutions and proposing how they can be transferred to new movement challenges
- Demonstrating motivation, persistence, confidence and commitment when faced with difficult or unfamiliar movement tasks

PRACTICAL TOOLS FOR DEVELOPING A LEARNING [GROWTH] MINDSET

- **How do I create a growth mindset**
- **Lesson 1:** Understanding mindsets
- **Lesson 2:** That part does what?
- **Lesson 3:** Training those minds to stretch and grow
- **Lesson 4:** Brains grow without labels
- **Lesson 5:** Observing and building mindsets
- **Lesson 6:** Setting goals. 'Mastery' and 'Not Yet' tracking
- **Practical** Idea for building a whole school growth mindset





How do I create a growth mindset?

1. Learn, learn, learn

- Stop saying 'I can't'. Say- 'I can't...yet!'
- Don't shy away from difficult tasks
- Focus on effort, struggle & persistence
- Focus on learning and improving, not grades
- Practice your skills and embrace new ones
- Learn a foreign language, try public speaking, learn a new sport

2. Understand hard work is the key


- Seek challenges
- Work hard
- Understand however good you are, there is always room for improvement
- Put a lot of effort in to the learning process
- Set goals and adjust as needed
- Celebrate your successes, big and small

3. Face setbacks

- Keep trying new things to assist in learning new strategies
- Reflect and focus on strategies that have worked, and haven't
- Focus on selftalk –Say to yourself 'I cant...yet'
- Embrace feedback and make changes as necessary
- Find inspiration in others-read stories of famous peoples' setbacks and how they persisted through these to achieve great things

WHAT ARE MINDSETS?

Lesson 1 : Understanding mindsets

 Time required: 50 mins

KEY TEACHER UNDERSTANDINGS

Mindset is a series of self-perceptions or beliefs people hold about themselves. These determine behaviour, outlook and mental attitude.

A **Growth Mindset** is where a person's self-belief is centred around the notion that abilities can be developed through dedication and hard work, through a learn at all costs attitude. Success is seen to be due to **35% Ability and 65% Effort**.

A **Fixed Mindset** is where people believe traits such as intelligence or talent are fixed traits, set at birth. A person with a fixed mindset lets failure or success define them. Success is due to **65% ability and 35% effort**.

For further information on understanding mindsets head to ReachOut.com Professionals

KEY MESSAGES

By the end of this lesson students will understand:

- That the language and self talk we use, can assist in developing and improving how we learn
- Failing is a necessary part of learning
- You can have both a fixed and a growth mindset in different contexts
- Your mindset can be changed

TEACHER LANGUAGE TIP:

When working with students to develop a growth mindset thought patterns, the following language hints may be useful to share with students when they are completing challenging tasks in your lesson:

- You aren't able to complete that difficult puzzle yet
- What did you learn?
- What mistakes did you make?
- What skills were needed to complete the task? Had you used those skills before?
- What would you do differently next time with the same/similar task?
- 'You can't do it... yet'

EQUIPMENT NEEDED

ACTIVITY 1:

- ReachOut.com Professionals Fact Sheet: How to Create a Safe and Supportive Environment
- Whiteboard/Smartboard
- Mindsets PowerPoint slides (Available from ReachOut.com Professionals website)
- Student Fact Sheet: Mindsets

ACTIVITY 2:

- Student Worksheet: Practicing a Growth Mindset (6 pages)
- Post-it notes
- 5 ReachOut.com Wooden Cube Puzzles- (available from ReachOut.com Professionals) (or a Jigsaw Puzzle with at least 100 pieces)
- 5 Rubik's Cubes (enough so multiple student pairs can complete this activity at the same time)
- Famous Failures Fact Sheet

TIP: Praise students' efforts, not necessarily their mistakes. Emphasise that making mistakes is acceptable and great for learning!

TIP: Discourage perfectionists-remind students that part of the learning criteria in your classroom is making mistakes


ACTIVITY 1: What are MINDSETS?

10 mins


Direct Teaching:

1. Remind Students that the classroom is a safe place to share ideas and knowledge and emphasise to students that mindsets can change depending on the task. Everyone can develop a growth mindset!
2. Use PowerPoint slides from ReachOut.com Professionals or write up definitions on the board for students to record
3. Hand out Student Fact Sheet: Mindsets

ACTIVITY 2: Practicing the language of a growth mindset

35 mins


1. Students work in pairs, within small round robin groups to complete the Practicing a Growth Mindset worksheet

- Place activities around the room where students can move around in a round robin style

ACTIVITIES:

1. ReachOut.com Wooden Puzzle (or equivalent)
2. Sudoku
3. Rubik's Cube
4. What's missing?

- Once students have completed at least two activities, students write down on a Post-it note:
 1. How they felt while completing one of the activities
 2. What mistakes they made
 3. How they overcame the mistake

2. Place Post-it-notes up on board/wall for other students to see and invite students to read them
3. Encourage students to discuss with each other their mistakes and how they tried to overcome them

ACTIVITY 2: Improvement & Reflection- 'Catching' ideas

5 mins


1. Using the 'Famous Failures Fact Sheet' as inspiration, students are to use their phones/iPads/tablets or a small note pad and pen to record ('catch') their thoughts/ideas about other activities they have done in their lives where they have made mistakes and record what they learnt through making those mistakes. Bring 'caught ideas' to the next class for discussion

Apps for note taking include (Supported by both iOS & Android)

- Evernote- This app allows students to sync notes across different platforms, allowing them to have access to all their notes no matter what device they own or work from
- Catch Notes- Students can sign in using a Facebook or Google account then create voice notes, photo notes and text notes.

TAKE HOME ACTIVITY: Brain stretching exercise



There are six eggs in the basket. Six people each take one of the eggs. How can it be that one egg is left in the basket?

Answer: The last person took the basket with the last egg still inside.

TEACHER REFLECTION



What did I learn today?

What mistakes did I make that taught me something?

What did I try hard at during the lesson?

Mindsets

What is a MINDSET?

- Mindset is a series of self- beliefs people hold about themselves.
- Mindsets determine people's behaviours, outlook and mental attitude e.g believing you are either 'intelligent' or 'unintelligent'.
- People can have both a GROWTH and FIXED mindset in difference situations.
- By knowing about the two mindsets, you can start thinking and reacting in new ways.

What is a GROWTH Mindset?

- 35% Ability with 65% Effort
- 'I can't do it, YET!'
- A growth mindset is where people believe they can learn and develop their intelligence through dedication and hard work.
- People with a growth mindset see failure and setbacks as opportunities to learn and improve.
- YOU can learn to develop a Growth Mindset!

What is a FIXED Mindset?

- 65% Ability with 35% Effort
- 'I can't do it'
- A Fixed Mindset is where people believe traits such as intelligence or talent are fixed traits, set a birth.
- People with a fixed mindset will describe themselves as either 'dumb' or 'smart' and are less likely to say "yes" to something that challenges them.
- When faced with failure or a challenge, they will tell themselves and others, 'they can't do it' or will make excuses to justify why they failed.
(E.g., I didn't pass the test as I was too busy doing my homework for another subject).



