

BRAIN BOOST TIME (BBT)

A decorative graphic consisting of a grid of blue dots in the top right corner, arranged in a pattern that tapers to the right.

**Onboarding deck
for primary school teachers**

A PRESENTATION BY
MINISTRY OF EDUCATION, SINGAPORE

A decorative graphic at the bottom of the slide, consisting of a large, stylized arch shape filled with diagonal blue and white stripes.

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1 Why use Brain Boost Time (BBT)?



1.1 Introduction

Question: Have you ever entered a class and observed that many of your students are tired and have their heads on the table or they are distracted and not attentive?

Inspiration: Concerned and caring teachers, who notice that their students can be overly energetic or are particularly lethargic at different times of the day, need a way to regulate the students' energy levels, so that they are able to focus better.



1.2 Scans of the learning sciences - Students' Inattention

The Classroom of the Future team looked into the learning sciences after getting inspired by our initial observations of students' attention (or lack thereof) in the primary school classroom. The insights below from educational psychology and educational neuroscience highlighted a need for an in-class break tool:

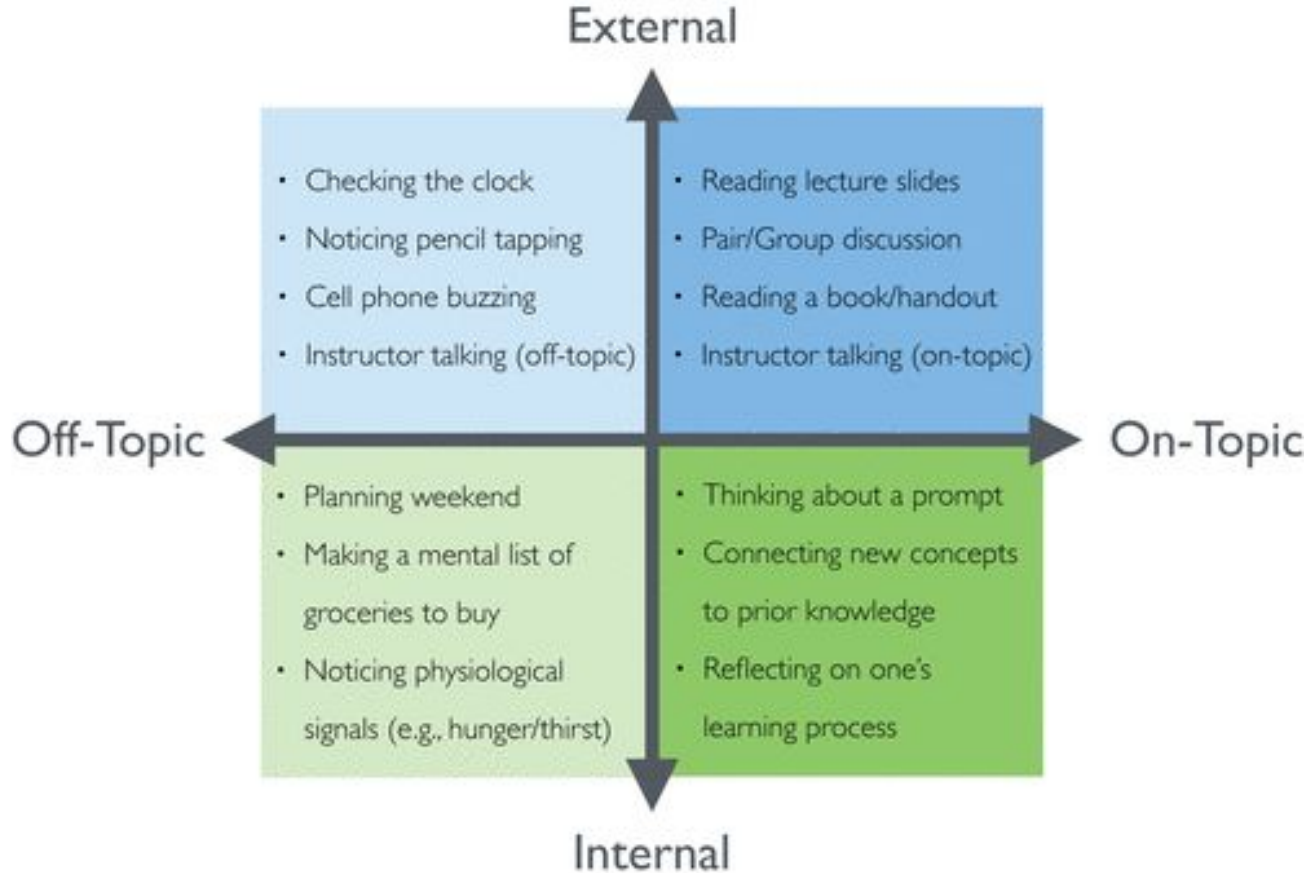
1. Childhood development experts generally claim that a **reasonable attention span to expect of a child is two to three minutes** (or up to five according to some) **per year of their age**. That's the period of time for which a typical child can maintain focus on a given task. (Neville, 2007)
2. Since 2000 it has been reported that the **average working memory of a student** has dropped from 12 seconds, down to 8 seconds in 2013, and by some estimates may drop to 2 seconds. (Microsoft, 2015)

