Matching

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Chris Joyce (2006)

Students match stems or prompts to one of a group of possible answer options.

Types include:

- terms, pictures or symbols with definitions or descriptions
- phrases
- cause and effect
- problems and solutions

When to use

Matching activities are useful for

- assessing knowledge
- assessing understanding
- accessing existing ideas at the start of a unit of work
- uncovering common misconceptions
- stimulating discussion when used as group tasks
- checking learning and deciding on next steps during a unit of work
- reviewing learning at the end of a unit of work

The theory

The options should provide plausible alternatives to the correct answer. The number of answer options needs to be limited. Less than 7 for primary students and less than 16 for secondary students are common recommendations. Too many options can create cognitive overload.

They are similar to multiple-choice questions. When well-constructed, answer options become distractors.

Test construction theory notes that you need to have more options so that students cannot guess by elimination.

Matching exercises can help learners see the bigger picture when information has been learnt in smaller chunks over time.

Matching also lessens the writing load.

How the strategy works

Matching activities

- may help uncover students' misconceptions
- can assess whether students can link pieces of information

- differ from multiple-choice questions, as the number of distractors decreases as correct matches are made

What to do

- Provide more answers than stems, especially if there are a small number of answer options. This helps to make the item more valid and reliable because it is harder to guess the correct answers.
- Avoid including overly easy options, as this can decrease the number of real options available for subsequent stems. Options that are too hard, however, are unlikely to provide useful information.
- Instructions should clearly key students in to the assessment focus.
- If an option may be used more than once this should be made clear to students. If some answer options do not have to be used, this should also be made clear.
- Stems or pictures should be on the left of the page and answer options on the right.

When interpreting the answers, look for:

- common errors, for example, muddling two options
- the degree of correctness. Has one incorrect response influenced other responses or are the matches random?

Limitations

- The strategies students use to select their answers can influence their success rate. Having a mismatch between the number of stems and answer options weakens the effect of problem-solving strategies.
- Too many items can make the task too difficult for students.

Adapting the strategy

- Put the activity on cards that students can physically move. This means they have less to carry in their heads. It is also easier to make corrections.
- Ordering is another example of matching. Answer options are matched to a position rather than a definition.

Examples of ARB resources that use matching

There are many matching activities in the ARBs. Below is a selection of the resources showing different ways this strategy can be presented.

Resource List

- Probability number lines
- Parts of a torch
- Types of energy
- Types of angles
- Which pest am I?
- How it moves
- Naming shapes

- Pesticides
- Speech bubbles II
- Types of paper
- Matching shapes
- Fruit prints
- Mapping diagrams
- Matching units of length
- Energy transformations
- Choosing fonts
- Drawing circuit diagrams
- What makes it go?
- Matching equivalent fractions
- Shapes and nets
- Travelling sound
- Joan Wiffen and the dinosaur fossil
- Recycling materials
- Kingfishers
- Interdependence loopy
- Investigating the water cycle
- Paper money for Monopoly (version A)
- Matching nets
- Folding nets II
- Describing probabilities
- What's the time?
- Matching nets II
- Light rays