Practising a Growth Mindset

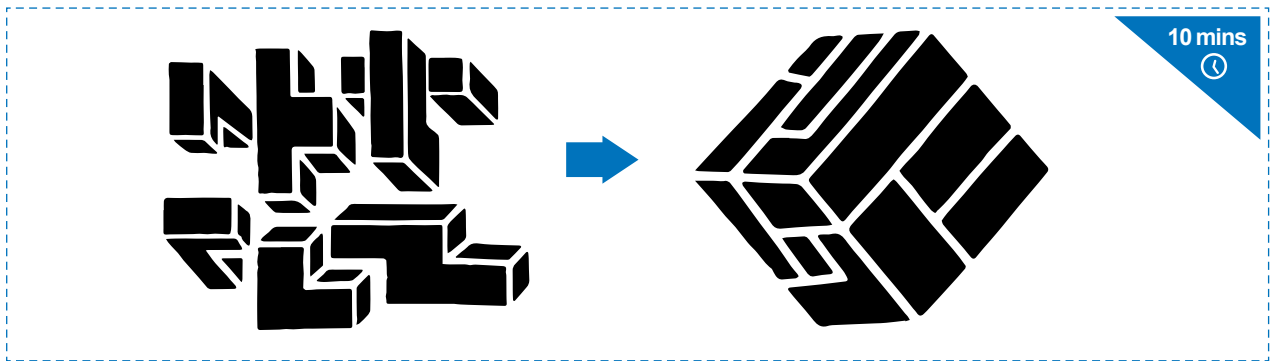
Choose at least two of these activities to work on your Growth Mindset (10 mins allocated to each activity) and answer the following questions.

Growth Mindset Self Talk (things to say to yourself while completing the tasks - these help with developing a growth mindset)

- I worked really hard on that part!
- I have all these skills, I just need to be able to _____.
- I've gotten this far, I'm not stopping now.
- When I can _____, I will know I have understood it.



1. ReachOut.com Wooden puzzle (or small jigsaw)



Questions

- What did you learn by doing the activity?

- What things did you say in your mind or out aloud when completing the activity?

- What mistakes did you make that taught you something?

- Can you apply this learning somewhere else when completing challenging tasks?

- What did you try hard at during the activity?

Growth Mindset Self Talk - Things to say to yourself for a growth mindset, after you have completed activities

- Before I couldn't _____. Now I can _____.
- Based on what I learned from this, next time I am going to _____.
- One thing I learned about myself as a learner is _____.





2. Sudoku

Fill in the blank squares with the numbers 1 through 9.

Every row, column and 3x3 region of a 9x9 grid must contain each number only once.

Technology Alternative: Complete online Sudoku puzzles: <http://www.websudoku.com/>

Growth Mindset Self Talk (things to say to yourself while completing the tasks-these help with developing a growth mindset)

- I worked really hard on that part!
- I have all these skills, I just need to be able to _____.
- I've gotten this far, I'm not stopping now.
- When I can _____, I will know I have understood it.



	4				2		1	9
			3	5	1		8	6
	9	4				7		
								7
2						8	9	
		9	5	2			4	1
4	2		8	6	9			
1	6		1				7	

						9	2	6
2	6		9	1		5		
	5	4		3				
6			8		5		9	7
8								1
5	4		1		9			2
				2		1	6	
		2		9	6		3	5
3	8	6						

10 mins



Questions

- What did you learn by doing the activity?

- What things did you say in your mind or out aloud when completing the activity?

- What mistakes did you make that taught you something?

- Can you apply this learning somewhere else when completing challenging tasks?

- What did you try hard at during the activity?

Growth Mindset Self Talk - Things to say to yourself for a growth mindset, after you have completed activities

- Before I couldn't _____. Now I can _____.
- Based on what I learned from this, next time I am going to _____.
- One thing I learned about myself as a learner is _____.





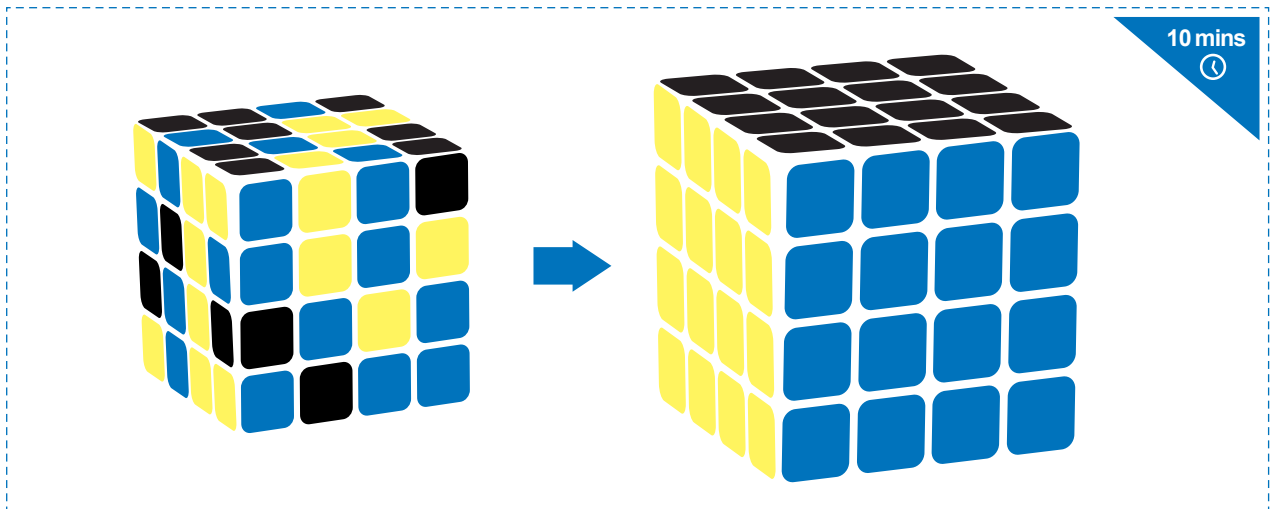
3. Rubik's Cube

- Mix up the cube and have your partner try to unlock the cube to get the same colour on the same side.
- For hints and tips for completing a Rubik's Cube head to YouTube

Growth Mindset Self Talk

(things to say to yourself while completing the tasks-these help with developing a growth mindset)

- I worked really hard on that part!
- I have all these skills, I just need to be able to _____.
- I've gotten this far, I'm not stopping now.
- When I can _____, I will know I have understood it.



Questions

- What did you learn by doing the activity?

- What things did you say in your mind or out aloud when completing the activity?

- What mistakes did you make that taught you something?

- Can you apply this learning somewhere else when completing challenging tasks?

- What did you try hard at during the activity?

Growth Mindset Self Talk - Things to say to yourself for a growth mindset, after you have completed activities

- Before I couldn't _____. Now I can _____.
- Based on what I learned from this, next time I am going to _____.
- One thing I learned about myself as a learner is _____.





4. What's Missing?

Growth Mindset Self Talk
(things to say to yourself while completing the tasks-these help with developing a growth mindset)



- I worked really hard on that part!
- I have all these skills, I just need to be able to _____.
- I've gotten this far, I'm not stopping now.
- When I can _____, I will know I have understood it.

Questions

- What did you learn by doing the activity?

- What things did you say in your mind or out loud when completing the activity?

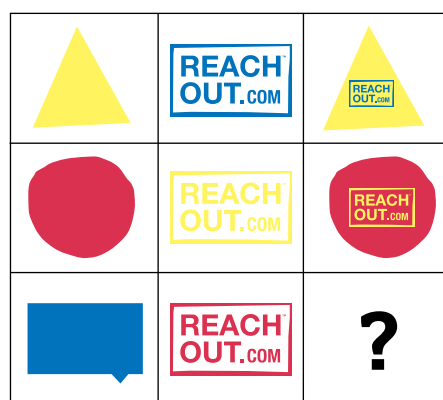
- What mistakes did you make that taught you something?