Table from 'Differences in Traditional and Brain-Literate Approaches to Behavioural Instruction (Chen et al., 2017)

Issue	Standard Education	Expected Outcome	Brain Literate Education	Expected Outcome
Attention to Task	Poor attention to task leads to teacher reprimands and reducing free time activities	Attention continues to be poor and student-teacher relationship limited	Different causes of attention problems (e.g., inattention, distractibility, neglect) require different interventions	Students attend to environment to decrease internal attention problem; students focus attention to avoid distractibility



1.2 Scans of the learning sciences - Students' Inattention





1.3 Scans of the learning sciences - Effective Attention Boosters

The following are some of the relevant extracts that helped us design the solution we call Brain Boost Time (BBT):

1. It was found that **movement in the classroom boosts brainpower** and that **regular Physical Activity (PA) breaks** given during the school day had a **positive impact on primary school students' academic performance and behavior in the classroom** (Reilly et.al 2012).
2. There is even some evidence that **Physical Activity (PA) breaks that include a cognitive component** can **improve time-on-task in primary school pupils** (Grieco et.al, 1921).
3. SEL programs based on mindfulness - defined as the **capacity to pay attention to the present moment with curiosity and kindness** (Kabat-Zinn 2003) - have been shown to **positively impact children's self-regulation skills** (Zoogman et al. 2014) and **reduce the negative effects of stress** (Biegel et al. 2009; Broderick and Metz 2009; Mendelson et al. 2010).

