

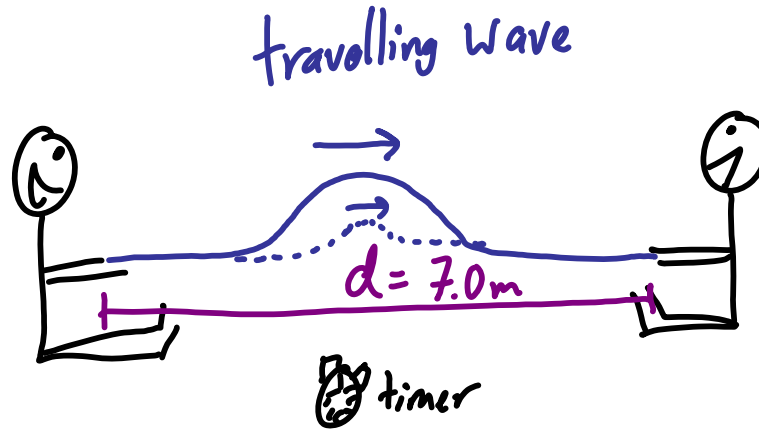
Slinkys!!!

Minilab

Part 1

Prediction: How do you think the amplitude of the wave affects its speed?

Procedure:



Data:

$d_{\text{Total}} = \underline{21.0\text{m}}$
 $t_{\text{small}} = \underline{1.80\text{s}}$
 $t_{\text{big}} = \underline{1.75\text{s}}$

Sample Calculations: Compare the speed of the small and large amplitude travelling waves.

$$v = \frac{d}{t}$$

Discussion:

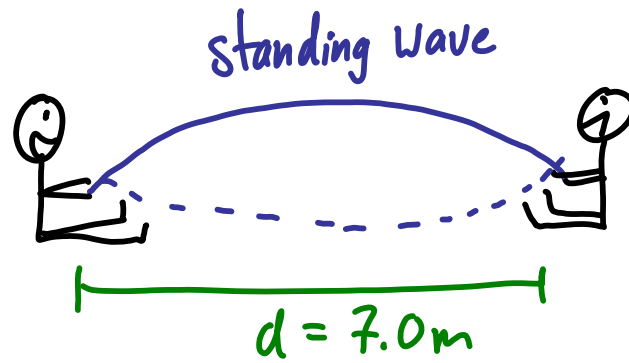
How does the amplitude of the wave affect its speed? Explain.

Briefly describe the difference between a **travelling** wave (the type used in part 1) and a **standing** wave (part 2).

Part 2

Prediction: How do you think the frequency of the wave affects its speed?

Procedure:



Wave 7.0m	# of Waves	λ (m)	Time for 10 cycles	Period (s)	Frequency (Hz)	Speed (m/s)
	$\frac{1}{2}$	14.0m	11.95s		$f = \frac{1}{T}$	$v = \lambda f$
	1	7.0m	5.99s			
	$\frac{3}{2}$	4.67m	4.01s			
	2	3.5m	2.99s			

Sample Calculations:

Discussion:

How does the frequency affect its speed? Explain.

Conclusion:

What does the speed of a wave depend on? (You may have to look this up on your own...)