- Can you apply this learning somewhere else when completing challenging tasks?

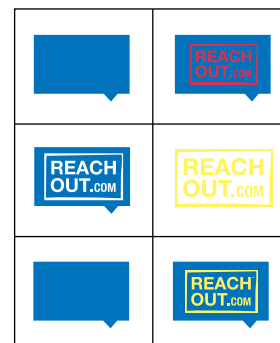
- What did you try hard at during the activity?

Which image is next? Choose from the multiple options below.

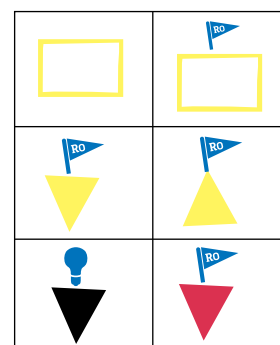
10 mins
🕒



Answers - Choose 1



Answers - Choose 1



Growth Mindset Self Talk - Things to say to yourself for a growth mindset, after you have completed activities

- Before I couldn't _____. Now I can _____.
- Based on what I learned from this, next time I am going to _____.
- One thing I learned about myself as a learner is _____.



Famous Failures

Many success stories of famous people have only occurred through great persistence, after many setbacks and failures.

If you never fail, you'll never succeed.



Albert Einstein

The failure: His teachers called him 'slow'. He didn't learn to speak English until he was 7 years old.

The success: He won the nobel prize for physics



Colonel Sanders

The failure: Now a famous KFC fried chicken recipe, Sanders was rejected 1008 times before a restaurant accepted the recipe and began making fried chicken.

The success: KFC is a worldwide brand, making billions of dollars a year



Oprah Winfrey

The failure: Oprah was fired from her first TV job and told she was 'unsuitable' for television

The success: Became a billionaire through her popular talk show and television network



J.K. Rowling

The failure: Her Harry Potter books were rejected by 12 publishers

The success: Rowling created Harry Potter, now estimated to be worth \$15 billion



Elvis Presley

The failure: After a performance, the concert manager told him he would be better returning to his old job of driving trucks

The success: Elvis is one of the most famous singers of all time




Failure in science

Science and experimenting is all about trying something out - if it works, great, but we can probably do it even better. Failing is a vital part of science. Scientists are constantly developing theories to explain how something happens or to try to solve a problem. If a theory 'fails' it can often be a good thing so failures are not even considered as such - they are called experiments!



DEVELOPING A GROWTH MINDSET

LESSON 2: That part does WHAT!?

 Time required: 50 mins

KEY TEACHER UNDERSTANDINGS

Mindset is a series of self-perceptions or beliefs people hold about themselves. These determine behaviour, outlook and mental attitude.

A Growth Mindset is where a person's self-belief is centred around the notion that abilities can be developed through dedication and hard work, through a learn at all costs attitude. Success is seen to be due to 35% Ability and 65% Effort.

A Fixed Mindset is where people believe traits such as intelligence or talent are fixed traits, set at birth. A person with a fixed mindset lets failure or success define them. Success is due to 65% ability and 35% effort.

For further information on understanding mindsets head to ReachOut.com Professionals

KEY MESSAGES

By the end of this lesson students will understand:

- The brain strengthens with use. Learning and practicing challenging things helps your brain to form new connections and grow
- They can improve how they learn throughout life by understanding how the brain works
- The brain is a muscle and is always changing. This is known as neuroplasticity

TEACHER LANGUAGE TIP:

When working with students to develop a growth mindset thought patterns, the following language hints may be useful to share with students when they are completing challenging tasks in your lesson:

- You aren't able to complete that difficult puzzle yet
- What did you learn?
- What mistakes did you make?
- What skills were needed to complete the task? Had you used those skills before?
- What would you do differently next time with the same/similar task?
- 'You can't do it... yet'

EQUIPMENT NEEDED

- Worksheet 1: Parts and functions of the human brain
- 6 X A3 pages for group activity
- Box of pens/pencils
- Laptops/computers/iPad/tablets
- Website: <http://www.brainline.org>

TIP: Encourage collaboration amongst your students. This encourages students to explore problems, but also learn new ways of solving them through observing others.

TIP: *Admitting to students you have failed means you're human! Students will be more likely to want to embrace failure and seek more challenging tasks knowing that you don't always get it right also!*

ACTIVITY 1: What do you know about your brain?

15 mins



Teacher demonstrates the size of the human brain. For a high impact visual demonstration use a medium cauliflower. Two hands pressed together are also a good visual.

1. Students work as individuals to come up with as many facts they know about the brain.
2. a) **Combining Facts:** Students then work in small groups of three to combine their facts on to one sheet of A3 paper. Each group reports back to the teacher where collated facts are placed on the board under the heading 'What we know about the brain'.
2. b) **Combining Facts:** using technology alternative
 - Using Popplet- students use their own SMART device to note their ideas in a fun brainstorm template
 - Students form small groups of three to combine and share their popplets to create a collaborative class popplet
 - Present ideas back to whole class group by sharing popplet amongst whole class group

ACTIVITY 2: What does what?

30 mins



Labelling and functionality of the brain (Group Round Robin Activity using <http://www.brainline.org>)

1. Students split in to 7 groups (each member of the group numbers themselves, 1, 2, 3, 4, 5 etc)
2. All the 1s merge together, all the 2s etc
3. Each group (all the same number) are allocated a section of the brain to research its structure and function
4. Groups work to summarise the main functions of the brain allocated to their group and record their findings on the worksheet (each member of the group to have the same information written down)
5. Once the information has been summarised, all members of the original group (in 1.) re-form so that each member of the group has a different brain part to describe and teach the group about

ACTIVITY 3: Sharing mistakes

2 mins



Students share from the activity from the previous lesson where they used their phones/iPads/tablets or a small note pad to record ('catch') their thoughts/ideas about other activities they have done in their lives where they have made mistakes, recording what they learnt through making those mistakes.

ACTIVITY 4: Improvement & Reflection: 140 Character thoughts

3 mins
🕒

Emphasise to students: The more you learn, the more your brain grows

1. Take home word: Plasticity (Also called neuroplasticity, this is the brains ability to change at any point-for better or worse)
2. Students reflect what they have learnt in the lesson using 140 characters only. Write down on paper or use a class hashtag on Twitter to continue discussion about how the brain works after the lesson eg #year9brains, #howmybrainworks. Use Storify to collate these for a revision tool

See ReachOut.com Professionals for tips on using Twitter in the classroom

TAKE HOME ACTIVITY:



Brain stretching exercise

A police officer saw a truck driver clearly going the wrong way down a one-way street but did not try to stop him. Why not?

Tip: The truck driver was not in reverse, nor was he in any particular emergency.

Answer: The truck driver was walking.

TEACHER REFLECTION



What did I learn today?

What mistakes did I make that taught me something?

What did I try hard at during the lesson?



Parts & functions of the human brain

1. In your groups, head to <http://www.brainline.org> to investigate the structure of the brain and its function.
Each group will be allocated one brain part to investigate.
2. Summarise your findings in the corresponding box below.
3. Share your information with your group to collate all information about each function and structure of the entire brain.
4. Label the brain diagram once you have found out what each part does.

