Module 4

Active Learning & Alignment in Instructional Design

UNIVERSITY OF TORONTO

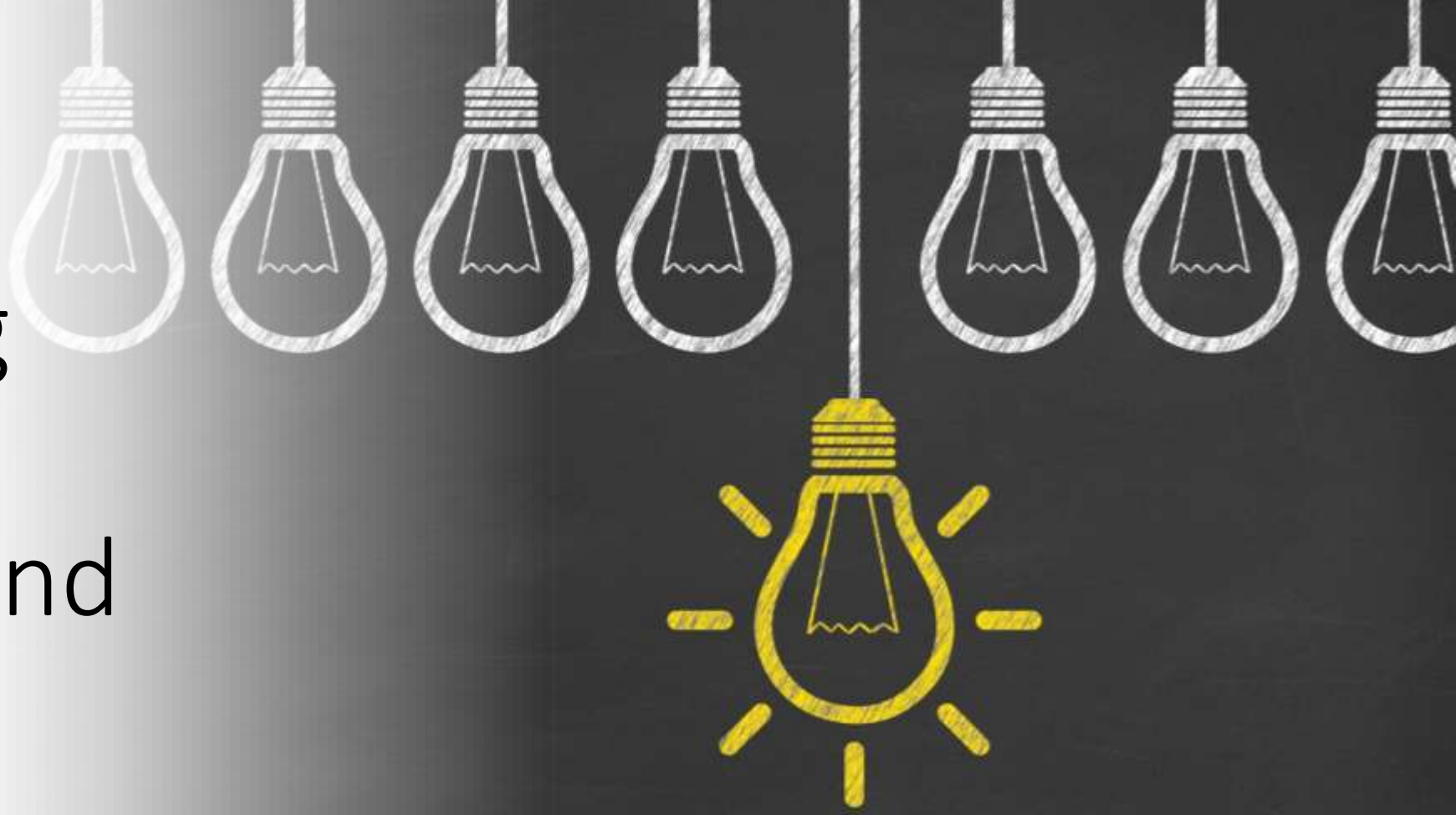
DEFY GRAVITY

Topics explored in this module

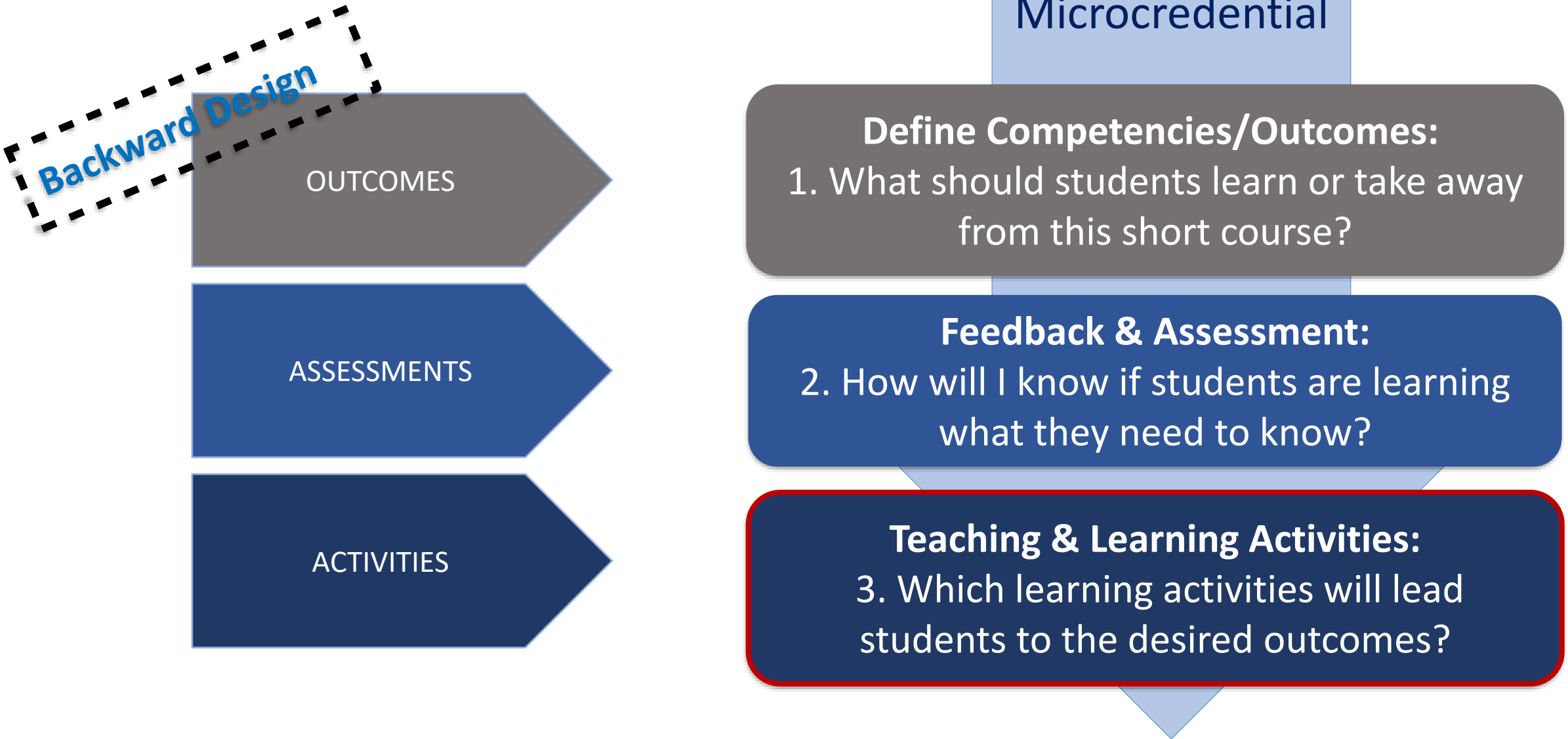
1. Planning learning activities and scaffolds
2. Active learning
3. Course component alignment

Note: Additional detailed information is available in selected slide notes

1. Planning Learning Activities and Scaffolds



Let's revisit the third backward design question noted in Module 1:



2. Active Learning

Value of active learning

Active learning provides students with multiple avenues to **think critically, practice, and solve real-life problems** they will likely face in future professional settings. It motivates students to take leadership in their learning process and take the initiatives to improve the identified areas. Students and instructors can foster a sense of community through regular interactions and shared goals and activities, which technology can support.

