

Toolkit for Practical Lessons

A user guide showcasing SLS features to support the development self-regulation in practical lessons





About CotF



**CLASSROOM
OF THE FUTURE**
Redesigning Learning

The Classroom of the Future project (CotF) is a multi-divisional effort where different government agencies leverage design thinking and other human-centric methodologies to **redesign the teaching and learning experience for students and teachers** to meet current and future needs.

CotF solutions enhance teaching and learning to help students to be future-ready, preparing them for an increasingly complex, interconnected, and tech-driven world.



About This User Guide

Do you have students who constantly rely on you to check their progress?

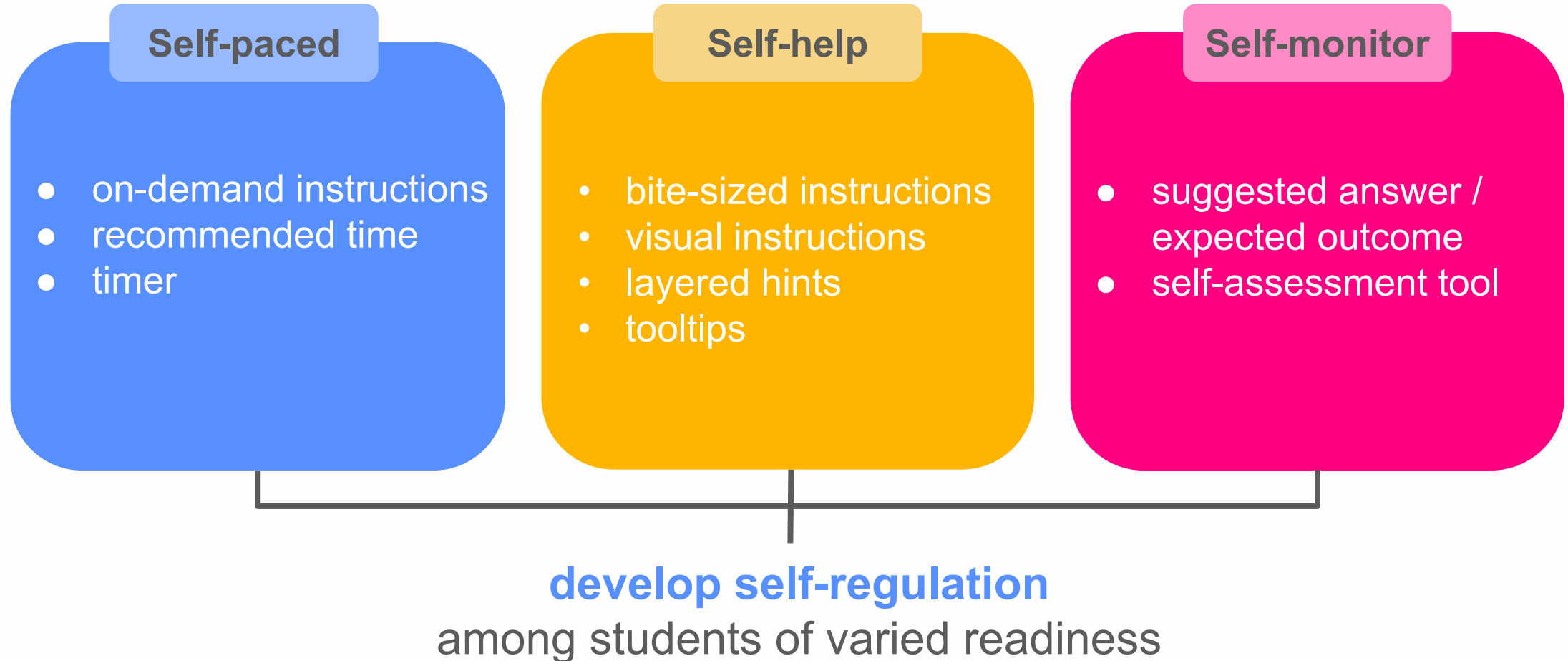
How can we help students achieve task mastery on their own terms?



Developing Self-Regulation in Practical Lessons using SLS Features



Key Elements of Lesson Design






Enhancing learning with bite-size on-demand visual instructions

2 Preparation and Cooking

1 2 3 4 5 6 7 8 9 10 11 12

Shortcrust pastry

1. Sift the plain flour and salt in a mixing bowl.
2. **Add cold butter into the sifted flour. Cut into smaller cubes using a palette knife and rub them into the flour with fingertips until the mixture resembles breadcrumbs and is pale yellow in colour.**
3. Add cold water slowly into the breadcrumb mixture and mix to form a soft dough.
4. Knead the dough on a lightly floured surface with fingertips until smooth.
5. Wrap the dough in a cling wrap and rest it in the chiller for 10 minutes.



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Chunk step-by-step instructions using paginated activity



Empowering Self-help with Layered Hints

Boost students independence with integrated scaffolds and hints.



- Provide opportunities to retry and learn from failures in practical tasks

Q1

Which ingredient helps to trap air in the mixture during the preparation?

🕒 HINT 1



What is the action that you have to take to introduce air?

🕒 HINT 2



Which ingredients, when whisked, form bubbles?

🕒 HINT 3



What is the purpose of trapping air?



Guiding Students' thinking process with task-specific tooltips

Tooltips at specific steps help to guide students' thinking as they perform the task.



- Encourages conscious thinking during procedure execution
- Encourages learning through hands-on experience

Why do we use fingertips for the rubbing-in method?

Read Less

This prevents the butter from melting quickly as fingertips are the coolest part of the hand.