30 mins
⌚

1. Brain Stem

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<hr/>	<hr/>
<hr/>	<hr/>

2. Cerebellum

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<hr/>	<hr/>
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3. Temporal Lobes

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<hr/>	<hr/>
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4. Occipital Lobes

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<hr/>	<hr/>



5. Parietal Lobes

_____	_____
_____	_____
_____	_____

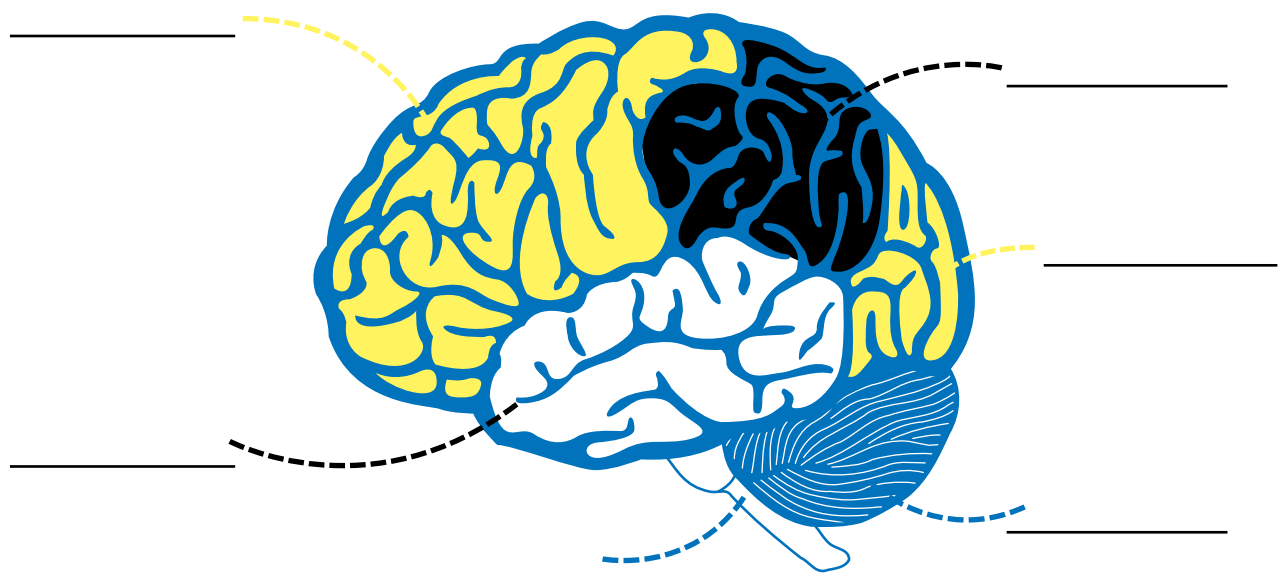
6. Frontal Lobes

_____	_____
_____	_____
_____	_____

7. Neurons

_____	_____
_____	_____
_____	_____


LABEL the brain diagram below:





TRAINING THOSE MINDS TO STRETCH AND GROW!

LESSON 3

 Time required: 50 mins

KEY TEACHER UNDERSTANDINGS

Long lasting functional changes in the brain occur when we learn new things or memorize new information. This reorganising of the brain through neural connections is called neuroplasticity. Modern research has demonstrated that the brain throughout our lifespan continues to create new neural pathways and alter existing ones in order to adapt to new experiences, learn new information and create new memories.

For a short video on neuroplasticity:
<https://www.youtube.com/watch?v=tJ93qXXYRpU>

KEY MESSAGES

By the end of this lesson students will understand:

- The brain strengthens and grows with use.
- Learning and practicing challenging tasks helps your brain to form new connections and grow.

TEACHER LANGUAGE TIP:

When working with students to develop a growth mindset thought patterns, the following language hints may be useful to share with students when they are completing challenging tasks in your lesson:

- You aren't able to complete that difficult puzzle yet
- What did you learn?
- What mistakes did you make?
- What skills were needed to complete the task? Had you used those skills before?
- What would you do differently next time with the same/similar task?
- 'You can't do it... yet'

EQUIPMENT NEEDED



- Large tables for each Round Robin Activity
- 1 A3 piece of paper per group of 3
- Box of pens
- Post-it notes (1 per student)
- Student Worksheet: Brain Stations
- 1 Set of Brain Station Activity Cards

TIP: Don't give all information your students require for an assignment or an in- class activity. Hold back the knowledge and let your students discover the information they need. Scaffold their learning.

TIP: Be positive, patient and persistent

ACTIVITY 1: Brain Quiz

10 mins



1. In small groups of 3 use one piece of A3 paper and a box of coloured pens to draw and label as many of the functions of the brain they learnt last lesson. Whole class discussion.

ACTIVITY 2: Brain Stations

30 mins



1. Divide class into small equal groups across 6 stations
2. Place one of the Brain Station Action Cards on each table
3. Work in pairs in small groups and rotate around each station, completing each task and recording information on the 'Brain Stations' worksheet.

Brain Station Activities:

1. Say the names of the week backwards, then in alphabetical order
2. Name two objects for each letter of your first name, increase this to 5, then 7!
3. What is the sum of your date of birth. Now calculate the sum of your activity partner and then two relatives/friends
4. Name one fruit/vegetable that is never frozen, canned or cooked
5. Name at least 6 (if not more) things you wear on your feet
6. What fruit has its seeds on the outside?

At each station, students take it in turns with their activity partner to complete the task. While one student is completing the task the other fills in the 'Observation' section of the worksheet about their partner's approach to the task.

Brain Station Activity Answers

1. Name one fruit/vegetable that is never frozen, canned or cooked:
LETTUCE
2. Name at least 6 (if not more) things you wear on your feet that begin with the letter 'S'.
SOCKS, SLIPPERS, SNOW SHOES, SKIS, SHOES, SNEAKERS, SNOW BOOTS, SANDLES
3. What fruit has its seeds on the outside?
STRAWBERRY

ACTIVITY 3: Improvement & Reflection: Reporting back

10 mins



1. Students think about one of the following:
 - a. A mistake they made
 - b. Something they learnt
 - c. Something that surprised them and write it on a Post-it note.
2. Share their answer with a partner
3. Place post-it notes on a wall/whiteboard in the three categories defined above (so all three ideas are across separate areas of the room)
4. Allow time for students to read others responses
5. Individual students volunteer to share their information as a whole class group

TAKE HOME ACTIVITY:

How many 'Fs' are in this sentence?

Finished files are the result of years of scientific study combined with the experience of years.

Answer: 6, but most people will give an answer of 3. Why? Our brain is focused on finding words that begin with 'f' and misses those words when 'f' is part of the word in the sentence.



TEACHER REFLECTION



What did I learn today?

What mistakes did I make that taught me something?

What did I try hard at during the lesson?