Characteristics of effective active learning

- Authentic and relevant learning
- Intentional and explicit activities
- Offer multiple routes to engagement
- Include frequent and immediate feedback
- Connect synchronous and asynchronous activities and content

Example active learning activity: Post-it parade

- Small group activity: 3–6 students
- Procedures:
  - A prompt (e.g., a question) is created on a digital whiteboard for students to brainstorm ideas on a specific topic
  - Students use sticky notes to post their ideas on each slide; one idea per sticky note
  - Students group posted notes based on themes, timelines, or other factors

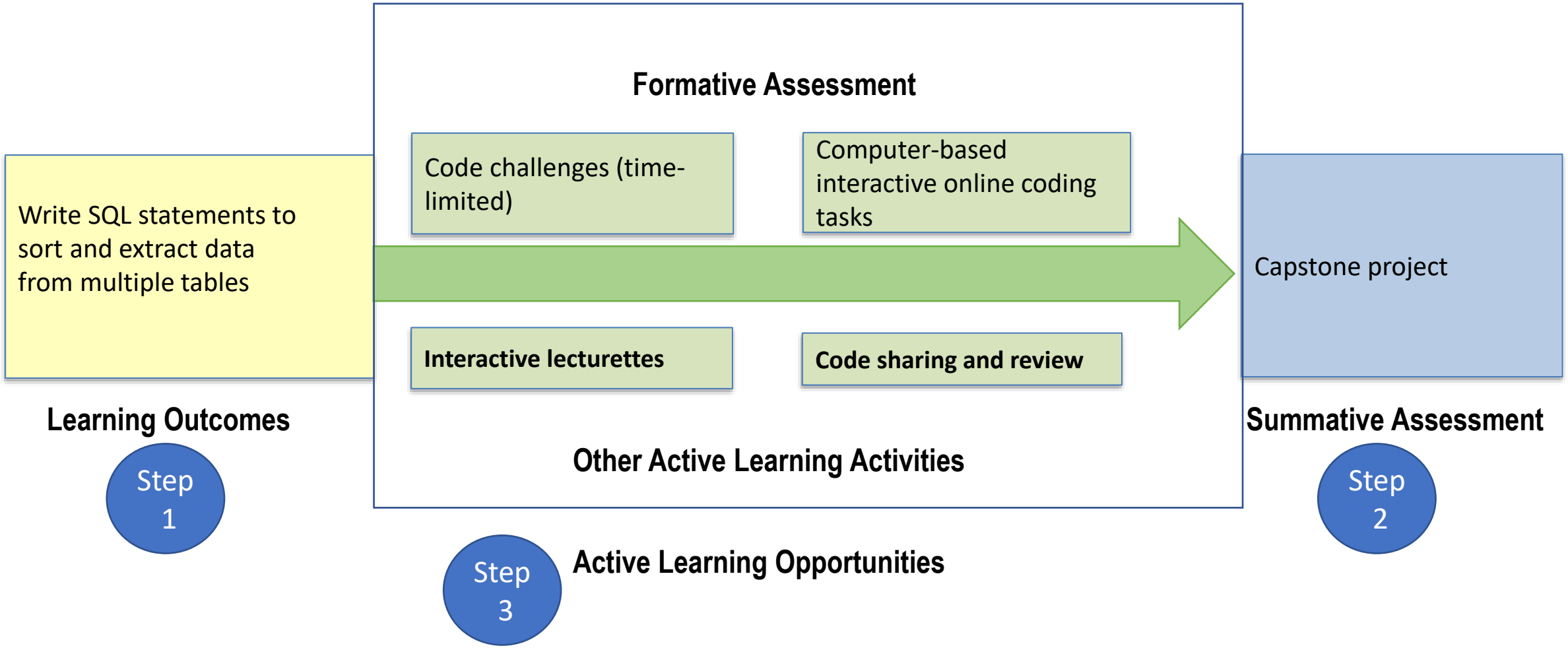
Adapted from "Post it parade" example from Queens University

- Resource developed by Centre for Teaching & Support Innovation: Active learning
  - Active learning activities for different class size
  - Tips for active learning classroom management

Active learning for microcredentials

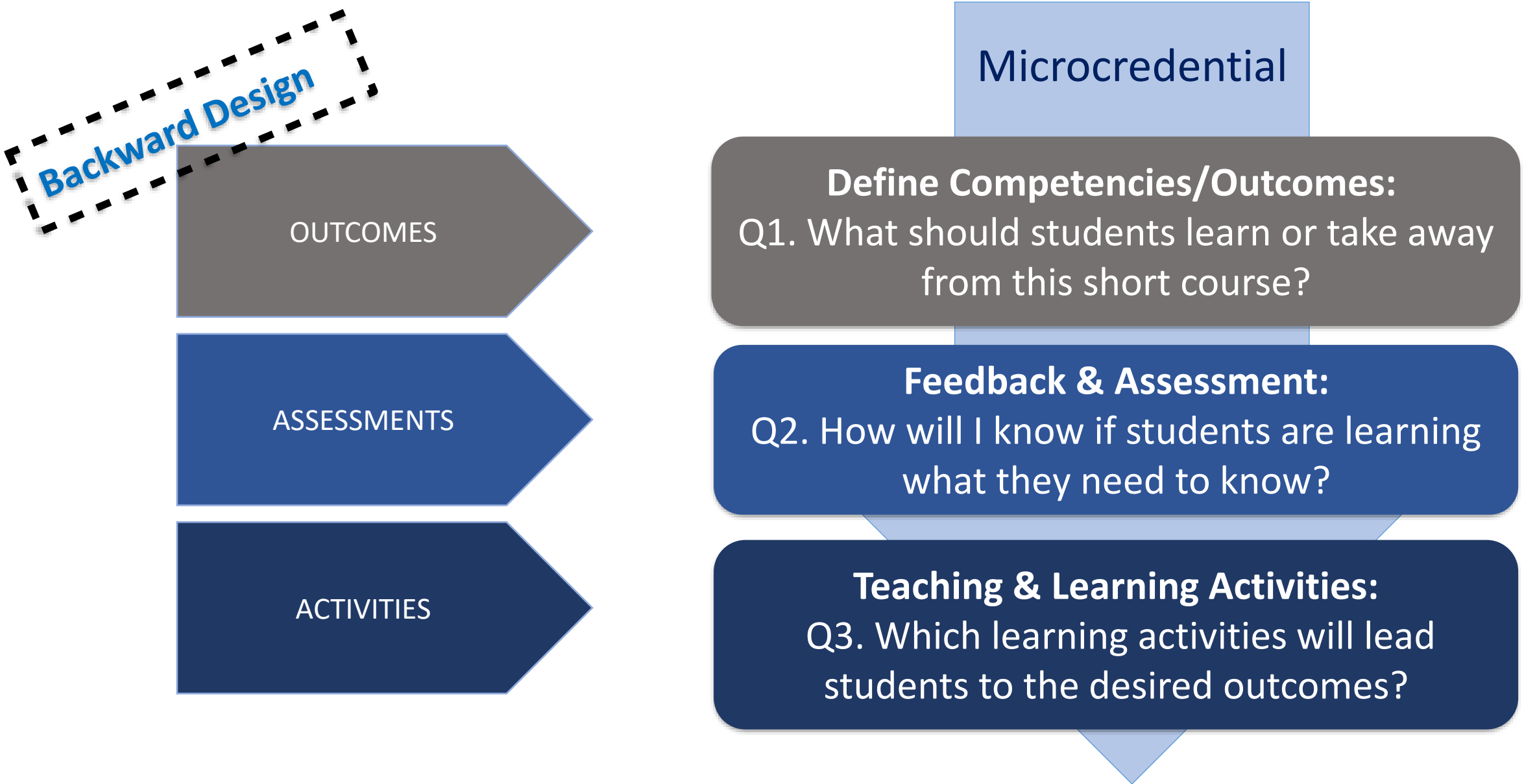
- Aligns learning activities with assessments and learning goals
- Focuses on learning, not learning time
- Individualizes learning experience
- Diversifies learning opportunities and resources
- Creates a professional learning community
- Empowers students to take the lead in their learning