2 What is Brain Boost Time (BBT)?



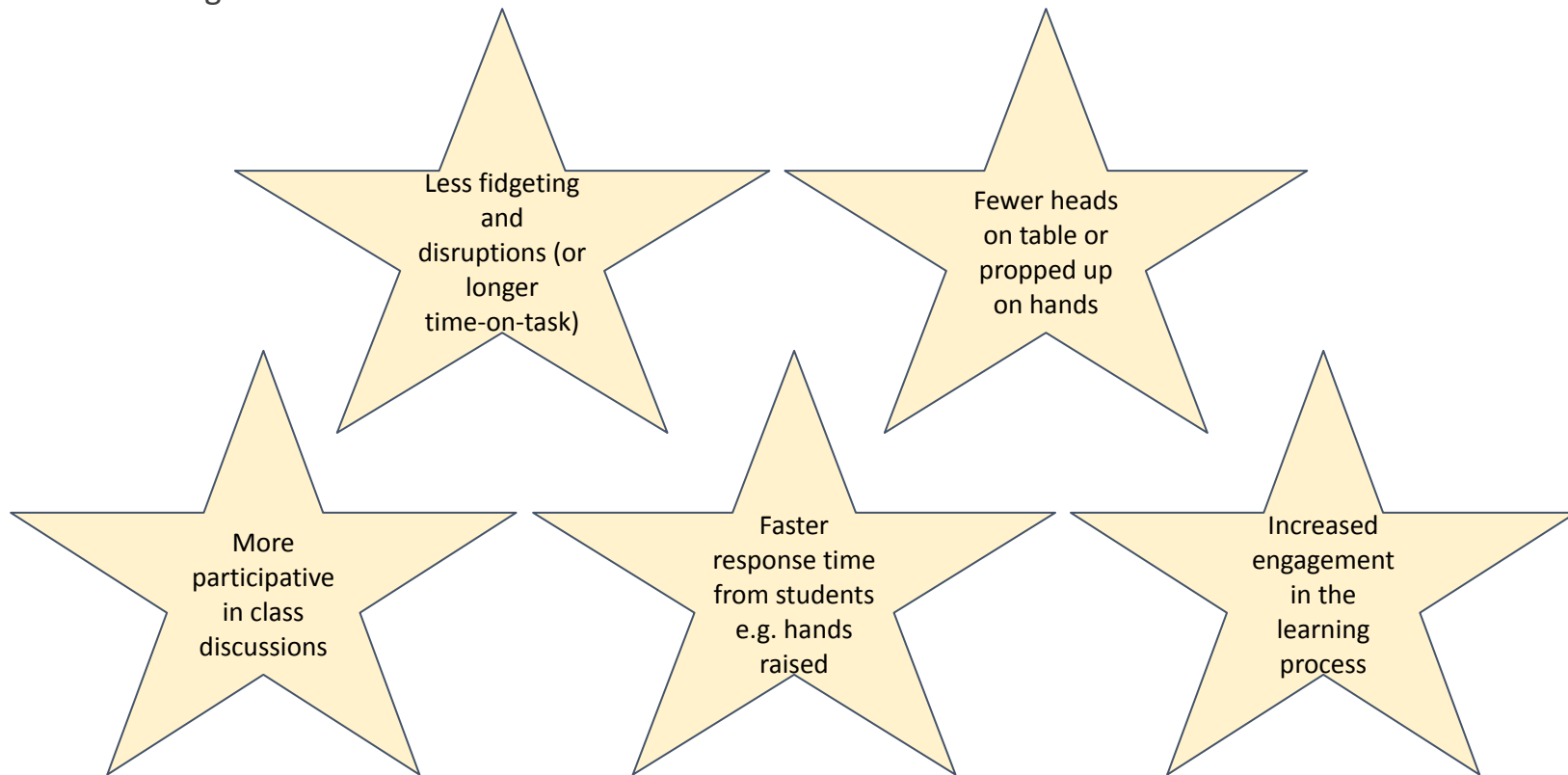
2.1 Solution

Brain Boost Time (BBT) is an easy-to-use web-based tool for primary school teachers to implement a range of **physical, cognitive or affective activities** for **in-class breaks** so that students who are overly energetic or lethargic could get into the **optimal zone of learning** in an effective and efficient way.



2.2a Benefits for Teaching and Learning (based on our observations)

The following describe the benefits of BBT as observed in class:





2.2b Advantages over other tools

In BBT, there are **no ads, no logins** and **no effort needed to filter for appropriate media content**. Just head to the site (bookmark it for easy access) and the relevant tabs are ready for use.

BBT also offers a curated combination of physical/energiser activities, reflective/cognitive activities and breathing/mindfulness activities from the following list of alternative platforms:

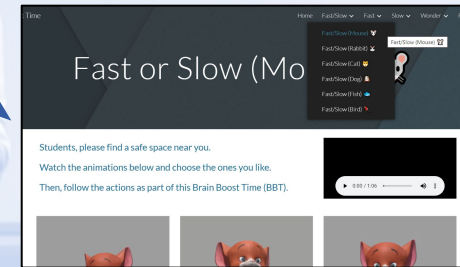
- Youtube Kids
- Netflix Jr.
- GoNoodle,
- Cosmic Kids,
- My Life,
- Move2Learn,
- Scratch Garden, and
- David Sladkey's Energizing Brain Breaks (book with video resources).

3 How to use Brain Boost Time (BBT)?



2.1 Feature 1: For Physical/Energiser activity (Fast/Slow/Both)

- In BBT, there are 6 animal *characters* i.e. **Mouse, Cat, Dog, Bird, Fish and Rabbit.**
- The *categories* for the physical activities are:
 - **Fast** - moderate intensity physical activities like dances
 - **Slow** - mild intensity physical activities like stretches
 - **Fast/Slow** - combination of both Fast and Slow
- There is also a randomiser tab to help teachers pick a *character/category* quickly.



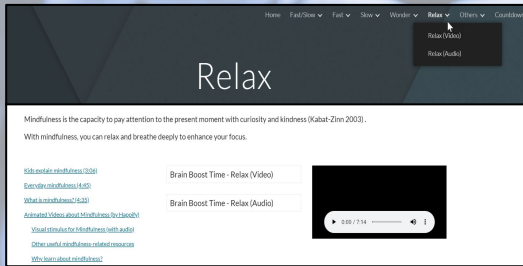
Let's WONDER and think or reflect together!

Take out a pen, think about the following and write what you have thought about in your notebook...

1. Memorise words to memorise!
 2. Letter of the day
 3. Colour and draw the week
 4. Guess the number!
 5. Race to Random Number
 6. Fun Fact: Mouse!
 7. Spot the hidden mouse!
- After school, you can visit to do a Wonder activity of your own before tomorrow the lesson!