Brain Stations

Complete each activity station and complete the following questions at each station



Station 1



Task
name:

1. What did you learn?

2. What mistakes did you make?

3. Did you use past experience to help you? If so, what was it?

4. What did you observe about your activity partner? Did they find the task easy? Were they frustrated?

Station 2



Task
name:

1. What did you learn?

2. What mistakes did you make?

3. Did you use past experience to help you? If so, what was it?

4. What did you observe about your activity partner? Did they find the task easy? Were they frustrated?

Station 3



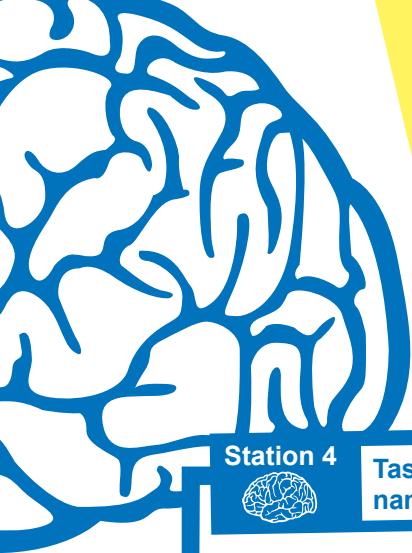
Task
name:

1. What did you learn?

2. What mistakes did you make?

3. Did you use past experience to help you? If so, what was it?

4. What did you observe about your activity partner? Did they find the task easy? Were they frustrated?

**Station 4****Task
name:**

1. What did you learn?

2. What mistakes did you make?

3. Did you use past experience to help you? If so, what was it?

4. What did you observe about your activity partner? Did they find the task easy? Were they frustrated?

Station 5**Task
name:**

1. What did you learn?

2. What mistakes did you make?

3. Did you use past experience to help you? If so, what was it?

4. What did you observe about your activity partner? Did they find the task easy? Were they frustrated?

Station 6**Task
name:**

1. What did you learn?

2. What mistakes did you make?


3. Did you use past experience to help you? If so, what was it?

4. What did you observe about your activity partner? Did they find the task easy? Were they frustrated?




Brain Station Action Cards


(Print & Cut out cards)



**Say the days
of the week
backwards, then
in alphabetical
order**




**Name two objects
for each letter of
your first name,
increase this to 5,
then 7!**



**What is the sum of
your date of birth.
Now calculate
the sum of your
activity partner
and then two
relatives/friends**

**Name one fruit/
vegetable that
is never frozen,
canned or cooked**




**Name at least 6
(if not more)
things you wear
on your feet**

**What fruit has
its seeds on the
outside?**



BRAINS GROWTH WITHOUT LABELS!

LESSON 4

 Time required: 50 mins

KEY TEACHER UNDERSTANDINGS

Language is critical for building a growth mindset in students. Understanding the power of using the word 'YET' is an important component of this language. When added to the phrase, 'I cant do that', the word 'YET' invokes a growth mindset, i.e. 'I cant do that yet'.

Developing a common growth mindset language in your classroom and across the school will assist students to understand that a growth mindset can be developed. Using labels such as 'clever' and 'intelligent', 'dumb' and 'smart' encourages a fixed mindset as people believe they either are, or they are not. By not using labels, using praise and giving feedback, a growth mindset can be encouraged.

KEY MESSAGES

By the end of this lesson students will understand:

- Labeling students as 'smart' or 'intelligent' generates and cements a fixed mindset. Everyone can learn more with practice, effort and encouragement.

TEACHER LANGUAGE TIP:

When working with students to develop a growth mindset thought patterns, the following language hints may be useful to share with students when they are completing challenging tasks in your lesson:

- You aren't able to complete that difficult puzzle yet
- What did you learn?
- What mistakes did you make?
- What skills were needed to complete the task? Had you used those skills before?
- What would you do differently next time with the same/similar task?
- 'You can't do it... yet'

EQUIPMENT NEEDED

- Student Worksheet: Brain Strain
- Language Matters: Ideas Flash Worksheet
- Blue tac
- Mindset Quiz
- Student Worksheet: 5 Questions - Improvement and Reflection worksheet

TIP: Find characteristics unique to each student and remind students of these when completing challenges that stretch their thoughts!

TIP: Teach students to visualise. When students are learning to fix their mistakes, visualising assists as a powerful tool which can be transferred to many contexts and challenges.

ACTIVITY 1: Labels are for food, not people!

5 mins



1. Anagrams of labels:

- Write up the following anagrams on the board and have students explain where they have heard the labels
- Students work in pairs to unravel the following anagrams relating to fixed mindset labels

Explain: Why labels are not useful and how they relate to a fixed mindset

Anagram	Solution
egit net nil	intelligent
umbd	Dumb
spud ti	Stupid
trams	Smart
lead tent	talented

ACTIVITY 2: Brain Strain

10 mins



- Students individually complete the following 3 brain exercises
- Write up the following brain activities prior to the lesson on the board or alternatively students can complete the Student Worksheet: Brain Strain
- Encourage students not to call out the answers
- When students have completed all activities (or have done as much as they can) they can share their answers through a whole class discussion

* **Note:** Head to luminosity.com for puzzles

Brain Strain Answers

Words	Solution
Bed + paper	sheet
School + eye	pupil/exam/private
River + money	Bank/flow

Puzzle	Solution
Molly's mum has four children. The first is called April. The second May. The third June. What is the name of the fourth child?	Molly. Molly's mother's fourth child was Molly herself.

ACTIVITY 3: Ideas Flash Worksheet

15 mins



- Students complete worksheet: Ideas Flash
- After completion students display Ideas Flash Worksheets on classroom wall for other students to view

ACTIVITY 4: Mindset Quiz (10 questions)

15 mins



(Adapted from Dweck, C.S. (2006). *Mindset: The new psychology of success*. New York: Random House Inc.)

- This activity introduces mindsets through a brief 10 question quiz. Students complete the quiz on their own to discover what mindset(s) they have

ACTIVITY 5: Improvement & Reflection- 5 Questions

5 mins



- Students complete the 5 Questions improvement and reflection worksheet.

TAKE HOME ACTIVITY:



Brain stretching exercise

Memorize a song

Choose a song with lyrics you enjoy but haven't memorized. Listen to the song as many times as necessary to write down all the lyrics. Then learn to sing along. Once you've mastered one song, move on to another!

Why is this good for your brain?:

Developing better habits of careful listening will help you in your comprehension. Using your mistakes (failing), thinking and remembering. Reconstructing the song requires focus and an active memory. When you focus, you release a brain chemical that enables plasticity (brain growth) and stimulates memory.

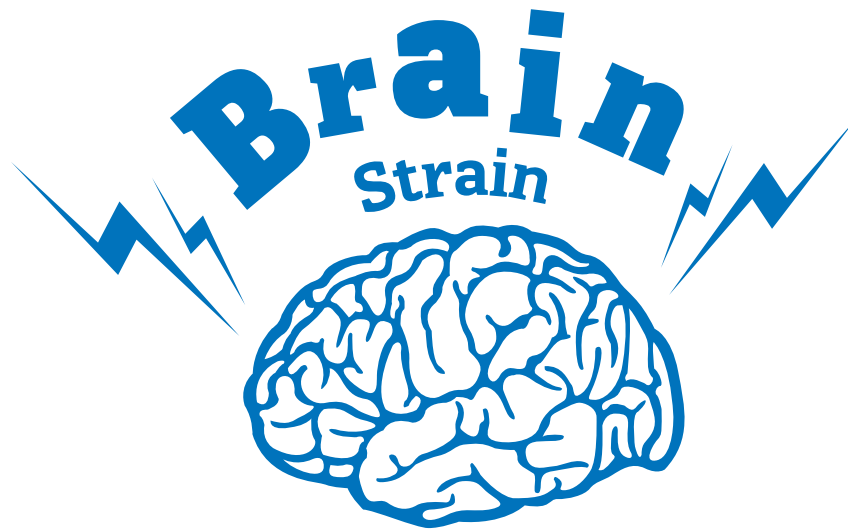
TEACHER REFLECTION

What did I learn today?

What mistakes did I make that taught me something?

What did I try hard at during the lesson?





1. What words connects the two?

10 mins
⌚

- a. **Bed + paper** b. **School + eye** c. **River + money**

2. There's something about Molly!

Molly's mum has four children.

The first is called April. The second May. The third June.

What is the name of the fourth child?