Example of active learning for microcredential design



3. Course Component Alignment

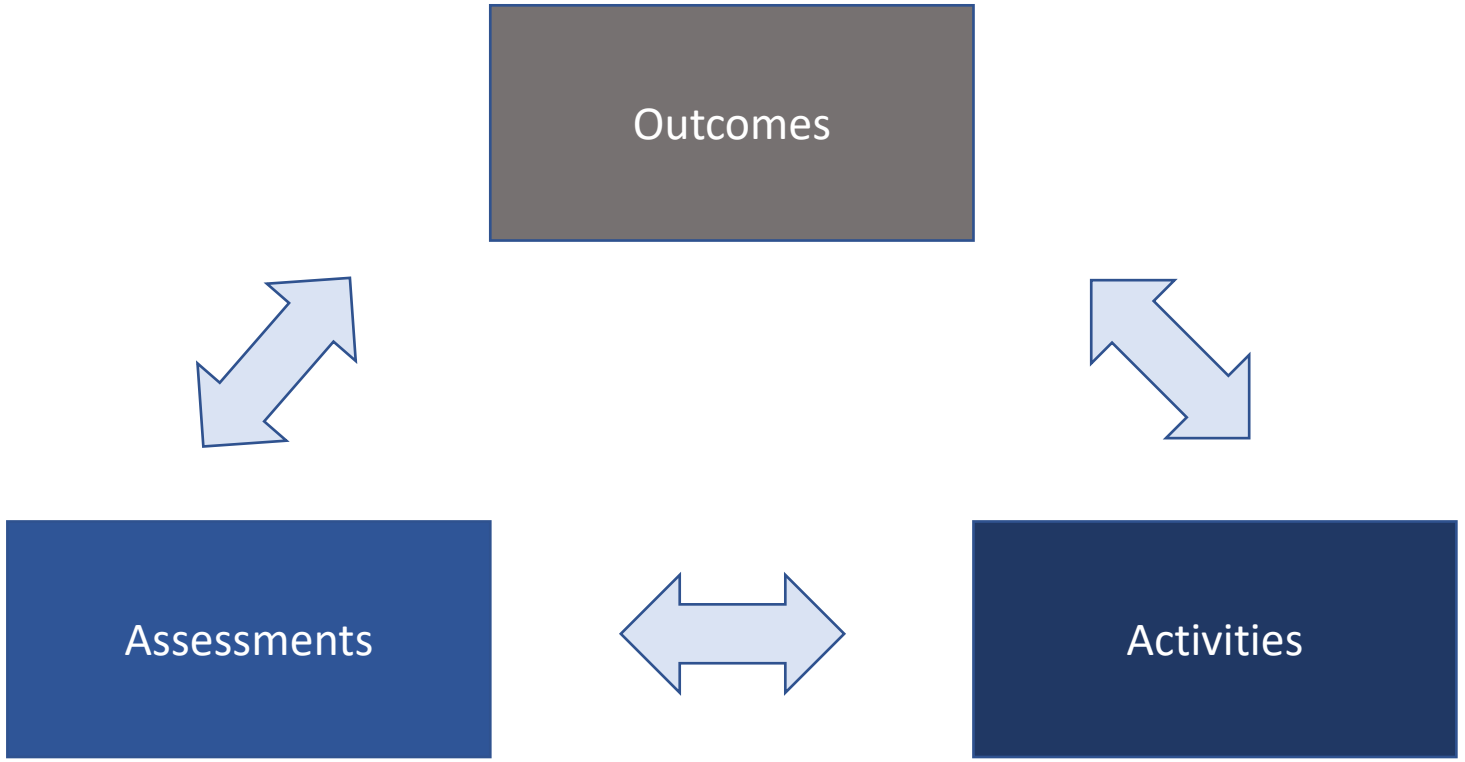
Pulling it all together



Underpinnings of student-centered design:

Alignment of these design components is essential to a well-designed microcredential course/program.

Revisit the alignment frequently during the design process.



Align designing components

Ensure alignment of the component pieces:

- **Learning outcome(s)** you have identified and articulated
- **Synchronous and asynchronous activities** that would support learning to achieve the outcome(s)
- **Assessments** that reflect skills described in the learning outcome(s)

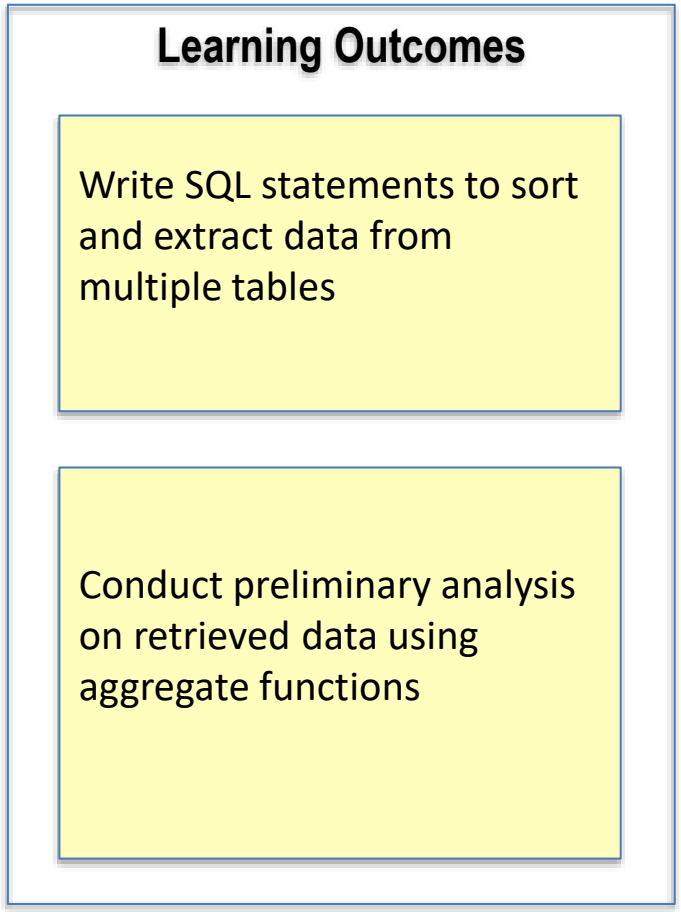
Example 1: Data organization using SQL

The alignment process is iterative, moving through the steps of backward design.

