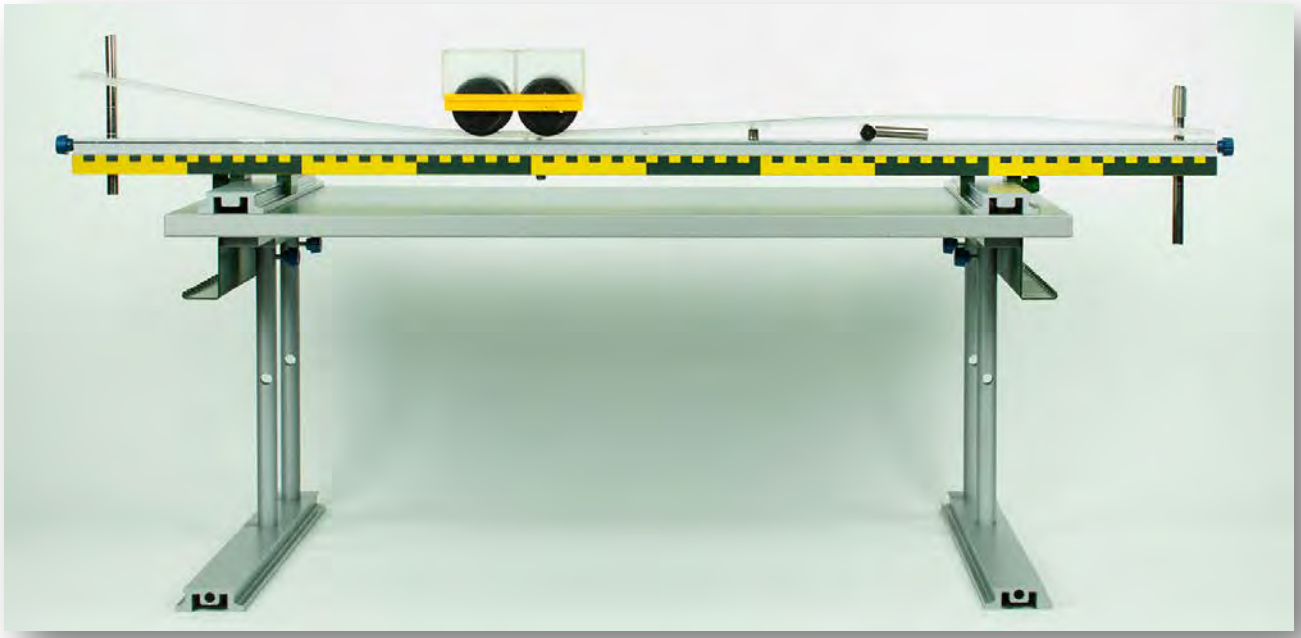
COMPARISON OF LINEAR MOVEMENTS

MED 04.06



Material

Item-no.	Qty.	Description
DS600-10	1	Assembly for lab table "NTL"
DS101-4B	1	Universal rail with scale and holes, L=1000 mm
DS101-2A	1	Flexible track, acrylic, L=1000 mm
DS102-2G	2	Clamp saddle
P1321-3K	1	Block for light gates
DS103-1H	1	Holder for guide rail
DM362-1E	1	Baffle block
DM300-3A	1	Trolley with variable speed
DM300-2A	1	Dynamics trolley, demo, 50 g
P1312-2A	1	Car body for trolley SE
P7240-2B	1	Support rod, T-shaped

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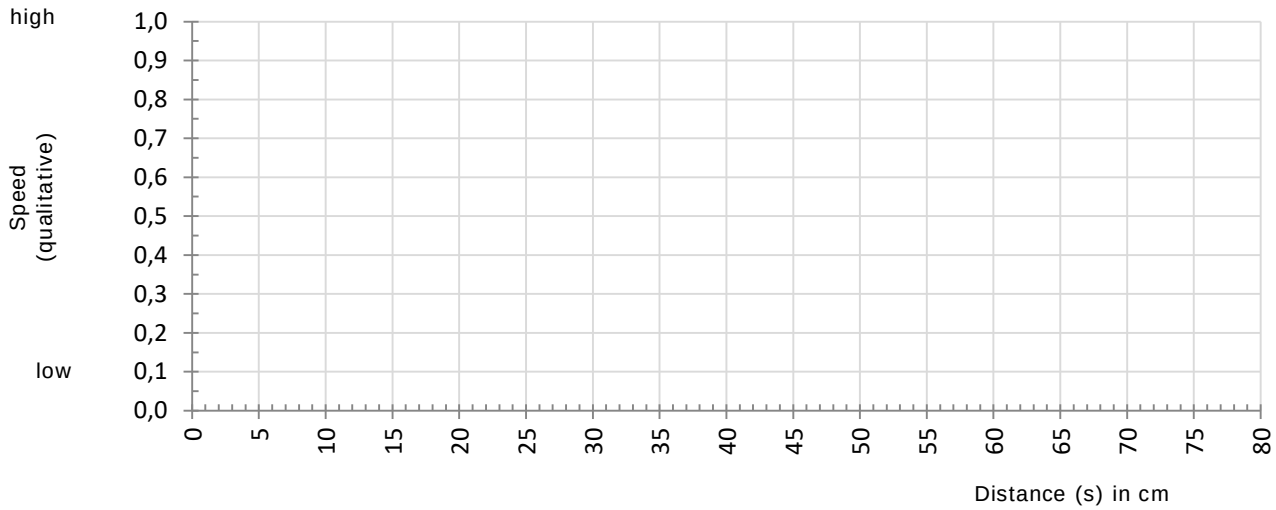
Purpose
To compare different linear movements.