3. Tongue Twisters

Repeat at least two of these sentences 3 times!

- ▶ **Flash message. Flash message.**
- ▶ **Mix a box of mixed biscuits with a boxed biscuit mixer.**
- ▶ **Six thick thistle sticks. Six thick thistles stick.**
- ▶ **Good blood, bad blood.**
- ▶ **Peter Piper picked a peck of pickled peppers, A peck of pickled peppers Peter Piper picked. If Peter Piper picked a peck of pickled peppers, Where's the peck of pickled peppers Peter Piper picked?**
- ▶ **Lovely lemon liniment.**
- ▶ **Three free throws. The instinct of an extinct insect stinks.**
- ▶ **Which wristwatches are Swiss wristwatches?**
- ▶ **Comical economists. Comical economists**
- ▶ **One-One was a racehorse. Two-Two was one, too. When One-One won one race, Two-Two won one, too.**

Answers: 1. a. sheet b. pupil/exam/private c. bank/flow 2. Molly. Molly's mother's fourth child was Molly herself.



Language Matters–Ideas Flash!

1. Write down some labels you have heard people give to other people (eg, 'smart')

15 mins



2. In groups of 3, share your ideas to generate a large list of labels.
3. Share your group's ideas with the whole class.
4. As an individual go back to your list of labels and choose the label you think should be banned from your classroom and to write an 'Ideas Flash Headline', this is like a news headline you may see online or in a newspaper and helps to provide a summary of your idea.
5. Use the table below to explain the label you are going to ban from your classroom.

Headline (Summarise your idea here in a short sentence or one word)

Details: Outline dot points about details of your idea to ban a labelling word so that if someone read it, they would have a good understanding of why you want to ban that label.



Visual: Draw a picture of symbol to bring your idea about banning a label to life visually.



Mindset Quiz

1. Circle the number for each question which best describes you
2. Total and record your score when you have completed each of the 10 questions
3. Using the SCORE chart, record your mindset

MY SCORE:

MY MINDSET:

	Strongly Agree	Agree	Disagree	Strongly Disagree
Your intelligence is something very basic about you that you can't change very much	0	1	2	3
No matter how much intelligence you have, you can always change it quite a bit	3	2	1	0
Only a few people will be truly good at sports, you have to be born with the ability	0	1	2	3
The harder you work at something, the better you will be	3	2	1	0
I often get angry when I get feedback about my performance	0	1	2	3
I appreciate when people, parents, coaches or teachers give me feedback about my performance	3	2	1	0
Truly smart people do not need to try hard	0	1	2	3
You can always change how intelligent you are	3	2	1	0
You are a certain kind of person and there is not much that can be done to really change that	0	1	2	3
An important reason why I do my school work is that I enjoy learning new things	3	2	1	0

SCORE

22-30 = Strong Growth Mindset

17-21 = Growth with some Fixed ideas

11-16 = Fixed with some growth ideas

0-10 = Strong fixed mindset



5 Questions for Improvement & Reflection

1. What have you learnt today?

2. What have you done well?

3. What has your group done well?

4. What would you like to know more about?


5. What do you know now that you didn't 50 minutes ago?

5 mins



OBSERVING AND BUILDING MINDSETS

LESSON 5

 Time required: 50 mins

KEY TEACHER UNDERSTANDINGS

A growth mindset is critical to adopting learning-oriented behavior. Students who believe that effort matters respond with more positive, sophisticated strategies and their achievement has an upward trajectory throughout their schooling. The brain is malleable and as a result, a growth mindset can be built.

KEY MESSAGES

By the end of this lesson students will understand:

- Practicing a growth mindset will assist in learning how to use your mistakes to increase what you know
- Working in a group can assist the development of a growth mindset as you learn from observing others and are encouraged to keep trying

TEACHER LANGUAGE TIP:

When working with students to develop a growth mindset thought patterns, the following language hints may be useful to share with students when they are completing challenging tasks in your lesson:

- You aren't able to complete that difficult puzzle yet
- What did you learn?
- What mistakes did you make?
- What skills were needed to complete the task? Had you used those skills before?
- What would you do differently next time with the same/similar task?
- 'You can't do it... yet'

EQUIPMENT NEEDED

- Student worksheet: *Walking the Growth Mindset Talk*
- Student puzzle sheet
- Student worksheet: 5-5-1

TIP: *Great works are performed not by strength, but by perseverance!*

ACTIVITY 1: Hangman

5 mins



Students work in pairs, taking one turn each to play hangman and guess a word in relation to 'MINDSETS'. If students are stuck for an idea, the following words can be given as suggestions.

Learning, effort, persistence, mistakes, failing, brain stem, parietal lobes, neuroplasticity, frontal lobes, cerebellum, neurons, brain, mind

ACTIVITY 2: Walking the Growth Mindset Talk

25 mins



- Using the Student worksheet: Walking the Growth Mindset Talk, students work in groups of 4 to complete one puzzle per person. Each member of the group has a specific role and function. Members of the group rotate their role each time a new puzzle is completed, so that all students have a turn at each role.

• ROLES:

- **PUZZLER:** works on the puzzle within the 4 minute timeframe
- **OBSERVER/RECORDER:** records what the puzzler is doing/saying while completing the puzzle
- **TIME KEEPER:** Keeps to the 4 min timeline for each puzzle, offering a 1 minute warning for when time is nearly up
- **COACH:** Uses the language of a growth mindset to encourage the 'puzzler' while working on the task

Activity Answers

1. Pick from the one labeled "Oranges & Lemons". This box must contain either only apples or only oranges.

2. Sudoku

6	2	9	5	7	1	3	8	4
7	8	3	9	2	4	5	1	6
4	5	1	3	6	8	2	7	9
8	7	2	1	5	9	4	6	3
5	3	6	4	8	7	9	2	1
9	1	4	2	3	6	7	5	8
1	9	5	6	4	2	8	3	7
2	6	7	8	9	3	1	4	5
3	4	8	7	1	5	6	9	2

Puzzle 3: a) Box, b) Yard, c) they are all caught, d) they all have caps

Puzzle 4: Learning, Feedback, Education, Persistence, Failure

ACTIVITY 3: Circle Chat Time

10 mins



1. Split class in to two even groups.
2. Form two circles (one inside circle and one outside circle) with students facing each other to form partners.
3. Students answer the following questions called out by the teacher or another student (if class is uneven in numbers). Once each question is asked, partners take it in turn to answer the question with each other.
4. After each question has been answered, students in the outside circle are asked to move as a whole group, one space to the left to form a partnership with another student.

5. The process is repeated until all questions have been asked.

Questions:

- What did you learn today?
- What mistakes have you made?
- What would you do differently next time you participated in this task?
- Can you use something you have learnt today with another task?
- What else would you like to learn?

ACTIVITY 4: 5-5-1

10 mins



- Students complete the worksheet, 5-5-1 which summarises their learning this lesson in 5 sentences, 5 words then in 1 word.

Brain stretching exercise - Learn to use your other hand



The task: If you're right-handed, use your left hand for daily activities (or vice-versa). Start with brushing your teeth left-handed, and practice until you have mastered it. Then try to build your way up to more complex tasks, such as eating.

The reason: This is an exercise in which you know what you're supposed to achieve, but must do it in a new and demanding learning context. Doing such an activity can drive your brain to make positive changes. Think of millions of neurons learning new tricks as you finally establish better control of that other hand!

TEACHER REFLECTION



What did I learn today?

What mistakes did I make that taught me something?