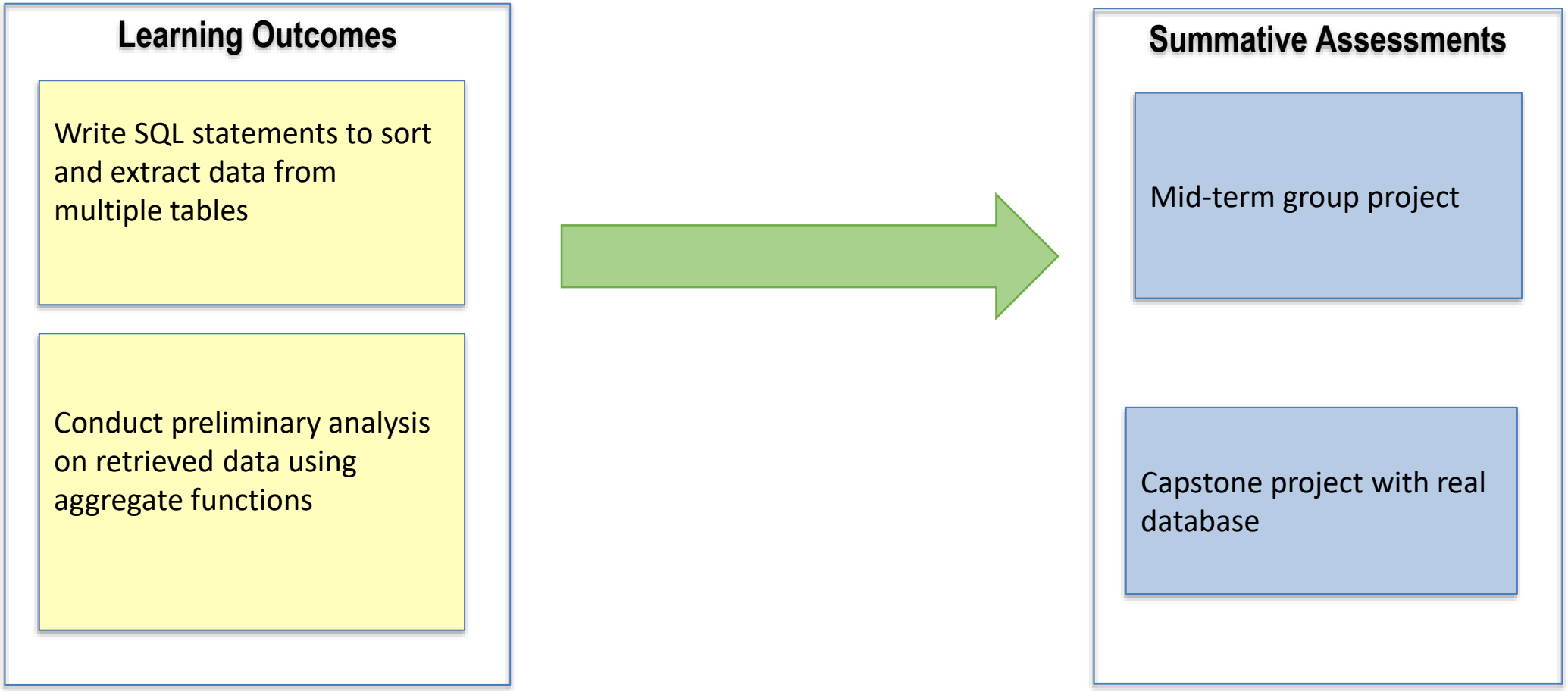
Let's revisit the alignment of course components that support this overarching competency from our previous example:

- At the end of the course, students will be able to manipulate data from relational databases using SQL commands