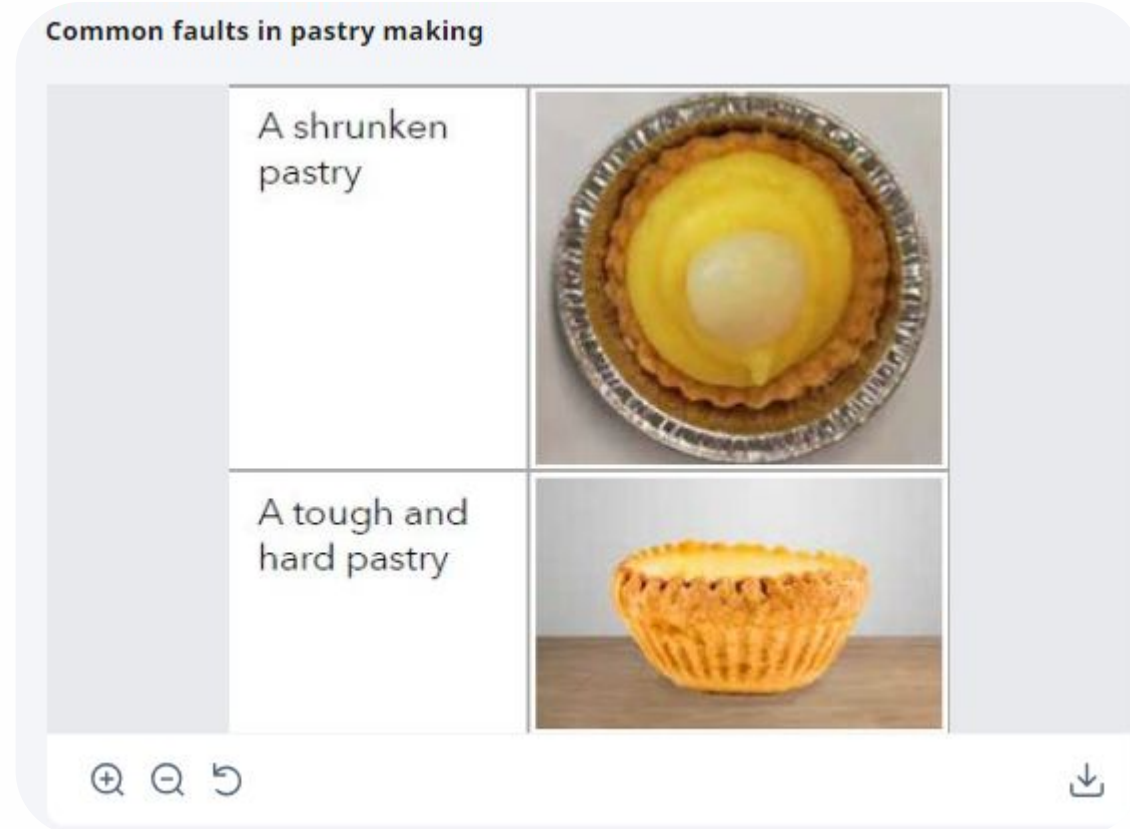


Empowering students to monitor their progress and reflect using Suggested Answers

Include expected outcome or common faults



- Offers students a reference point to track their progress
- Encourages students to reflect consciously on their work





Fostering reflection with Self-Assessment Components

Self-assessment component in the form of

1. criteria for success
2. procedural checklist
3. 'traffic light' system



- Gauge students' confidence in practical tasks
- Provides insights into students' practical confidence levels

Q6

I **can do** this step on my own.

I am **a little unsure** but I still manage to do this step

I **need help** for this step.



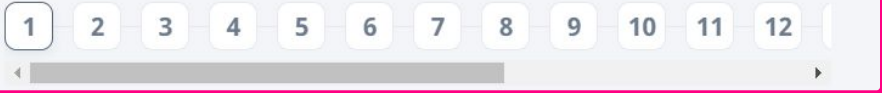
Sample SLS Modules





NFS - Quiche

2 Preparation and Cooking



self-paced guide

Shortcrust pastry

1. **Sift the plain flour and salt in a mixing bowl.**
2. Add cold butter into the sifted flour. Cut into smaller cubes using a palette knife and rub them into the flour with fingertips until the mixture resembles breadcrumbs and is pale yellow in colour.
3. Add cold water slowly into the breadcrumb mixture and mix to form a soft dough.
4. Knead the dough on a lightly floured surface with fingertips until smooth.
5. Wrap the dough in a cling wrap and rest it in the chiller for 10 minutes.
6. Preheat oven to 190 °C.
7. Roll the dough with a rolling pin using short, light strokes in one direction, until the required size is reached. Do not overstretch the dough.
8. Grease a fluted baking tin with vegetable oil.
9. Transfer the rolled pastry onto the greased baking tin.
10. Prick the base all over with a fork.
11. Bake blind in the oven on the middle shelf for 15 minutes or until pastry is firm.
12. Place the pastry on a cooling rack to cool slightly before adding the filling



on-demand bite-sized animations / videos (replayable)

[Read Less](#)

[What is the purpose of sifting flour?](#)

[Read Less](#)

It helps to incorporate air and remove lumps and impurities that may be present in the flour.

tooltips for scaffolding

Self-assessment

- I can do this step on my own.
- I am a little unsure but I still manage to do this step.
- I need help for this step.

self-assessment tool



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Thank you!

Explore our edtech innovations and share your thoughts with us at <https://for.edu.sg/cotf>