2.1 Feature 2: Cognitive activity (Wonder)

- Teachers can use a [Wonder](#) activity to tail off BBT or as a BBT activity by itself. Examples include the following:
 - **Memory words (Mnemonics)** - Students can come up with words that spell the animal
 - **Letter of the Day** - Students think of words learnt recently beginning with a random letter
 - **Words of the week** - Students break down longer or more complex words to smaller ones
 - **Guess the number** - Students guess the number on a number line by approximation
 - **Race to Random Number** - Students use any numbers and operators to get a number
 - **Fun Fact** - Students learn fun facts about the related animal characters
 - **Spot the hidden animal** - Students look for related animal characters in visual puzzles



2.1 Feature 3: Mindfulness activity (Relax)

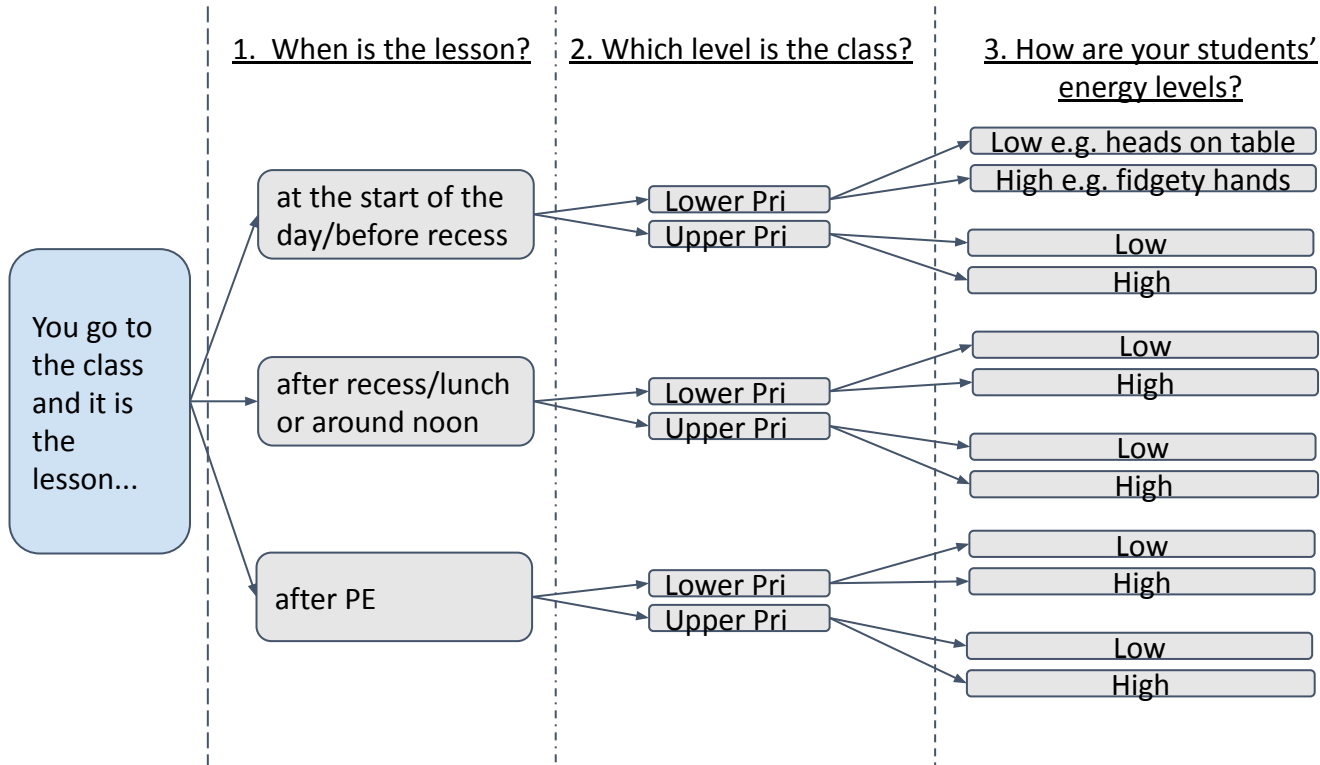
- Teachers can use the curated media in Relax to tail off BBT or as an activity by itself. When using Relax, note the following:
 - If using the [Relax](#) tab for the **first time**, teachers can show videos **about mindfulness**
 - [Relax \(Video\)](#) includes a range of mindfulness and breathing technique videos which students can watch and follow to let their minds relax and improve concentration
 - [Relax \(Audio\)](#) includes audio mindfulness instructions that students can listen to and follow (optionally with their eyes closed) to be more focused and be in the present



2.2 Uses

Your answers to the following 3 questions will help determine the best BBT features to use.

Follow the flowchart below or use the [interactive slides](#) to determine the suggested features.



