CENTRES FOR EXCELLENCE IN MATHS

FE centre resource

Pearson

Lesson plan

Mindsets, resilience and number sense

1. Lesson objectives

- To categorise attitudes into fixed or growth mindsets
- To recognise that progress is maximised when in the growth zone
- To use ratio tables to answer proportion questions
- To state characteristics of mathematical resilience

2. Functional Skills Level 1 curriculum

Lesson to be used at the start of the course to ensure that a positive learning environment is developed.

3. Lesson plan

This is an overview of the lesson. More notes can be found in the notes in the lesson slides.

Activity	Purpose of this activity	Time (min)	Guidance	Materials
Objectives	Introduce topics	5	Slide 1 Introduce the context of the lesson and the objectives.	Slide 2
What mode is your brain in?	To determine what mindset the learner has.	5	Give learners statements from Handout 1, cut up into separate strips. Ask the learners to put T for true or F for false on each statement.	Slide 3 Handout 1: Mindset statements
Characteristics of a growth and fixed mindset	Help learners understand their mindset	2–3	Allow learners time to think of a scenario when they had a positive mindset. Introduce the idea of fixed and growth mindsets to learners, so that they can identify different characteristics.	Slides 4, 5
Review	What mindsets do the learners have?	2–3	Give learners Handout 2: Mindset table. Present Slide 7 so they can put the statements under the correct headings. Ask learners to identify if they have a fixed or a growth mindset.	Slides 6–8 Handout 2: Mindset table
Explore Activity	Everyone can do maths	5	Search for a video called ‘Everyone can do Maths’ (Jo Boaler) that can be found on video-hosting sites such as YouTube. Watch from 0.35 to 4 mins. Video introduces the concept that everyone can learn maths. With the right mindset, the brain can grow and is a muscle.	Slide 9

Activity	Purpose of this activity	Time (min)	Guidance	Materials
Group work	Label growth zone model	10	Learners to discuss statements in small groups, from Handout 4 and exam questions from Handout 5, and place them on the growth zone model (Handout 3).	Slides 10, 11 Handout 3: Growth zone model Handout 4: Growth zone statements Handout 5: Exam questions
Group work	Review growth zone model	10	Tutors to share Slide 12 and enable feedback from learners, *'where have you put xxx statement'.* Tutor to ask learners what strategies they have to move from one zone to another. Important – learning happens in the growth zone.	Slides 12–14
Discussion	What happens to your brain when you are stressed?	5	An explanation of brain function and what happens when learners are stressed. This is to help learners understand this is a chemical reaction that everyone experiences to varying degrees.	Slides 15, 16
Group work	Introduce ratio tables	10	Ratio tables are introduced as a tool to help learners approach proportion problems. For extra support see the ratio table video on the CfEM website. This is a series of structured slides that the tutor demonstrates and the learners have a go at. The tutor demonstrates Slides 18, 20, 22. Learners have a go at Slides 19, 21 on their table/in pairs.	Slides 17–22

Activity	Purpose of this activity	Time (min)	Guidance	Materials
Learner focused	Learners apply ratio tables to questions.	10	Give out Handout 6 (Slide 23). Learners apply ratio tables and, when done, the tutor uses the review slide (Slide 24).	Slides 23–24 Handout 6: Ratio table questions
Discussion	Resilience	5	Give an example of resilience. Learners should identify characteristics of resilience to help them succeed.	Slides 25–28
Poster	Recap	15	Learners create a poster/mind map/spider diagram, including all strategies that will support them on their maths journey.	Slide 29 Paper, pens
Review objectives	Review	5	Review/recap contents of the lesson and refer to lesson 1. Learners have a tool kit to support their maths journey.	Slide 30