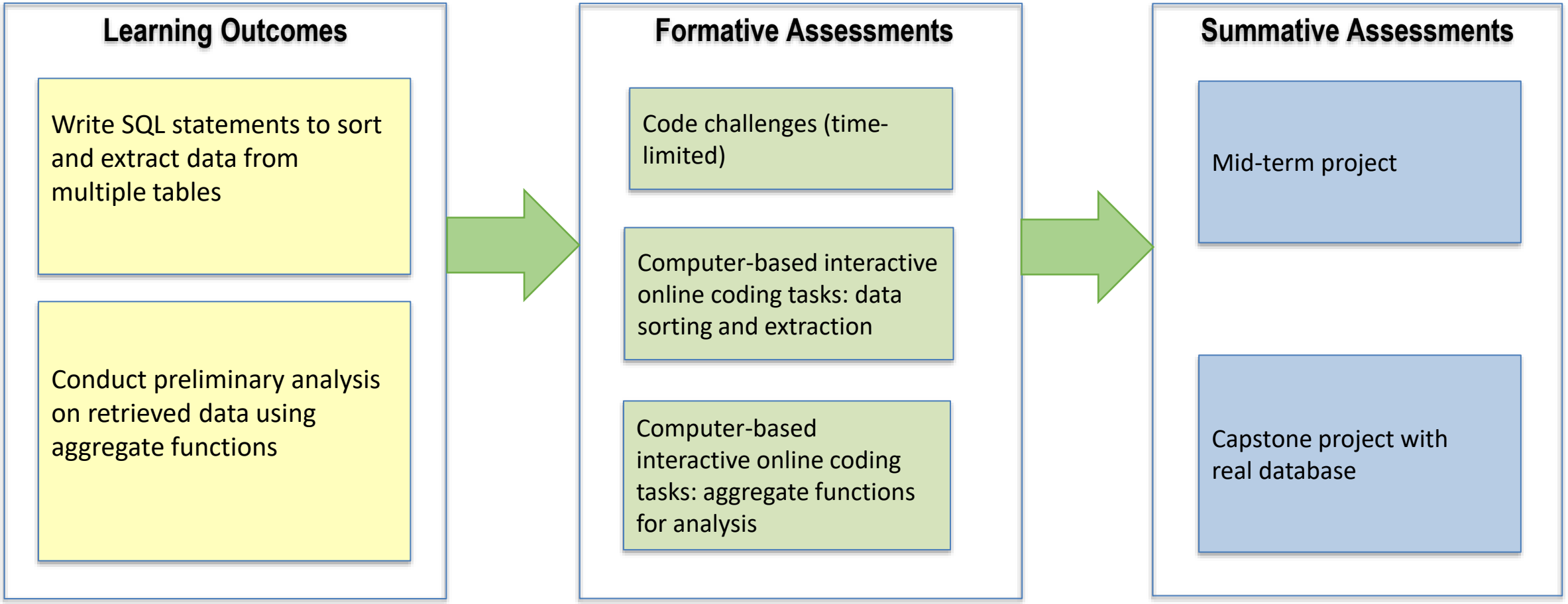
Step 1: Draft learning outcomes



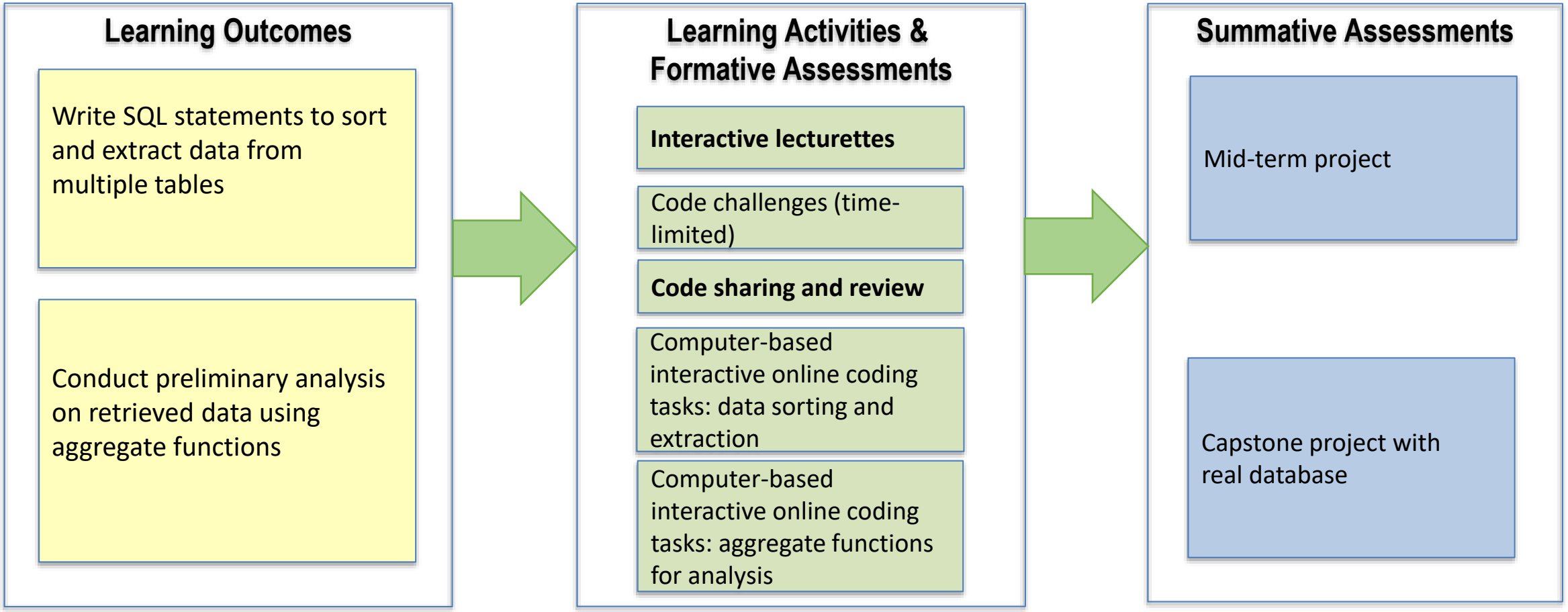
Step 2: Demonstrate competency through summative assessment



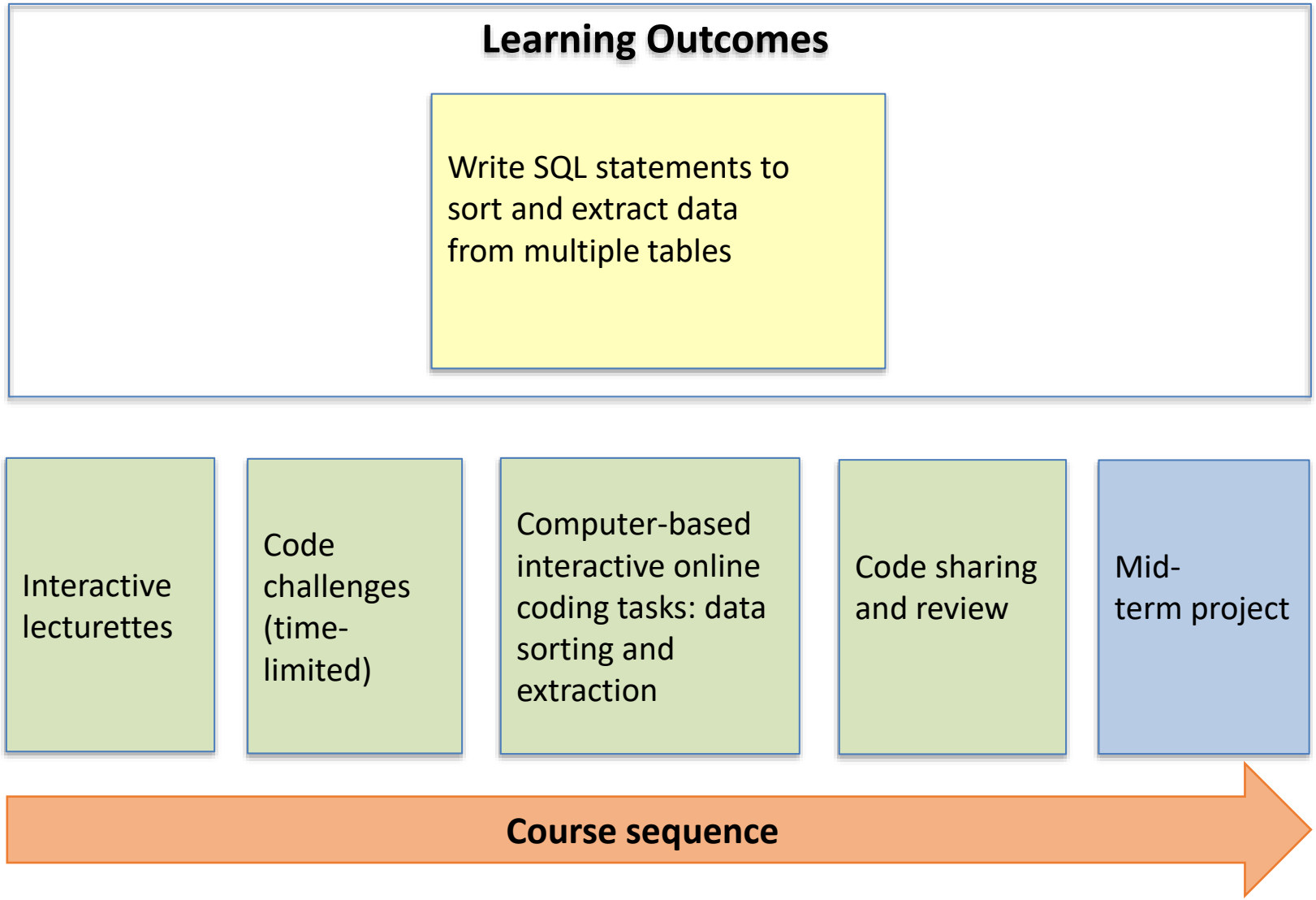
Step 3: Design learning activities: formative assessments



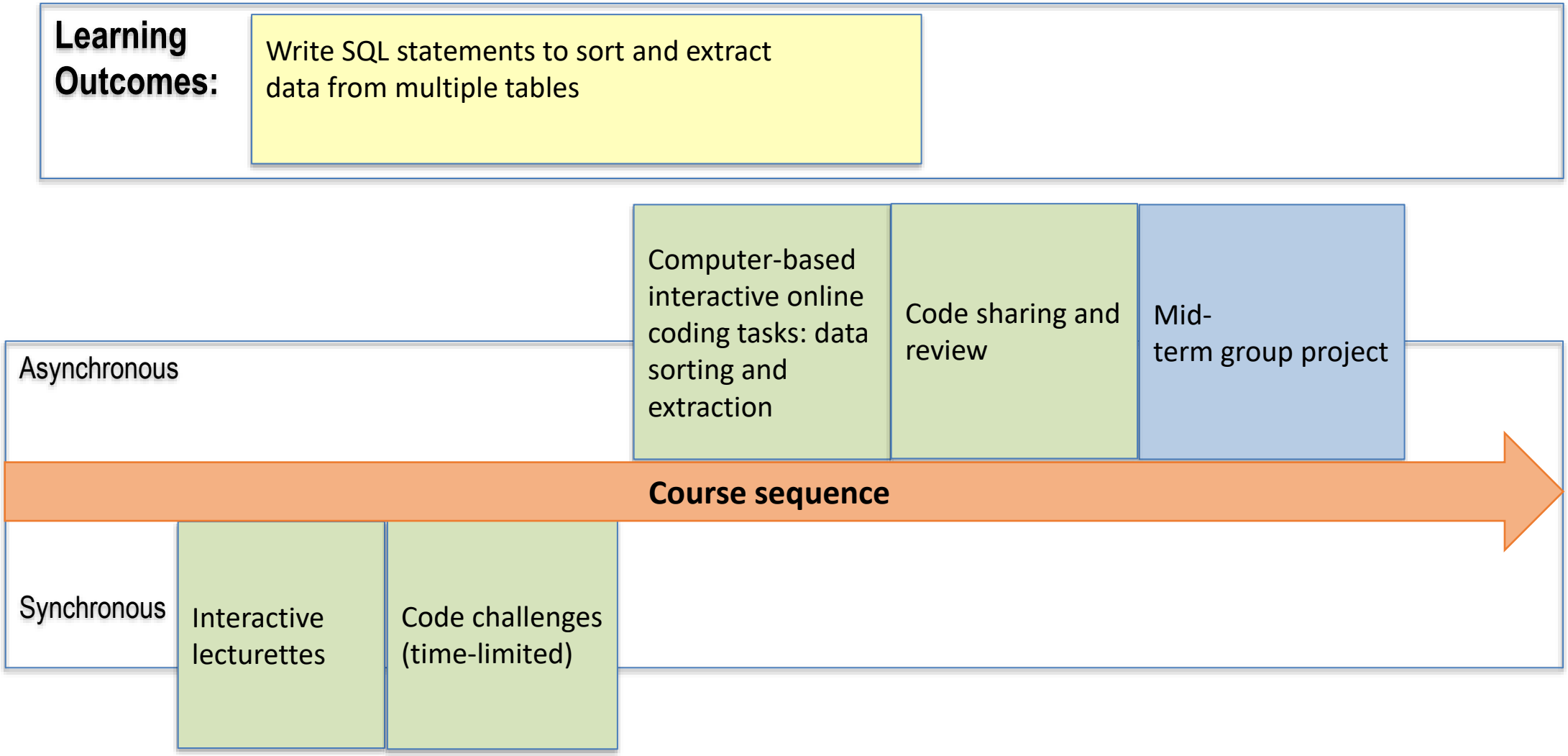
Step 3: Design learning activities: other learning activities



