# *Make it move* **Teacher background notes**

**In this investigation, students observe and compare the movements of various objects that they interact with when playing.**

## [Australian Curriculum: Science links](https://assist.asta.edu.au/resource/4179/make-it-move-year-f-cle)

## Learning intentions

Students will be able to:

* identify and describe ways in which objects move;
* observe, share and reflect on ways in which objects move;
* respond to questions about familiar objects and events such as, the ways in which objects move;
* observe and compare the ways different-sized objects move;
* engage in discussions about observations;
* use methods such as drawing to represent ideas.

## Suggested time for this CLE

The time needed to complete the *Make it move* CLE will depend on the depth of the prior knowledge of students, the time to perform the Introduction and three investigations—‘Moving toys’, ‘Playground in motion’ and ‘Size matters’—and follow up with any further extension activities. Allow 4 hours.

## Prior conceptual knowledge

It is anticipated that students in their first year of schooling will hold some understanding of some of the ways in which objects move. From an early age, children explore their physical surroundings. Learning about the physical world continues through early childhood and this is evidenced when observing children using playground equipment, bouncing balls, building towers, floating boats, etc.

## New concepts to be introduced

The introduction to the *Make it move* CLE (see Teaching and Learning Plan), outlines a range of simple tasks that can be implemented with minimal equipment. These initial tasks are designed to tune students into investigating and describing how objects move.

By conducting the suggested learning plan, students will explore, inquire and gain knowledge of how objects move and how objects of different sizes and shapes move differently. It is appropriate that students in the early years recognise that:

* objects move in particular ways and we can describe how an object moves by saying how fast it is going and what sort of path it takes;
* the way to start an object moving or to change how it is moving is to give it a push or a pull;
* the size and shape of an object may determine its movement;
* the movement and changes in the movement of an object can be observed and described.

The teacher is advised to offer Foundation students opportunities to explore and understand movement using objects familiar to them—toys, playground equipment as well as games and simulations of an interactive nature.

## Possible misconceptions

While conducting investigations outlined in *Make it move*, students may articulate alternative conceptions to our scientific understanding about movement and how these events occur. Purposeful and effective teaching interventions will assist and support student understandings and skill development.

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| **STUDENTS MAY THINK…** | **INSTEAD OF THINKING…** |
| Only living things move. | ‘Pushes’ and ‘pulls’ act on both non-living and living things. |
| All things move in straight lines. | Objects can move in many different ways depending on their size and shape. |
| Objects are either moving or not moving. | Motion can include different categories such as ‘at rest’, ‘speeding up’, ‘slowing down’, ‘travelling at a constant speed’ or ‘changing direction’. |
| Pushes and pulls are different things. | Pushes and pulls are forces, the only difference being that they act in opposite directions. |

## Links to further information

Further background information can be found in the following comprehensive units of work and research article:

* Australian Academy of Science, 2012, ‘On the move’, PrimaryConnections <https://primaryconnections.org.au/resources-and-pedagogies/curriculum-units/move>
* ‘Pushes and Pulls,’ Victoria State Government, Education and Training website, <http://www.education.vic.gov.au/school/teachers/teachingresources/discipline/science/continuum/Pages/pushespulls.aspx> (17 April 2014)