1.5 Science Forces Online Lesson 1: Streamlining

Upload/send to me once you have completed

Learning Intentions

By the end of this lesson I will be able to:

- ★ To identify balanced & unbalanced forces.
- ★ Sketch force diagrams that show forces acting on an object.

Task 1 – Forces Revised

What does the word balanced mean to you?

_____

_____

We know that there are three types of forces; push, pull or twist, that can be exerted on an object. These forces can change the _____, _____ or _____ of an object.

Task 2 - Balanced and Unbalanced Forces

Balanced Forces

A balanced force is when two equal forces push or pull in the opposite direction, like a draw in a tug of war.

Balanced forces are **equal** and **opposite**. When forces are balanced then the object will remain stationary or continue to move at a constant speed.

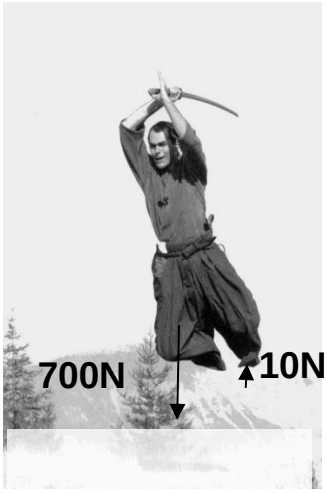
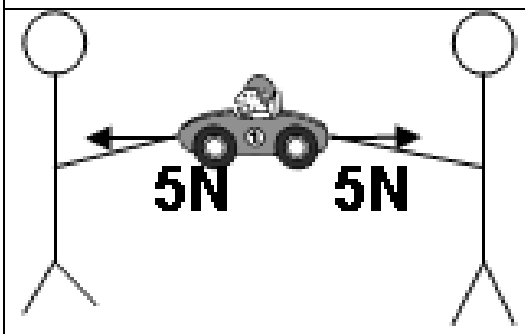
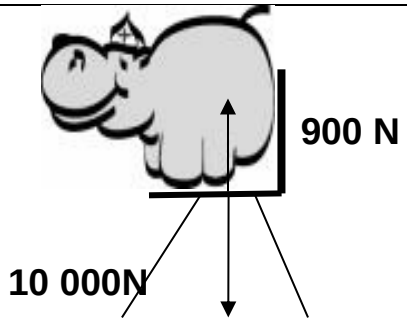
Unbalanced Forces

An unbalanced force is when one force is larger than the other. The object will change it's speed or direction it is moving in.

Unbalanced forces are not equal or in the opposite direction. The resultant force is the result of the unbalanced force and causes the object to accelerate or slow down.

What to Do:

Look at the pictures. Decide whether the force is balanced or unbalanced. Write what will happen in each picture.

	This man is jumping through the air, are the forces on him balanced or unbalanced? Which forces are acting on the man? …… and …… What happened to the man after the photo was taken? ……
	Balanced or unbalanced? Which direction will the toy move?
	Balanced or unbalanced? What will happen to the chair? What will happen to the hippo?

	Balanced or unbalanced? What will happen to the ball? What may happen to the footballer?
	Explain why the girl is floating on top of the water and not sinking? What will happen if the lilo is removed?
	Balanced or unbalanced? Which forces have you drawn? (eg: gravity, pushes, pulls, friction) What is going to happen next?