What did I try hard at during the lesson?



Walking the Growth Mindset Talk

Work in groups of 4. Allocate one of the roles below to each person in your group and rotate these roles each time a new puzzle is completed, or time runs out.

25 mins
🕒

ROLES



PUZZLER

- works on the puzzle within the 4 minute timeframe



OBSERVER/RECORDER

- records what the puzzler is doing/saying while completing the puzzle



TIME KEEPER

- keeps to the 4 min timeline for each puzzle, offering a 1 minute warning for when time is nearly up



COACH

- uses the language of a growth mindset to encourage the 'puzzler' while working on the task



Timekeeper: Stick to 4 minute timeframe and provide a 1 minute warning for when time is up.



Observer/Recorder: What is the puzzler doing/saying when trying to figure out the puzzle?



Coach: Offers encouragement and assistance before, during and after the puzzle challenge is worked on.

Ideas for encouragement:

BEFORE:

_____ [insert name] I can help you when you get to _____ stage

DURING:

You worked really hard on that!

You know how to do this, remember when you _____

You just need a little more practice, let me help you.

AFTER:

You worked really hard on that!

You never gave up!

Great, you used your past experience to help!



Puzzler: Work on the puzzle allocated to you

• How did you feel during the task? _____

• What did you say to yourself as you did the puzzle? _____

• What mistakes did you make? _____



Student Puzzle Sheet

Puzzle 1: Oranges or Lemons?

There are three fruit boxes. One is labeled "Oranges" another is labeled "Lemons". The last one is labeled "Lemons & Oranges". You know that each box is labelled incorrectly. You can only choose one box to pick from in order to correctly label all the fruit boxes without opening them.

How can you label the boxes correctly?



Puzzle 2: Sudoku

		9		7			8	
7		3						
	5			6				
	7			5		4		
5		6			7			
	1				6			8
				4				7
2			8		3	1		
	4							2

Puzzle 3: Anagram untangle

ANAGRAM	SOLUTION
Angler In	
Fa Be Deck	
Action Due	
Sincere Pets	
Earful I	

Puzzle 4: Things in common

Thing	What do they have in common?
a) Mail-Shoe-Lunch	
b) Back-Barn-Scotland	
c) Ball-fish-cold	
d) Bottle-Baseball player-Mushroom	



Student worksheet: 5-5-1

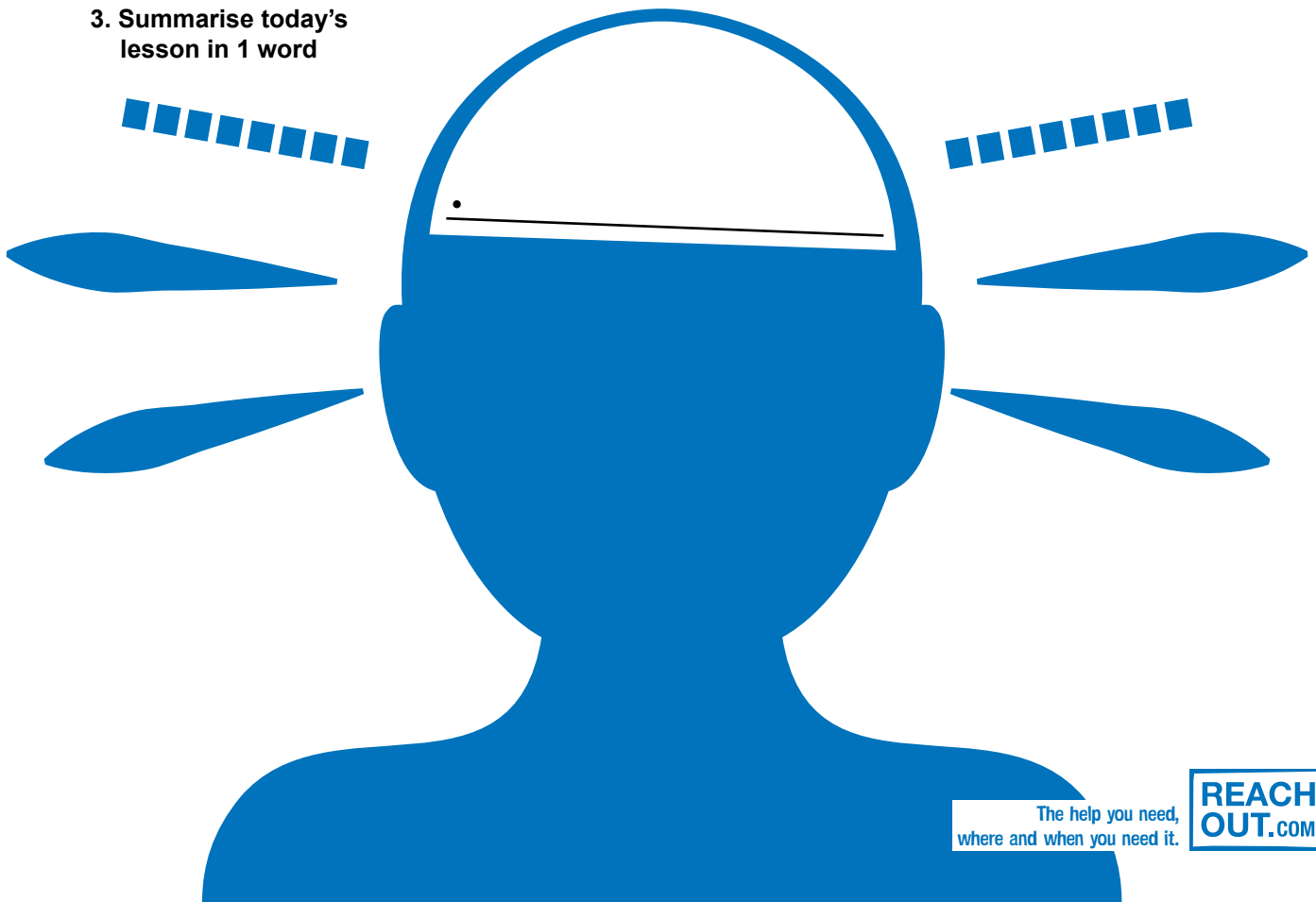
1. Summarise today's lesson in 5 sentences

1	
2	
3	
4	
5	

2. Summarise today's lesson in 5 words

1	2	3
4	5	


3. Summarise today's lesson in 1 word





SETTING GOALS- 'MASTERY' AND 'NOT YET' TRACKING

LESSON 6:

 Time required: 50 mins

KEY TEACHER UNDERSTANDINGS

To assist in developing a growth mindset in students, a school that encourages students to think of their learning and achievement in terms of 'mastery' and 'not yet' (as described by Carol Dweck) will be best placed to assist students in embracing failure as a tool for learning. In an ideal world, a school environment would allow students as much time and practice as required for each student to master a skill or task. Time constraints and class sizes make this task difficult, but the learning behind what it means to master a skill is worth sharing with students for their overall learning and resilience throughout life.