Step 4: Map the course sequence



Step 5: Consider synchronous and asynchronous learning components

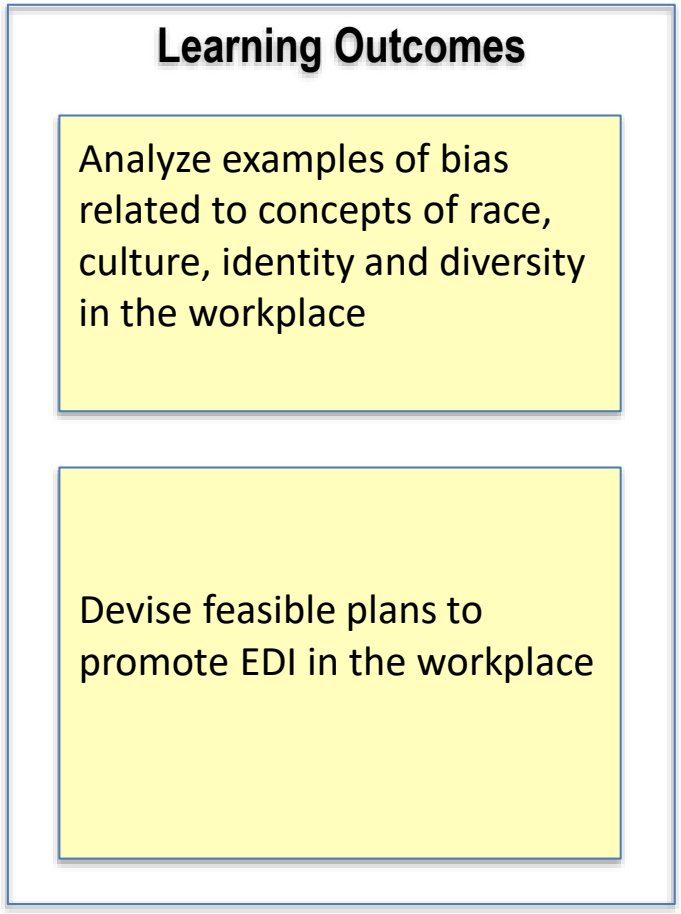


Example 2: Promoting equity, diversity, and inclusion (EDI) in the workplace

Here is our second example of aligning course components that support this overarching competency:

- At the end of the course, students will be able to foster an EDI-responsive environment in the workplace