Suggested BBT features

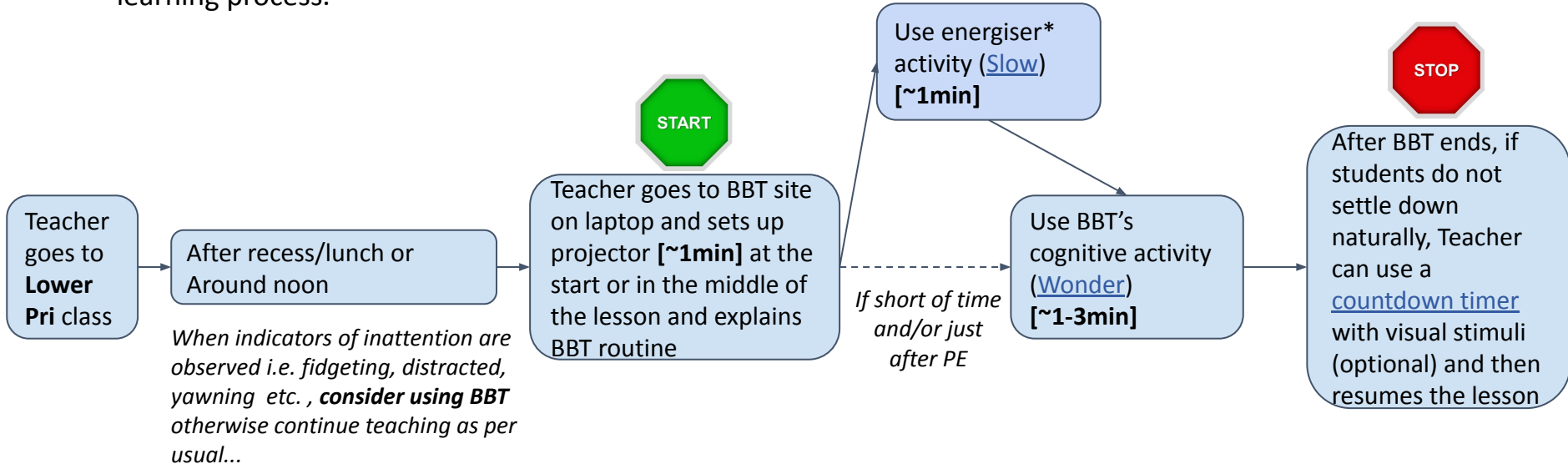
1. Energiser ([Fast](#)) + Tail-off
2. [Wonder/Relax](#)
3. [Wonder](#)
4. [Wonder/Relax](#)
5. Energiser ([Slow](#)) + Tail-off
6. Any
7. [Wonder](#)
8. [Wonder/Relax](#)
9. [Wonder/Relax](#)
10. [Relax](#)
11. [Wonder/Relax](#)
12. [Relax](#)



2.2a Most common usage scenario for lower primary students

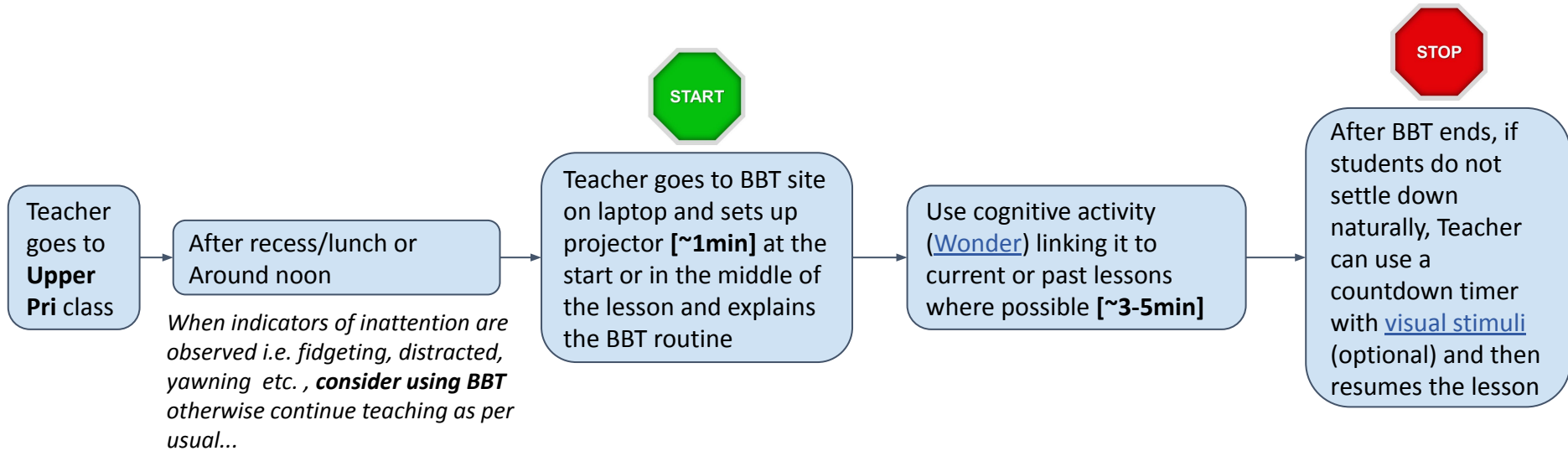
Teachers spend about **5 mins** for an in-class break using BBT and students show more **positive emotions**, **optimised energy levels** and **focused attention** in the learning process.

