BURNIE COUNTS

INSTRUCTIONAL MODEL



(re) Summarise

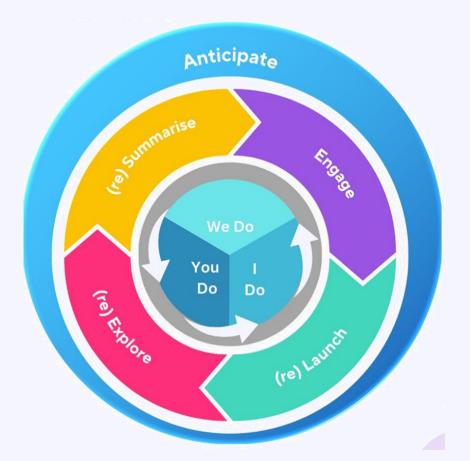
- Sequence the selected work samples.
- Might unpack the Learning Intentions and Success Criteria*
- Support students in articulating solutions and strategies and provide reasons for their thinking.
- Pose questions to stimulate student thinking.
- Connect mathematical ideas and build understandings.
- · Direct instruction as necessary.
- Synthesis, emphasise and record key mathematical points building on student contributions.

(re) Explore

- Rich, challenging tasks.
- Mixture of collaborative and independent work.
- Use of manipulatives/materials/ visual aids.
- Interact with students, observing and monitoring how they are responding.
- Offer enabling prompts to students who are stuck and extending prompts to students who have finished.
- Select student work samples for subsequent sharing.
- Encourage sharing of partial solutions and/or discuss misconceptions that have arisen.
- CPA (concretely, pictorially, abstract) model

Anticipate

- Identify Learning Intentions* and Success Criteria from Burnie Counts Scope and Sequence and where they will be introduced.
- Choose tasks based on the learning intentions, mathematics learning goals, and prior knowledge of students.
- Do the task and anticipate students' solutions and strategies.
- Select resources, materials, and ways for students to represent their thinking.
- Plan enabling and extending prompts.



Engage

- Engage students with mathematical concept.
- Game/Number Talk/Warm-up (make real world connections where possible)
- Consolidation of previously learnt skills
- Engage task needs to link to direct instruction.

(re) Launch

- Might unpack the Learning Intentions and Success Criteria*
- · Pose the task.
- Model the task as required.
- Clarify language, materials, and representations.

I do, We do, You do...

- I do: Direct instruction and model skills and concepts so that students engage in learning.
- We do: Guided practice to scaffold, assist and assess so that students are engaged in collaborative practice.
- You do: Ongoing check in, feedback, roam conference so that students work independently with content and success criteria.

Anticipate

• Complete the <u>Burnie Counts Lesson Template</u> in Learning Teams (where possible). Example of completed Lesson Template

Grade Level: 6

Big Idea/s: Partitioning

Burnie Counts Lesson Template

Curriculum Content Descriptor(s):

Compare, order and sequence fractions and multiples. AC9M6N03

Learning Intentions – students will:

To compare and order proper and improper fractions greater than 1

Success Criteria – students will be successful when they can:

I can compare and order fractions greater than 1.

I can use mathematical symbols.

I can convert mixed numbers to improper fractions.

Main Task

Select and Rehearse the— do the task yourself and share strategies in your team.

Anticipate student responses and plan prompts.

ORDERING FRACTIONS GREATER THAN ONE

Directions: Using the digits 1 to 9 at most one time each, place a digit in each box to make a true



Enabling Prompts

(Prompts/questions for students who are struggling with the task)

- 1. Start with 2 fractions only.
- 2. Remove the mixed number option or place the mixed number at the start
- 3. Use numbers more than once.
- 4. Visual aids fraction wall, fraction pieces, number line etc

Extending Prompts

(Prompts/questions for students who need more challenge)

- 1. How many ways can you do it?
- 2. Use < > and =
- 3. Represent each fraction on a number line.
- 4. Can you make your own problem in a similar format.