Step 1: Draft learning outcomes



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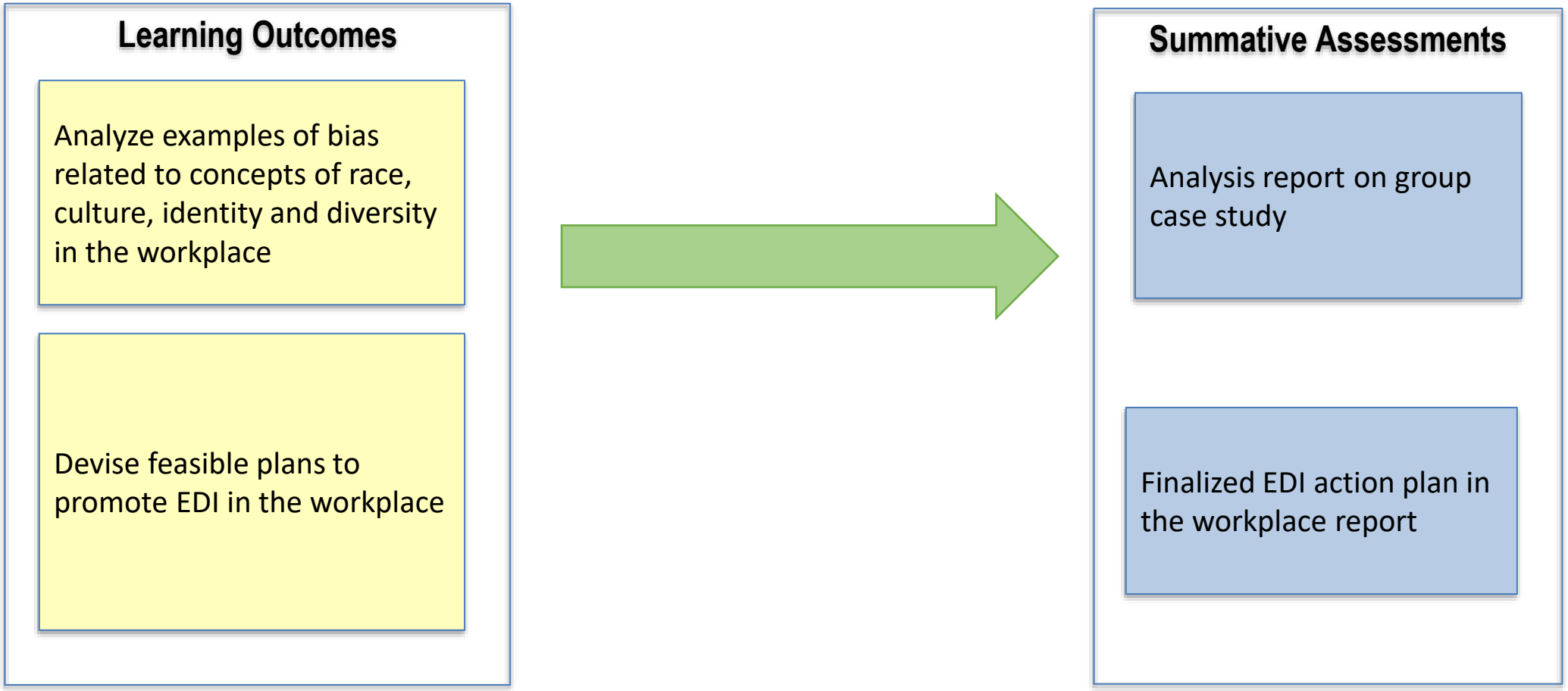
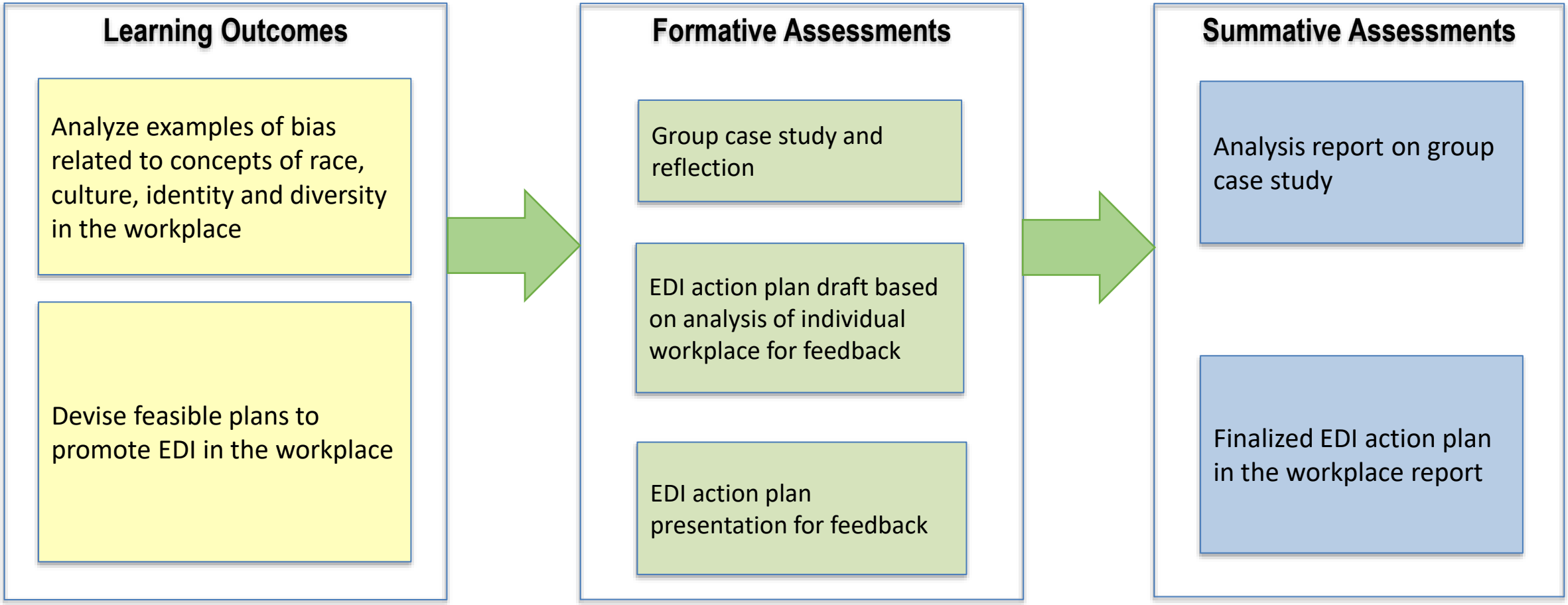
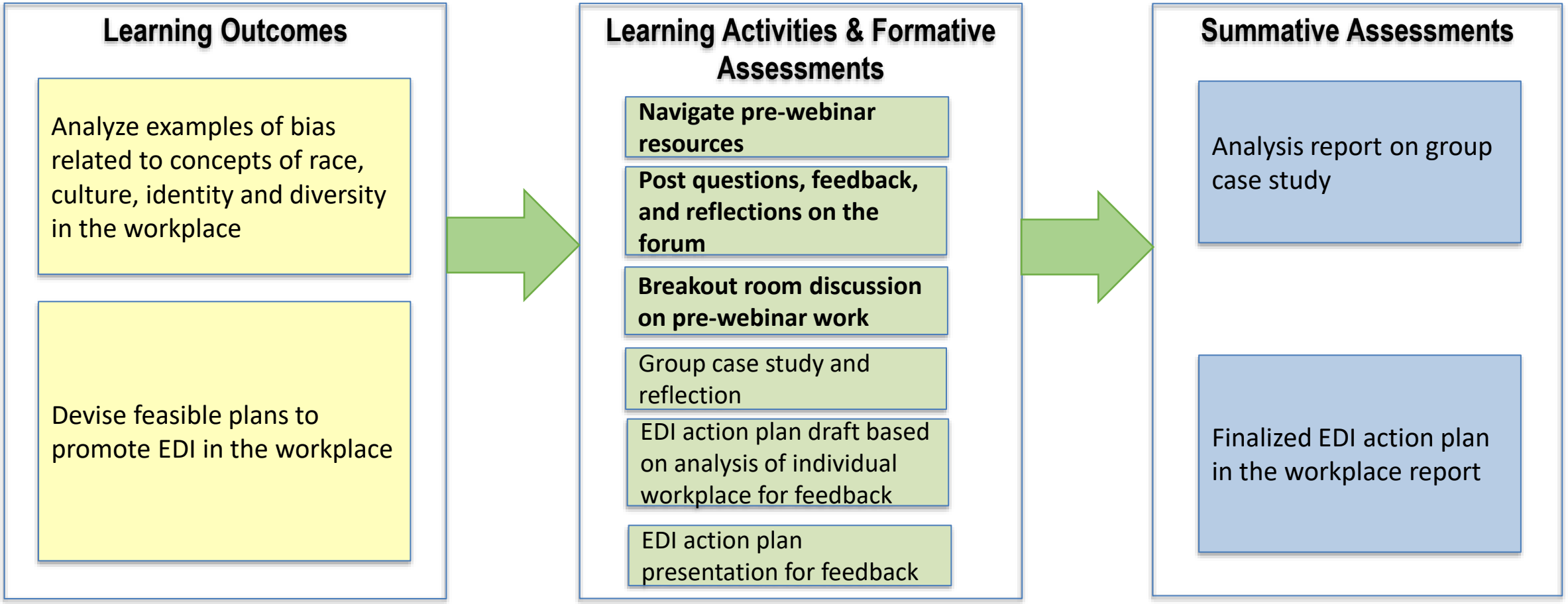