Preparation – Experiment 1
Place the universal rail with scale and holes on a stable surface and fix the clamp saddle to the left end of the rail. Afterwards fix the holder for guide rail on the right side of the track and attach the baffle block to this holder.

Put the trolley with variable speed on the left side of the track as shown on the image above.

Experiment 1
We set the speed control approximately in the middle and switch the car on.
The speed during the entire ride is observed.

Try to make a diagram below.
The centre of the car should be the reference point for marking the track.



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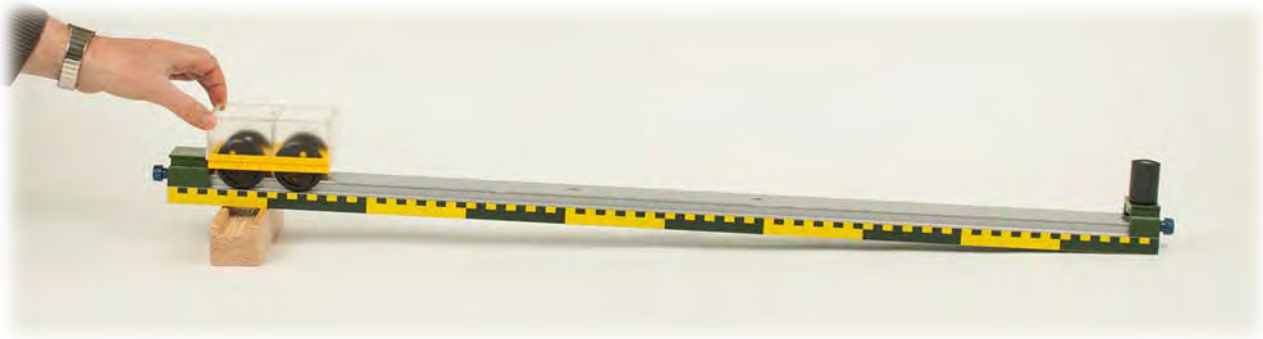
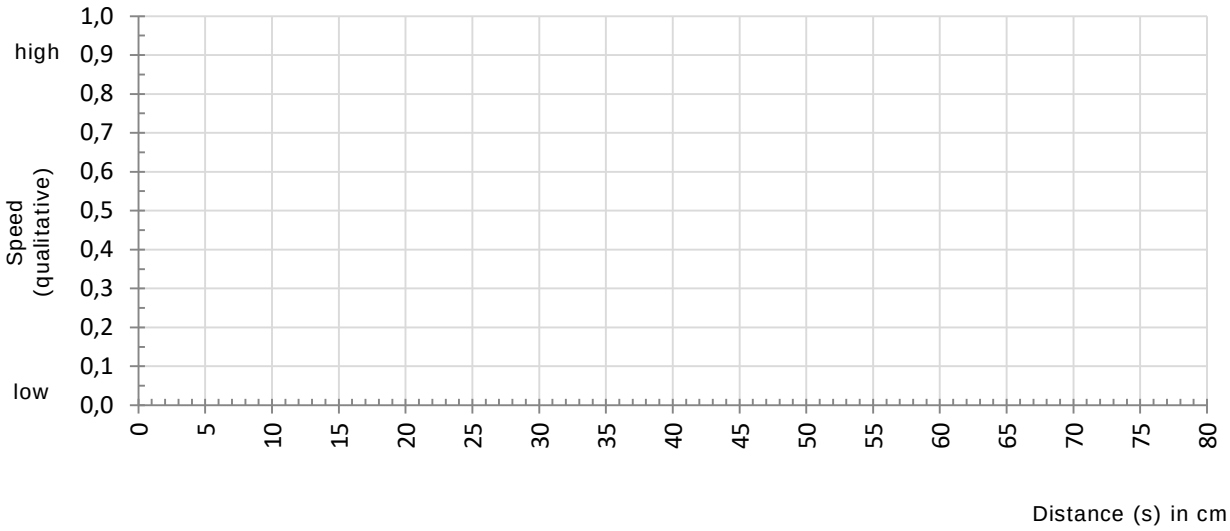
Preparation – Experiment 2
Place the universal rail with scale and holes on a stable surface and fix the clamp saddle to the left end of the rail. Afterwards fix the holder for guide rail on the right side of the track and attach the baffle block to this holder.