*For lower primary students, doing energisers (Fast/Slow) before the cognitive activity (Wonder) has additional positive effects





2.2b Most common usage scenario for upper primary students



Tips to get the best of BBT for your students:

1. Do BBT together with students
2. Talk about the BBT experience and its intent
3. Share students' responses/reactions from BBT
4. Read the room, ensure safety and comfort
5. Adjust BBT according to students' profile

4 Conclusion



4.1 Feedback

We seek your feedback and suggestions to help improve BBT through this [link](#).

You can go to the latest Brain Boost Time site through this link at go.gov.sg/etdbbt.

We also created, [Brain Boost Time\(r\)](#), a chrome extension to facilitate BBT usage.

Do reach out to me at bin_zainal_shah_suhaimi@moe.edu.sg for any queries. Thanks!



4.2 Frequently Asked Questions (FAQs)

Q1. How can I get higher participation for BBT?

A1. We suggest the following 3 Fs:

1. Keep it **fun**; Let BBT be light, easy and stress-free (give them autonomy).
2. Keep it **fresh**; Offer a variety of activities.
3. Keep it **factual**; Provide students with clear expectations and share with them the benefits of breaks.

Q2. How can I support students to transit back to learning?

A2. At the end of BBT, you may consider the following activities:

- Start a short calming [[Relax \(Video\)](#)] activity,
- Use a timer ([Countdown](#)) to give the students a clear signal,
- Ask students to identify their levels of alertness,
- Take a 1 minute breather, and listen to calming sounds [[Relax \(Audio\)](#)],
- Allow students to drink water and/or take a quick bio break.



4.2 Frequently Asked Questions (FAQs)

Q3. Is BBT backed by research and scientific studies?

A3. Yes, the team behind BBT did literature scans (see below for relevant references and resources) and extensive testing in schools with Design Thinking in mind. We observed classes, interviewed teacher users and students and even did a quantitative analyses of students' survey results which indicated that BBT was largely effective for both lower and upper primary students.

1. [Brain Breaks: Help or Hindrance?](#)
2. [Brain breaks: An evidence-based behavior strategy](#)
3. [Movement Breaks: A resource for teachers](#)
4. [Brain Breaks and Engagement](#)
5. [Brain Breaks and Student Engagement](#)
6. [Breaks in The Elementary Classroom and Their Effect on Student Behavior](#)
7. [Movement Break Effects On Second Graders: An Action Research Study](#)
8. [Take a Break! Teacher Toolbox \(Physical Activity Breaks in a Secondary Classroom\)](#)
9. [Movement Breaks in the Classroom: A Resource for Post-Primary Schools](#)
10. [Determining effectiveness of Brain Breaks on Student Performance](#)
11. ["Brain Breaks" in the College Classroom are Associated with Subtle Benefits](#)
12. [Brain breaks on Zoom](#)

5 Walkthrough



Brain Boost Time (BBT)



Welcome to Brain Boost Time - the tech tool to use during in-class breaks!

You may head to the respective tabs if you already know the what, how and why of BBT.

Otherwise do have a read below to learn more about the go-to in-class break tool we call Brain Boost Time (BBT).

[What is Brain Boost Time \(BBT\)?](#)

[How to use Brain Boost Time \(BBT\)?](#)

[Why use Brain Boost Time \(BBT\)?](#)

The above screenshot shows the **Home** page or landing page when you access <https://go.gov.sg/etdbbt>.

This page includes details about BBT including an interactive flowchart. Teachers can click on the 'Feedback' button in the sky blue banner at the top to share their thoughts and suggestions about BBT.



Randomisers

Head to the tabs directly if you already know which features you would like to use.

Spin the randomiser(s) below then head to the corresponding tab from the menu at the top.

[BBT Category Randomiser](#)

[BBT Character Randomiser](#)

BBT Category Randomiser

1. Spin the randomiser

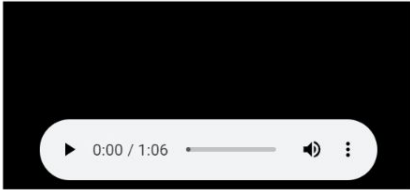
The above screenshot shows the **Randomisers** page.

This page includes 2 randomiser applets to help teachers select an animal character or the category for the physical activity. The randomiser wheels from WordWall come with attractive visual and auditory stimulus. Teachers can skip the randomisers and go to the tabs directly if they already have a BBT activity in mind.

