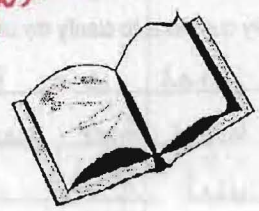
√+ Outstanding! May I scan and post on Angel?

Reading Log

Any fact facing us is not as important as our attitude toward it, for that determines our success or failure.
—Norman Vincent Peale



Date 9/6/2000

Before Reading

My learning objectives are: Define Force; identify specific forces acting on an object, know relationship between Force & Motion

My learning performance criteria are: Define and become familiar with Forces and how they effect motion.

Estimated time to spend reading: 2 Hrs.

First Reading Notes

Preview, observations, and questions:
(Headings, topic sentences, tables, illustrations)

- To understand the CAUSE of motion, we use dynamics (mechanics)

- The fundamental principles of mech. explains how motion occours as a consequence of forces.

5-1

① What is a FORCE?

② What is the connection between force and motion?

5-3

③ Identify all of the forces acting on an object.

④ Use Newton's laws and kinematics to determine the motion.

Forces

① General Force ($\vec{F}$)
② Gravitational Force ($\vec{F}_G$)
③ Spring Force ($\vec{F}_{sp}$)
④ Tension ($\vec{T}$)
⑤ Normal Force ($\vec{n}$)
⑥ Static Friction ($\vec{f}_s$)
⑦ Kinetic Friction ($\vec{f}_k$)
⑧ Drag ($\vec{D}$)
⑨ Thrust ($\vec{F}_{thrust}$)

Glossary

Term	Definition, term used in context or a phrase
Net Force	— the vector sum of all the forces
Intro FORCES:	
Gravitational Force	— Long-range force of gravity, the entire planet pulling on the object
Spring Force	— the push or pull of a spring.
Tension Force	— the contact force exerted by a spring (wire) rope on an object.
Normal Force	— the force exerted by a surface against an object (that is pressing against the surface)
Friction $\vec{F}$	— the $\vec{F}$ exerted by the surface.
① Kinetic Friction	— As the object slides across the surface.
② Static Friction	— $\vec{F}$ that keeps object in place (stuck).
Drag	— A force that resists motion (fluid or air).
Thrust	— force exerted by thrust, ex. the force exerted on a rocket by exhaust gases.

TACTICS: IDENTIFYING FORCES

① Identify the object of interest
② Draw a picture of the situation
③ Draw a circle arround the object.
④ Locate every point on the boundary of this curve where the objects touch the object of interest.
⑤ Name and label each contact force acting on the object.
⑥ Name and label Long-range forces.

Force - A push or pull

- A force is a push or pull.
- A force acts on an object.
- A force requires an agent.
- A force is a VECTOR.

- A force can be either a contact force... ...or a long range force