Step 3: Design learning activities: formative assessments

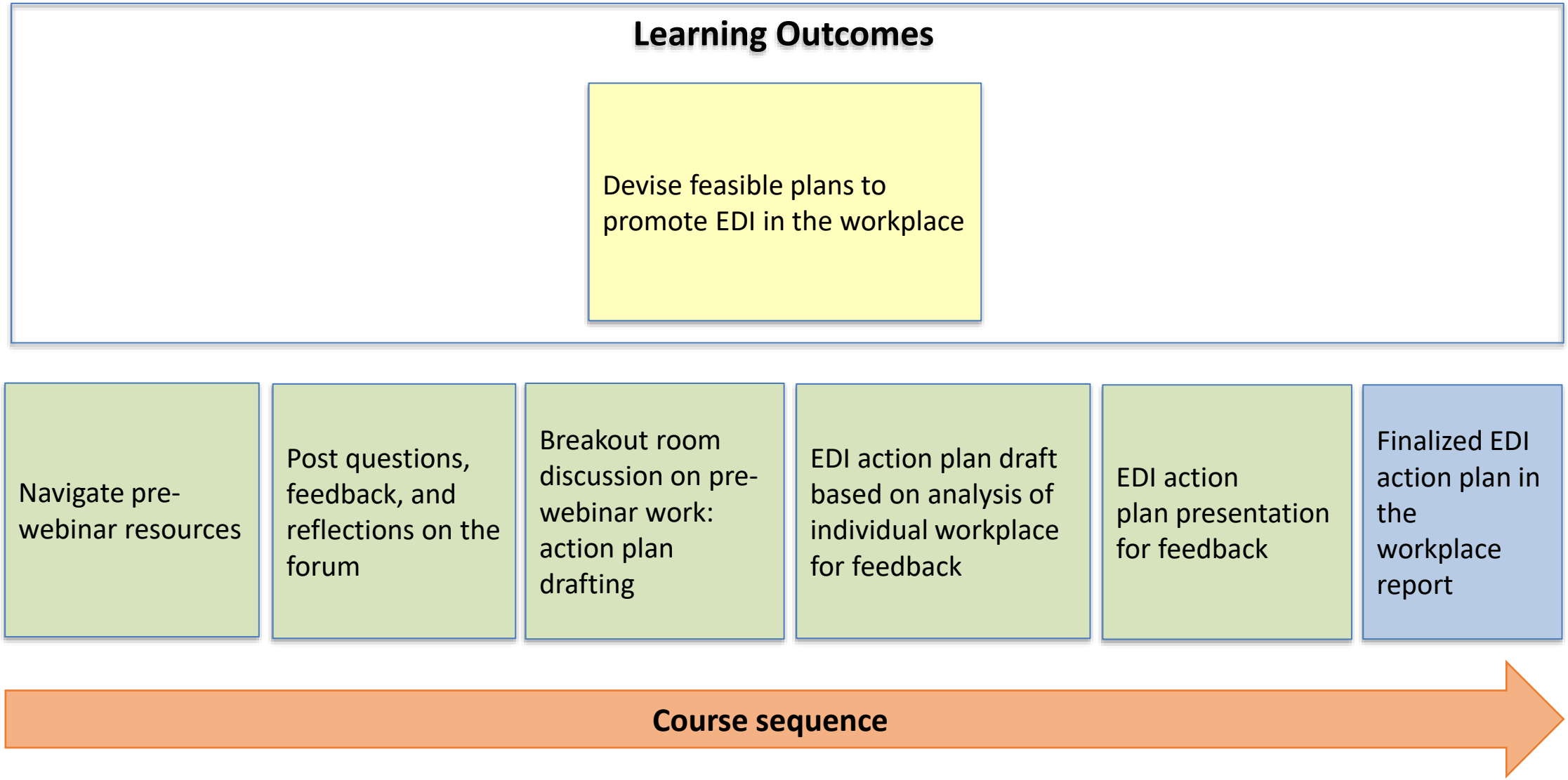


Step 3: Design learning activities: other learning activities

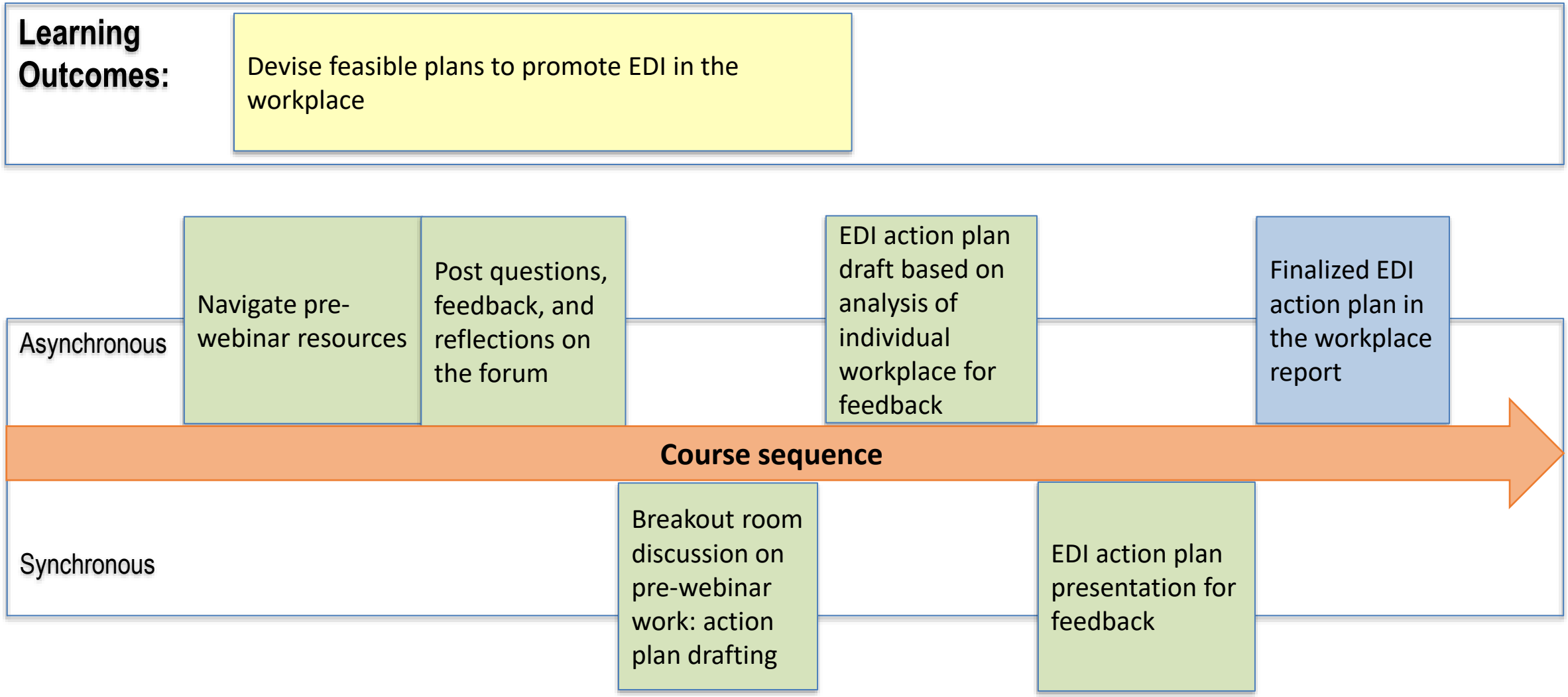


Backward Design

Step 4: Map the course sequence



Step 5: Consider synchronous and asynchronous learning components



4. Summary

Key takeaways for active learning and integration

- Adopt the active learning concept in instructional design to make microcredential learning authentic, relevant, and engaging
- Three designing components for alignment: learning outcomes, learning activities, and assessment
- Connect synchronous and asynchronous course elements

References

Burgstahler, S. (2009). Universal design of instruction (UDI): Definition, principles, guidelines, and examples. *Do-It*. https://files.eric.ed.gov/fulltext/ED506547.pdf

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Centre for Teaching Support & Innovation (CTSI). (n.d.). Active learning at the University of Toronto. *University of Toronto*. https://teaching.utoronto.ca/resources/active-learning-at-the-university-of-toronto/

Klein-Collins, R. (2013). Sharpening our focus on learning: The rise of competency-based approaches to degree completion. *National Institute for Learning Outcomes Assessment*. https://learningoutcomesassessment.org/documents/Klein%20Collins%20OP20.pdf

Resources from the University of Toronto

1. Active learning activities and strategies

- Resources to support active learning at U of T

2. Alignment and integration

- Micro-credential design components worksheet (three-column table).docx
- Sequencing worksheet.docx
- Separating synchronous and asynchronous components worksheet.docx

3. General course design resources

- Course design resources
- Accessibility guidelines

4. Online module design resources

- Module design guidelines/checklist
- Module design support resource page
- Accessible learning object design

External resources

1. Active learning examples

- Examples of active learning activities

2. Instructional models

- ARCS model of motivation
- Situation-based learning design process.docx

3. Facilitating professional learning community

- NEA micro-credential professional learning community facilitation guide

4. General recommendations for instructional design

- The decisive dozen: research background abridged