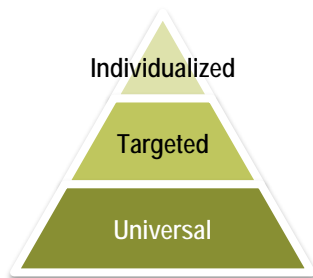


# Concept Attainment



Concept attainment is a structured inquiry process to help bring meaning to new concepts by highlighting similarities and differences. Students determine the attributes of a concept by comparing like examples and contrasting them with non-examples provided by the teacher.



A teacher's understanding of their students' learning needs helps determine when to provide universal, targeted, or individualized instructional strategies. For some students, universal instructional strategies may be enough to meet their learning needs. For others, more targeted instructional strategies are the starting point for implementing the curriculum. The strategy described is a guideline that teachers can use depending on the learning context.

## Why use this strategy in an inclusive learning environment

- Students attend to similarities and differences of objects, words, pictures, numbers, and phrases which can strengthen their connections to prior knowledge.
- Encourages students to observe, classify, categorize, and hypothesize.
- Encourages students to build their understanding and subject-area vocabulary.

## How this strategy could be used in an inclusive learning environment

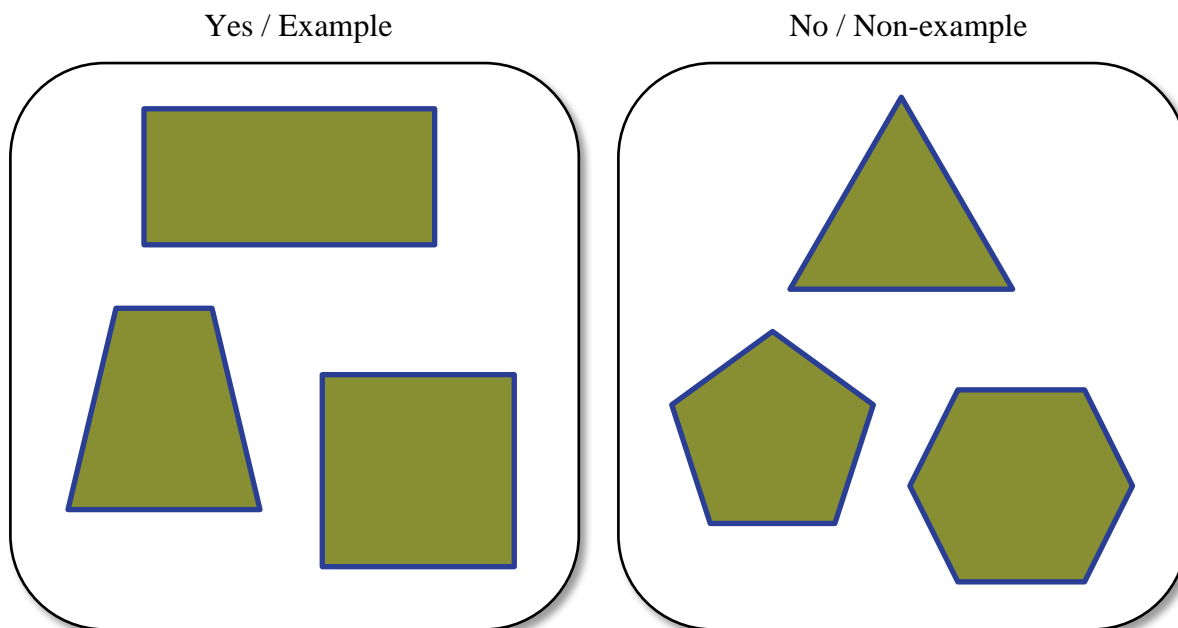
1. Prior to the activity, select a concept to be studied. Identify critical attributes for how examples of the concept will be sorted and ensure that the attributes chosen will be meaningful for the students.
2. Create several examples, moving from concrete to abstract, using objects, pictures, numbers, or words which contain all the critical attributes of the concept, in addition to several non-examples (which may contain some but not all of the critical attributes).
3. Sort examples by placing them in either the "example" (Yes) or the "non-example" (No) column. Based on the examples provided, students determine the common attributes.
4. Once students have had a chance to hypothesize on the essential attributes of the concept, discuss which column (Yes or No) they think the examples belong.



- Repeat this process with another example until the students understand how examples are being sorted. Students then share their thinking.
- Once the concept has been identified, students generate other examples with partners and test them against the list of attributes.

## Examples

Introducing the concept of quadrilaterals with pictures



Introducing the concept of quadrilaterals with vocabulary words

| Example     | Non-example |
|-------------|-------------|
| ▪ square    | ▪ hexagon   |
| ▪ rectangle | ▪ triangle  |
| ▪ trapezoid | ▪ pentagon  |

“Is the circle an example or a non-example?”

## Tips for individualized supports

- Start with a completed example that students are familiar with to highlight similarities and differences. Have students identify the essential attributes.
- Model the process before having students work on their own or in small groups.
- Use concrete objects or pictures for examples and non-examples.
- Use partially completed examples, having students add words, phrases, or pictures that explain the rules.



- Ensure students have time to process the information provided before being asked to respond.
- Have students vote on the attributes using visuals or through physical movement (e.g., voting paddles, hand signals, moving to a different part of the room to vote yes/no or for example or non-example).
- Use a student's augmentative communication device to express ideas about what is the same and different.
- Provide academic language in an English language learner's first language using peer translation or a bilingual dictionary.
- For English language learners, provide sentence starters to help students scaffold responses during or after the concept attainment activity:
  - *This is the same as \_\_\_\_\_.*
  - *This is similar to \_\_\_\_\_.*
  - *This is different than \_\_\_\_\_.*
  - *I don't understand what \_\_\_\_\_ means.*
  - *Why is \_\_\_\_\_ different from \_\_\_\_\_?*

