

Pendulum investigation

Weight: Objects are attached the end of the string by tying them on or using tape.

Length of string: The length of the string should be measured and noted using whichever system your region uses. For Australian schools, this will be in centimetres (cm).

Drop angle: The diagram at the bottom of this page was designed to help you measure the drop angle.

Number of swings: It can be difficult to measure the duration of a single swing so the accuracy for the duration can be improved by averaging the time taken for multiple swings. However, this requires students to be familiar with decimals. An easier method is to count the number of swings during a set period of time, such as 10 seconds. This can be counted from either the release point or the bottom of the swing as long as a full cycle is measured each time.

Tip: Only change one thing at a time in the shaded cells. We have used the ditto mark (") to indicate when one of the variables has *not changed*. The following table has enough rows to change the weight, length, and drop angle three times. Avoid using the ditto mark for the number of swings as this is important information so shortcuts are not recommended.

Weight	Length	Drop angle	Number of swings
1.			
2.	"	"	
3.	"	"	
	1.		
"	2.	"	
"	3.	"	
		1.	
"	"	2.	
"	"	3.	