KEY MESSAGES

By the end of this lesson students will understand:

- 'Mastery' and 'not yet' are two measures related to a growth mindset identified by Carol Dweck
- Reflection about mistakes and successes is a key tool when progressing towards mastery of a skill
- Seeking support and/or assistance will help with progression towards mastery of a skill/task
- Failure is necessary for learning

TEACHER LANGUAGE TIP:

When working with students to develop a growth mindset thought patterns, the following language hints may be useful to share with students when they are completing challenging tasks in your lesson:

- You aren't able to complete that difficult puzzle yet
- What did you learn?
- What mistakes did you make?
- What skills were needed to complete the task? Had you used those skills before?
- What would you do differently next time with the same/similar task?
- 'You can't do it... yet'

EQUIPMENT NEEDED



- Student worksheet: Tracking Mastery
- Student worksheet: Backward Mapping & Tracking Mastery
- Student worksheet: Learning Pyramid

TIP: Success is the ability to go from one failure to another with no loss of enthusiasm

ACTIVITY 1: Opposite Hands

10 mins



- Students work in pairs and use their non-dominant hand to write the words to do with mindsets backwards for the other person to guess. Word examples could include: Mindset, Growth, Fixed, Yet, feedback, failing, learning

ACTIVITY 2: Tracking Mastery

15 mins



- Students complete worksheet: Tracking Mastery
- Whole class discussion: Students volunteer to share their skill/task they have mastered

ACTIVITY 3: Backward Mapping & Tracking Mastery

15 mins



- Students complete worksheet: Backward Mapping & Tracking Mastery
- Share with class who they have identified that can help them in working towards mastery

ACTIVITY 4: Learning Pyramid

10 mins



- Students complete the learning pyramid regarding their participation in the lesson

TEACHER REFLECTION

What did I learn today?

What mistakes did I make that taught me something?

What did I try hard at during the lesson?



Tracking Mastery

• What skill or ability have you mastered?

25 mins



Example:

SKILL: Shooting a 3 pointer

Looks Like:

Ball leaves hands cleanly, travels in an arc towards ring, goes through the middle of the ring

Sounds Like:

Swoosh

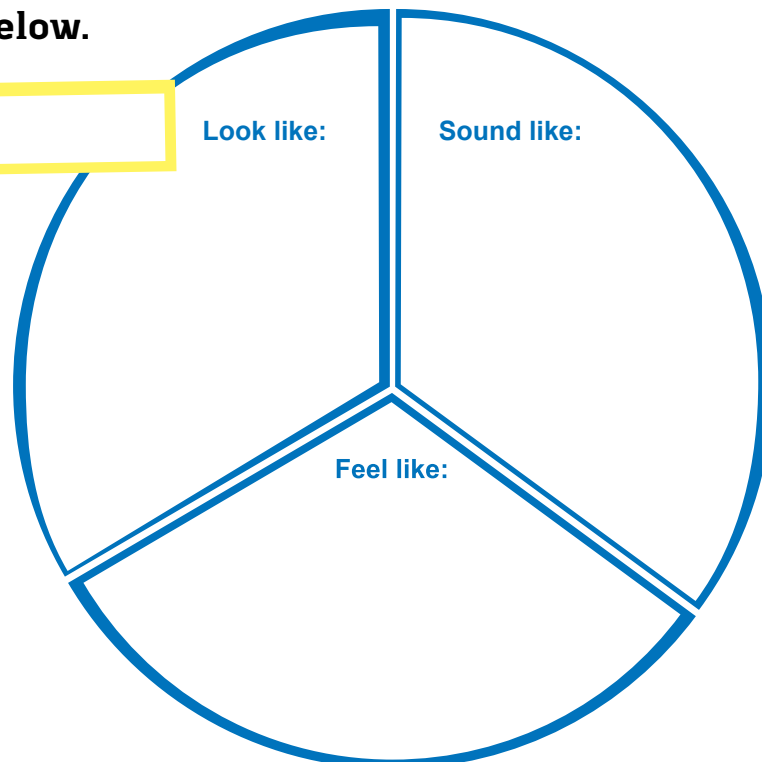
Feels Like:

Tingling in hands as ball leaves finger tips, butterflies in stomach as the ball goes in

Fill in the diagram below.

SKILL:

When mastered,
this skill would...



What were the steps involved to become a 'master' at this skill? Outline them in the table below, including a timeline and information on who assisted you to become a 'master'.

SKILL	Steps taken to become a 'master'	Time it took	Mistakes Made	What you learnt from the mistake	Who assisted you

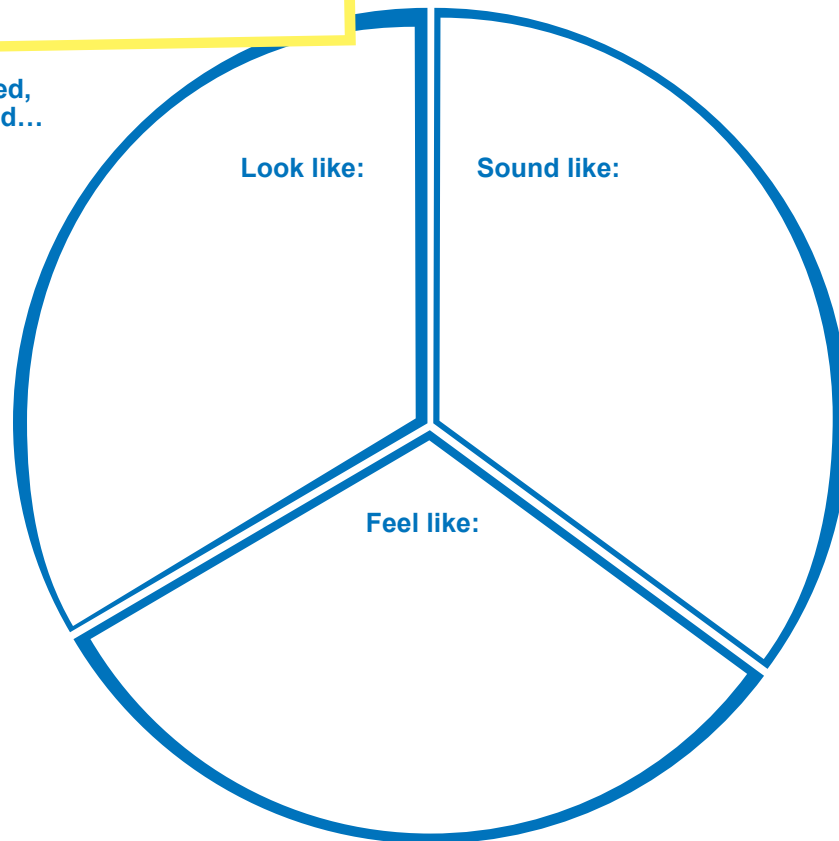


Backward Mapping & Tracking Mastery

Complete this worksheet based on a skill you have not mastered 'yet'.

SKILL:

When mastered,
this skill would...



Outline what steps you will
need to take to work towards
attaining mastery

SKILL	Steps to become a 'master'	Timeframe	Potential mistakes	How could you use the mistake?	Who could assist you?



Learning Pyramid

Fill in each section of the pyramid to reflect on today's lesson.

Questions you have about the lesson

Things you have learnt today

Things you have been reminded of today

PRACTICAL IDEAS FOR BUILDING A **WHOLE SCHOOL GROWTH MINDSET!**

- **Place “Mistakes For Learning” boards where photos or text is placed in a common area to share failures and learnings across the school day, encourage teachers and students to contribute**
- **Use your opposite hand day**
- **Change all marks from As, Bs, Cs or number grades for the week to ‘Mastery’ and ‘Not Yet’ grades across all learning areas**
- **Display ReachOut.com growth mindset posters around your classroom or common staff/student areas**
- **Send out a Growth Mindset tip or tool in each school newsletter**
- **Tweet/use Facebook to send out reminders and highlight achievements and learning from mistakes to your school community**
- **Have all school staff participate in Growth Mindset Professional Development**

References

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