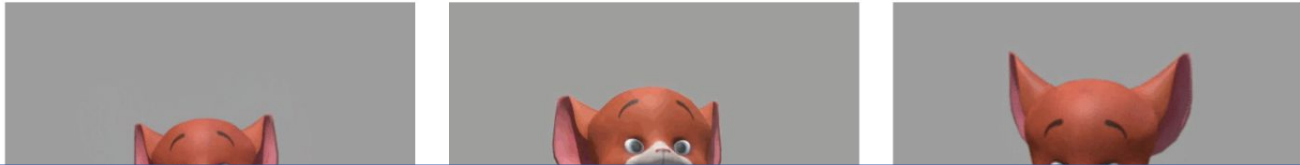


Fast or Slow (Mouse)

- Fast/Slow (Mouse)
- Fast/Slow (Rabbit)
- Fast/Slow (Cat)
- Fast/Slow (Dog)
- Fast/Slow (Fish)
- Fast/Slow (Bird)



Students, please find a safe space near you.
Watch the animations below and choose the ones you like.
Then, follow the actions as part of this Brain Boost Time (BBT).



The above screenshot shows the **Fast or Slow (Mouse)** page. These Fast/Slow pages includes gifs of an animal character moving either fast or slow for students to follow for their physical/energiser activity during BBT. This tab is best used when there is a mix of lower primary students who are lethargic and energetic in class so that they can have the autonomy to choose.



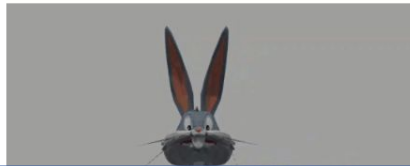
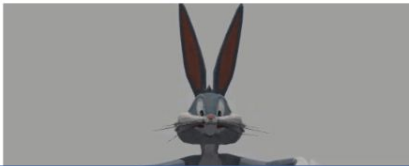
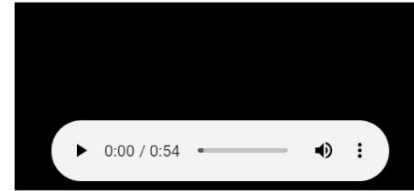
Fast (Rabbit)

- Fast (Mouse) 🐭
- Fast (Rabbit) 🐰
- Fast (Cat) 🐱
- Fast (Dog) 🐶
- Fast (Fish) 🐟
- Fast (Bird) 🐦

Students, please find a safe space near you.

Watch the animations below and choose the ones you like.

Then, follow the actions as part of this Brain Boost Time (BBT).



The above screenshot shows the **Fast (Rabbit)** page.

These Fast pages includes gifs of an animal character moving with moderate intensity for students to follow for their physical/energiser activity during BBT. This tab is best used when the lower primary students in your class seem lethargic as the actions will perk them up and get their blood flowing.



Slow (Cat)

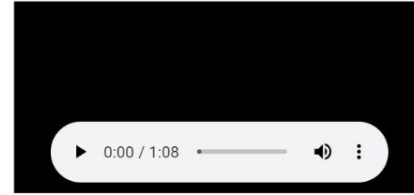


- Slow (Mouse)
- Slow (Rabbit)
- Slow (Cat)
- Slow (Dog)
- Slow (Fish)
- Slow (Bird)

Students, please find a safe space near you.

Watch the animations below and choose the ones you like.

Then, follow the actions as part of this Brain Boost Time (BBT).



The above screenshot shows the **Slow (Cat)** page.

These Slow pages includes gifs of an animal character moving slowly with low intensity for students to follow for their physical/energiser activity during BBT. This tab is best used when the lower primary students in your class seem highly energetic like after recess as the actions will help manage their energy.



Wonder (Dog)

[Wonder \(Mouse\)](#) [Wonder \(Rabbit\)](#) [Wonder \(Cat\)](#) [Wonder \(Dog\)](#) [Wonder \(Fish\)](#) [Wonder \(Bird\)](#) [Wonder \(Dog\)](#)

Let's WONDER and think or reflect together!

Take out a pen, think about the following and write what you have thought about in your notebook...

[1. Memory words \(Mnemonics\)](#)

[2. Letter of the day](#)

[3. Chosen word of the week](#)

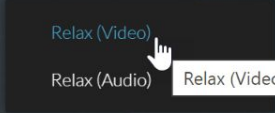
[4. Guess the number?](#)

[5. Race to Random Number](#)

The above screenshot shows the **Wonder (Dog)** page.

These Wonder pages includes a list of cognitive/reflective activities for students to do during BBT.

This tab is best used for a tailing off activity for lower primary students or for a main BBT activity for upper primary students as it allows students to reduce the cognitive load on the current topic temporarily.