Engage

The Engage phase refers to the first part of a lesson (no more than 15 minutes).

Using this time as a mental warm up helps get the lesson off to a good start. It settles students down and gets them ready to focus. The engage phase is the first part of a structured lesson approach, which is a High Impact Teaching Strategy.

Why 'Engage'?

- To review or practise something that has been taught in the past. For example, basic number facts.
- To practise a skill that is required for the lesson to come. For example, multiply (x) and divide (÷) by 10, 100, 1000 when the lesson involves converting from centimetres to metres and vice versa.
- To pre-load some knowledge required for an upcoming lesson later in the week. For example, vocabulary.

Reference

Examples of Engage tasks:

- Game/Number Talk/Warm-up (make real world connections where possible)
- Number talk video example
- Number talk resources
- Warm up resource
- Games resources
- Engage resources
- Engage resources 2

(re) Launch

The teacher:

- Poses a variety of well-constructed questions in different ways, including open-ended, clarifying, scaffolding, probing and leading.
- Pose the task by providing students with clear and concise descriptions.

Reference

The students:

Ask clarifying questions about vocabulary and materials.

Example of (re) Launch phase

(re) Explore

The teacher:

- Uses targeted questions to focus on the learning objectives for the lesson.
- Uses questioning to enable and extend students' thinking, to check for misconceptions and gaps in knowledge.
- Encourage sharing of partial solutions and/or discuss misconceptions that have arisen.
- Encourages respectful dialogue and collaboration.
- Does not ask too many questions to dominate the conversation.
- Explicitly draws students' attention back to key mathematical ideas that underpin the learning intentions and success criteria of a lesson.
- Encourages students to work collaboratively.
- Provide manipulatives/materials/visual aids relevant to the task.
- Identify work samples for sequence of sharing in Summarise Phase.
- Uses CPA (concretely, pictorially, abstract) model. CPA resource

The students:

- Explore mathematical concept individually or collaboratively.
- Use problem-solving strategies.
- Feel safe to ask and respond to questions.
- Are prepared to struggle and make mistakes in order to make progress in their learning.
- Can respectfully respond to other students' questions.
- Know when they have achieved the goal of the lesson and feel successful.
- know how to use a range of concrete or virtual manipulatives.
- feel comfortable to use concrete or virtual manipulatives in their learning.
- can make the connections between the concrete materials, drawings, and abstract notation.

(re) Summarise

The teacher:

- Ask questions that probe student thinking and prompt to justify their responses.
- Guides students through the sequenced examples and the thinking involved in solving a problem to build upon concepts or skills.
- Provides opportunities for students to practise similar problems to assess if the concept has been understood (re Launch)
- Uses feedback to illustrate to students how they can move forward and improve their work.
- Shows students how to give respectful feedback to each other and how to self-assess.
- Uses questioning to stimulate students' thinking and check for misconceptions and gaps in knowledge.
- Direct instruction as necessary (move into Gradual Release)

The students:

- Use feedback to improve their understanding and develop thinking.
- Give and receive peer feedback respectfully.
- Are encouraged to ask probing questions.
- Gradually move to independent work on similar problems
- Know the intention or purpose of the lesson.

Reference

<u>Using Questioning to Stimulate Mathematical Thinking</u>

Example or (re) Summarise phase.

I do, We do, You do...

The teacher:

- Explicitly teaches the mathematics needed for the task and teaches the techniques where content is explicitly introduced and explored.
- Invites questions and wonderings.
- Monitors student progress and gives immediate feedback
- Models knowledge, skills and how to use manipulatives/visual aids.
- Worked examples support independent practice.
- Ongoing check in, feedback, roam room so that students work independently with content and success criteria.

The students:

- Focus on the steps and follow what the teacher is doing.
- Know how to use a particular procedure or approach when working to solve a problem.
- Communicate their ideas and thinking clearly.
- Ask questions and respectfully respond to other's questions.
- Are prepared to struggle and make mistakes to make progress in their learning.

Gradual Release model Resource

Example I do, we do, you do