Week 4 Net Force

Force Measurement

TASK	HOW MUCH FORCE? (include units)	WHICH DEVICE?
Measure how much force it takes to hold up a bookbag (at rest).		□ 5 Newton scale □ 20 Newton scale □ bathroom scale
Measure how much force it takes to hold up the wood block (at rest)		□ 5 Newton scale □ 20 Newton scale □ bathroom scale
Measure how much force it takes to pull the wood block upward at a slow constant speed.		□ 5 Newton scale □ 20 Newton scale □ bathroom scale
Measure how much force it takes to pull the wood block across the table at a slow constant speed.		□ 5 Newton scale □ 20 Newton scale □ bathroom scale
Measure how much force it takes to just start the wood block moving on the table.		□ 5 Newton scale □ 20 Newton scale □ bathroom scale
Measure how much force it takes to drag a person across the floor in a chair at a slow constant speed		□ 5 Newton scale □ 20 Newton scale □ bathroom scale
Measure how much force it takes to just start a table moving (longways.)		□ 5 Newton scale □ 20 Newton scale □ bathroom scale

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Measure how much force it takes to hold up a bookbag (at rest).		□ 5 Newton scale □ 20 Newton scale □ bathroom scale
Measure how much force it takes to hold up the wood block (at rest)		□ 5 Newton scale □ 20 Newton scale □ bathroom scale
Measure how much force it takes to pull the wood block upward at a constant speed.		□ 5 Newton scale □ 20 Newton scale □ bathroom scale
Measure how much force it takes to pull the wood block across the table at a constant speed.		□ 5 Newton scale □ 20 Newton scale □ bathroom scale
Measure how much force it takes to just start the wood block moving on the table.		□ 5 Newton scale □ 20 Newton scale □ bathroom scale
Measure how much force it takes to push a table across the floor at a constant speed.		□ 5 Newton scale □ 20 Newton scale □ bathroom scale
Measure how much force it takes to just start the table moving.		□ 5 Newton scale □ 20 Newton scale □ bathroom scale

Tricky Force Measurement

1. The average person on the street assumes that scales always read weight. Hang the block on the end of the spring scale and change speed up and down repeatedly. Why did the reading change?

2. How must an object be moving so that a scale actually reads the weight of it? (Two answers!)

3. If you placed one foot on one bathroom scale and one foot on a different bathroom scale, how could you calculate your weight from the two readings?

4. Suggest a way to weigh one of the tables in the room.

5. Suggest a way to measure the force it takes to drag a person (on their feet) across the room with the devices we have.

Tricky Force Measurement

1. The average person on the street assumes that scales always read weight. Put the block on the end of the spring scale and change speed up and down repeatedly. Why did the reading change?

2. How must an object be moving so that a scale actually reads the weight of it? (Two answers!)

3. If you placed one foot on one bathroom scale and one foot on a different bathroom scale, how could you calculate your weight from the two readings?

4. Suggest a way to weigh one of the tables in the room.

5. Suggest a way to measure the force it takes to drag a person (on their feet) across the room.