Relax (Video)

Videos for mindfulness

[Fish breathing under the sea \(1:00\)](#)

[Hot air balloon in the air \(1:00\)](#)

[Square breathing with fishes and a square in the video \(2:36\)](#)

[Scenic view and breathe \(2:59\)](#)

[Belly Breathing with Grover about focusing on 1 thing at a time \(3:15\)](#)

[Box breathing with animation \(3:35\)](#)

[Mindful looking, bubbles bounce \(4:02\)](#)

[Mindful visualisation, snow and snowflakes \(4:19\)](#)

[Mindful breathing for 5mins! Stop, Breathe and Think \(5:22\)](#)

The above screenshot shows the **Relax (Video)** page.

This page includes a list of curated videos for students to watch and relax as part of the mindfulness or breathing activities during BBT. This tab is best used for a tailing off activity for both lower and upper primary students or for a main BBT activity when students need to calm down like after PE for example.



Relax (Audio)

- Relax (Video)
- Relax (Audio)

Relax (Audio)

Audios for mindfulness

[Listen to the instructions in the audio below...](#)

[3 mins](#)

[5 mins](#)

[10 mins](#)

[Nature sounds to relax with eyes closed](#)

[Ocean Sounds \(10 mins\)](#)

[Jungle Sounds \(10 mins\)](#)

[Soft or pop music to settle down](#)

[Disney Piano](#)

The above screenshot shows the **Relax (Audio)** page.

This page includes a list of curated audio for students to listen and relax as part of the mindfulness or breathing activities during BBT. This tab is best used for a tailing off activity for both lower and upper primary students or for a main BBT activity when students need to calm down like after PE for example.



GoNoodle (Combos)

- GoNoodle (Combo)
- Brain Break Central (C GoNoodle (Combo)
- MovetoLearn (Fast)
- Brain Breaks (Slow)
- Scratch Garden (Wonder)
- Netflix Jr. (Wonder)
- Cosmic Kids (Relax)
- MyLife (Relax)
- Gif Search
- Meme Maker

[Guided Dancing \(Fast\) Playlist](#)

[Popping Bubbles \(1:42\)](#)

[Baby Shark \(2:23\)](#)

[Can't Stop the Feeling \(3:21\)](#)

[Do the Yeti \(3:28\)](#)

[Coordination \(Slow\) Playlist](#)

[Brainercise \(Slow\) Playlist](#)

[Think about it \(Wonder\) Playlist](#)

[Calming \(Relax\) Playlist](#)

The above screenshot shows the **GoNoodle (Combos)** page.

These pages in the 'Others' tab includes a list of curated media from alternatives to BBT. This tab is best used to offer a wider variety of BBT activities. The 'Gif Search' and 'Meme Maker' are included to allow teachers to be creative for their break-time activities with their students.



Countdown



BBT has ended and it is time to continue learning! Hope that the session of BBT helped you recharge and refocus. Set a custom timer or take this last 10 seconds for all students settle down. Drink a sip of water and breathe as your teacher prepares to resume the lesson.

Countdown Timer

(in minutes)

Start

The above screenshot shows the **Countdown** page.

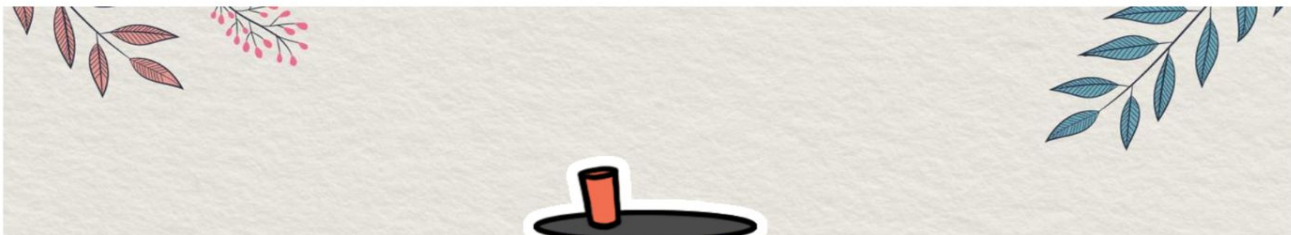
This page includes a ten seconds timer as well as a custom timer applet. Teachers can use the timers to set a countdown for the BBT activities or as a signal for students to note that BBT is ending and the lesson will resume.



BBT Qs

Thank you for using Brain Boost Time!

TypeForm link for Feedback (or complete the form below) : <https://suhaimizs.typeform.com/to/gjE7lo>



The above screenshot shows the **Feedback** page.

A typeform is embedded in this page to gather feedback from teacher users. We truly appreciate any and every feedback received as it would help us improve the BBT experience for more teachers in the future.