

THINKING CLASSROOM + 5 PRACTICES

Orchestrating Productive Discussions that Centre Student Thinking

0. CHOOSING GOALS + TASKS

- Review curriculum expectation(s).
- Clarify the learning focus.
- Choose/design a task that is cognitively challenging (high-level) that helps uncover the learning focus.

1. ANTICIPATING

- Do the task yourself/with colleagues:
 - How will students approach the task?
 - What misconception(s) may emerge?
 - What representations will be helpful to uncover the learning focus?
- Make a plan for monitoring: for each anticipated approach, what questions will be helpful to assess or advance thinking?
- Make a rough plan with approaches to select, sequence and connect.

2. MONITORING

- Listen, observe, identify key strategies.
- Keep track of approaches.
- Be less helpful by asking questions
 - to assess understanding (STAY to listen and learn).
 - to advance thinking: give hints or extensions (LEAVE students to think).
- Encourage/facilitate knowledge mobility.
- “Seed” approaches that will be helpful for consolidation.

3. SELECTING

- CRUCIAL STEP – What core concept(s) do you want to highlight?
- Purposefully select approaches that will advance ideas, make connections between concepts/representations, and be accessible to all students.
- In a vertical set-up, select work that is across the room from each other.

4. SEQUENCING

- What “narrative” do you want to tell?
- Is there a common misconception that needs to be addressed first?
- What order will be helpful
 - to reveal connections between ideas/representations?
 - to build toward the learning focus (a concept, relationship, skill, or procedure)?
- Avoid always starting or ending with “your favourite” approach.

5. CONNECTING

- Focus discussion around student work and thinking.
- Craft prompts to make concepts, relationships, and connections noticeable
 - compare and contrast a few groups' work.
 - highlight processes instead of answers.
- Use discussion moves to engage in dialogue and co-construct meaning.

THINKING CLASSROOM + 5 PRACTICES

Orchestrating Productive Discussions that Centre Student Thinking

1. CHOOSING GOALS + TASKS

- Review curriculum expectation(s).
- Clarify the learning focus.
- Choose/design a task that is cognitively challenging (high-level) that helps uncover the learning focus.

1. ANTICIPATING

- Do the task yourself/with colleagues:
 - How will students approach the task?
 - What misconception(s) may emerge?
 - What representations will be helpful to uncover the learning focus?
- Make a plan for monitoring: for each anticipated approach, what questions will be helpful to assess or advance thinking?
- Make a rough plan with approaches to select, sequence and connect.

2. MONITORING

- Listen, observe, identify key strategies.
- Keep track of approaches.
- Be less helpful by asking questions
 - to assess understanding (STAY to listen and learn).
 - to advance thinking: give hints or extensions (LEAVE students to think).
- Encourage/facilitate knowledge mobility.
- “Seed” approaches that will be helpful for consolidation.

3. SELECTING

- CRUCIAL STEP – What core concept(s) do you want to highlight?
- Purposefully select approaches that will advance ideas, make connections between concepts/representations, and be accessible to all students.
- In a vertical set-up, select work that is across the room from each other.

4. SEQUENCING

- What “narrative” do you want to tell?
- Is there a common misconception that needs to be addressed first?
- What order will be helpful
 - to reveal connections between ideas/representations?
 - to build toward the learning focus (a concept, relationship, skill, or procedure)?
- Avoid always starting or ending with “your favourite” approach.

5. CONNECTING

- Focus discussion around student work and thinking.
- Craft prompts to make concepts, relationships, and connections noticeable
 - compare and contrast a few groups' work.
 - highlight processes instead of answers.
- Use discussion moves to engage in dialogue and co-construct meaning.

Whole Class Discussion Moves to Consolidate Thinking from a Task

Setting Up the Class Discussion

Gather students in a huddle in the middle of the room

- to disconnect student ownership from or "re-anonymize" their boards;
- so that a whole class discussion can be facilitated about students' thinking instead of individual groups'/students' ideas; and
- because when students are standing, they are more mentally and physically engaged.

Use a Guided-Gallery Walk

- While monitoring student work, identify and make note of desired sequence.
- When possible, choose boards that involve walking across the room to get students to switch from being at the back to the front of the group.

Facilitating the Class Discussion

Position Yourself as a Facilitator of Conversations

not as an interviewer of individual students.

Ask Members Not from the Group's Board to Explain

- to keep students actively thinking as they need to merge their ideas with those from another group's; and
- to avoid a "show-and-tell" approach as this reduces the thinking and engagement of the rest of the class.

Invite More Student Talk

- by posing open ended questions that
 - are discussion-generating (e.g., invite opinion, debate);
 - probe students' thinking (e.g., to get at misconceptions); and
 - make the key concepts or ideas noticeable (e.g., to get at meaning).
- by giving students opportunities to talk to each other before sharing with the whole class (e.g., turn and talk);
- by using wait time; this communicates to students that deep thinking takes time and can diversify participation in the discussion when more students have time to formulate ideas to share;
- by prompting students for further participation; this can invite more ideas into the discussion (e.g., "Does anyone want to add to ..."?);
- by asking students to restate another's reasoning; this marks the contribution as especially important and worth emphasizing;
- by asking students to apply their reasoning to another's; this can catalyze meaning-making if students' thinking either differs or is similar; and
- by revoicing a student's contribution without changing the idea itself; this will ensure students have heard it.

Whole Class Discussion Moves to Consolidate Thinking from a Task

Setting Up the Class Discussion

Gather students in a huddle in the middle of the room

- to disconnect student ownership from or "re-anonymize" their boards;
- so that a whole class discussion can be facilitated about students' thinking instead of individual groups'/students' ideas; and
- because when students are standing, they are more mentally and physically engaged.

Use a Guided-Gallery Walk

- While monitoring student work, identify and make note of desired sequence.
- When possible, choose boards that involve walking across the room to get students to switch from being at the back to the front of the group.

Facilitating the Class Discussion

Position Yourself as a Facilitator of Conversations

not as an interviewer of individual students.

Ask Members Not from the Group's Board to Explain

- to keep students actively thinking as they need to merge their ideas with those from another group's; and
- to avoid a "show-and-tell" approach as this reduces the thinking and engagement of the rest of the class.

Invite More Student Talk

- by posing open ended questions that
 - are discussion-generating (e.g., invite opinion, debate);
 - probe students' thinking (e.g., to get at misconceptions); and
 - make the key concepts or ideas noticeable (e.g., to get at meaning).
- by giving students opportunities to talk to each other before sharing with the whole class (e.g., turn and talk);
- by using wait time; this communicates to students that deep thinking takes time and can diversify participation in the discussion when more students have time to formulate ideas to share;
- by prompting students for further participation; this can invite more ideas into the discussion (e.g., "Does anyone want to add to ..."?);
- by asking students to restate another's reasoning; this marks the contribution as especially important and worth emphasizing;
- by asking students to apply their reasoning to another's; this can catalyze meaning-making if students' thinking either differs or is similar; and
 - by revoicing a student's contribution without changing the idea itself; this will ensure students have heard it.