## Name :

## Date :

Forces: pushes and pulls


plastic laundry basket or similar box with handles

timer

tape

a pillow or stuffed animal

a friend or partner

## Instructions

1. Use tape to mark a race course finish line around 30-40 feet long
2. Put the pillow or stuffed animal in the laundry basket
3. From behind, push the basket from the start to finish line. Time how long it takes to cross the finish line
4. Next, pull the basket from the front. Time how long it takes to cross the finish line
5. Repeat steps 3 and 4 , but remove the pillow and place the books in the laundry basket. Time how long each push and pull takes.
6. Repeat steps 3 and 4, but remove the books and place your partner in the laundry basket. Time how long each push and pull takes.
7. Answer the questions on next page.

## Forces: pushes and pulls

Which was more difficult, pushing or pulling?
$\qquad$
$\qquad$
Did you feel the push and pull forces?
$\qquad$
$\qquad$

Why is it more difficult to push and pull with a person than with a pillow?
$\qquad$
$\qquad$

| Item | Push time | Pull time |
| :---: | :---: | :---: |
| Light (pillow) |  |  |
| Medium (books) |  |  |