Afterwards place the block for light gates below the left end of the track so that it becomes an Inclined plane. Attach the car body to the Dynamics trolley demo before the experiment.



Experiment 2
Place the Dynamics trolley on the left end of the track and let it roll.
Observe the speed during the complete ride of the trolley

Again try to make a diagram below.
The centre of the car should be the reference point for marking the track.



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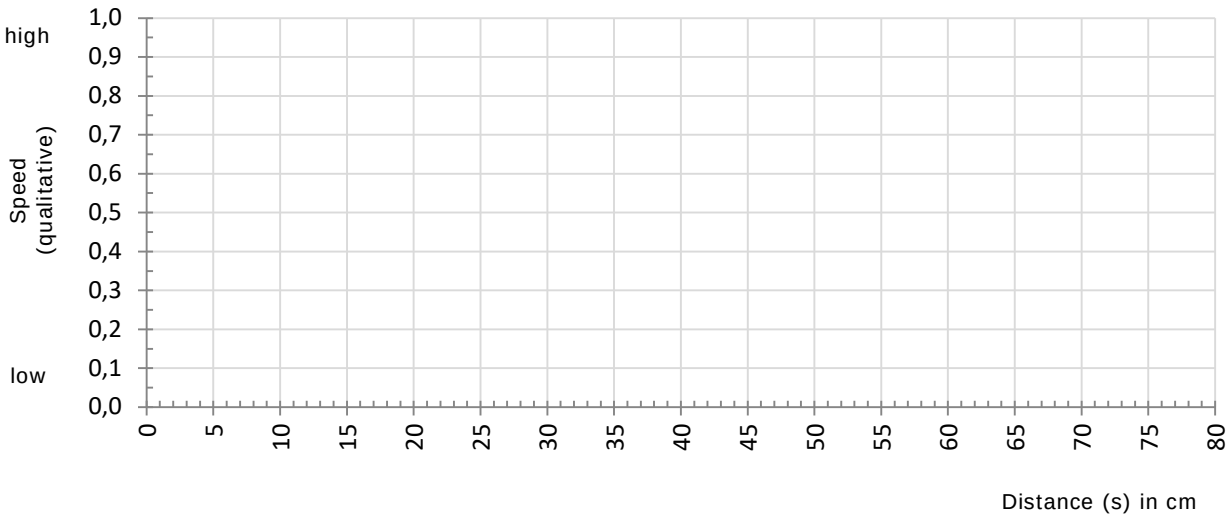
Preparation – Experiment 3
Place the assembly on a stable surface and fix the two clamp saddles to the profile of the track as shown on the picture.

Place the flexible track on the universal track and put the two central rods through the holes of the universal track. The left plastic screw is positioned centrally on the upper thread and the right plastic screw on the lower thread; afterwards close the screws.

The two support rods are inserted from the bottom into the outer holes and fixed there.
Pull the right half of the flexible track upwards and clamp the T-shaped support rod in between as shown on the image below.
Attach the car body to the Dynamics trolley demo before the experiment.

Experiment 3
Place the Dynamics trolley on the left end of the track and let it roll.
Observe the speed during the complete ride of the trolley

Again try to make a diagram below.
The centre of the car should be the reference point for marking the track.



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Preparation – Experiment 3
Remove the track from the clamp saddles.
Loosen the screws of the plastics screws in the centre and fix the flexible track on the lower threads with the plastic screws. Afterwards raise the track on the right end as show on the image below and fix the track to the clamp saddles again.

Experiment 4
Place the Dynamics trolley on the left end of the track and let it roll.
Let the trolley roll to the right and back to the left and observe the speed during the complete ride of the trolley

Again try to make a diagram below.
The centre of the car should be the reference point for marking the track.