Before Reading
My learning objectives are: 
1. Understand the main topics and information that is required. 
2. Understand what I am reading. 
Estimated time to spend reading: 30 minutes

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

### Glossary
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition, term used in context or a phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Force</td>
<td>Push/pull - way specific action force is applied to something</td>
</tr>
<tr>
<td>Agent</td>
<td>Force that acts on an object by touching</td>
</tr>
<tr>
<td>Contact Force</td>
<td>Force that acts on an object by touching</td>
</tr>
<tr>
<td>Normal Force</td>
<td>Force exerted by a surface against an object pressing down on an object (equilibrium)</td>
</tr>
<tr>
<td>Friction</td>
<td>Causes objects to stay in place</td>
</tr>
<tr>
<td>Tension Force</td>
<td>Slides across surface (opposes motion)</td>
</tr>
<tr>
<td>Static Friction</td>
<td>Prevents motion (forces motion in direction)</td>
</tr>
<tr>
<td>Dynamic Friction</td>
<td>Causes objects to slide</td>
</tr>
<tr>
<td>Annuit</td>
<td>Identify object and amount</td>
</tr>
<tr>
<td>Identify Forces</td>
<td>Identify all forces acting on an object</td>
</tr>
<tr>
<td>Identify electric and magnetic forces</td>
<td></td>
</tr>
<tr>
<td>S3.3 Identifying Forces</td>
<td></td>
</tr>
</tbody>
</table>

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Term: Force
Definitions:
- **Friction**: Causes objects to stay in place
- **Tension Force**: Slides across surface (opposes motion)
- **Static Friction**: Prevents motion (forces motion in direction)
- **Dynamic Friction**: Causes objects to slide
Second Reading Notes
Inquiry questions to clarify my understanding of the material:

1. What constitutes the forces executed by compressing/stretching a spring?
2. What is meant by “long range”?
3. Why is normal force perpendicular to the surface?
4. 

Summarize Reading
The most important points of the reading were:

- There are many different forces acting on an object. It is also important that we are able to recognize the direction the force has on the object. For problem solving it is important to identify the object of the motion you want to study from a picture.

Actual time spent reading: 50 min.

Integrate Knowledge
The relationship between this new information and my previous computer knowledge and experience is:

- I know of friction if a book sitting on a table, in which the table exerts an influence motion. I also know that gravity acts to downward force on all objects.

Assessment of Learning Performance
I suggest the following change(s) in my reading habits to improve my learning performance:

- I need to re-read definitions, but for more understanding. Also to clarify issues I am not clear about.

My reason for making this suggestion(s) is:

- Sometimes I think I understand material when I really don’t.

The following two factors most affected (positively or negatively) the quality of my reading performance:

1. Using this text (positively)
2. 

Rereading Notes
Significant new understanding of major computer technology concepts:

- There are many more types of important forces I had no idea of, such as friction, magnetic force, normal force & spring force. I also learned how important the magnitude & direction of the vectors we draw are. The vectors should be able to explain clearly what is occurring.
Before Reading
My learning objectives are: Define Force. Identify specific forces acting on an object. Know relationship between motion and forces.
My learning performance criteria are: Define and become familiar with forces and how they affect 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 mechanics explain how motion occurs as a consequence of forces.

5-1
1. What is a FORCE?
2. What is the connection between force and motion?
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 (F)
2. Gravitational Force (F_g)
3. Spring Force (F_s)
4. Tension (T)
5. Normal Force (N)
6. Static Friction (F_s)
7. Kinetic Friction (F_k)
8. Drag (D)
9. Thrust (F_thrust)

Glossary
Definition, term used in context or a phrase
- Net Force: the vector sum of all the forces
- Into Forces:
- Gravitational Force: the entire planet pulling on the object
- Spring Force: the force exerted by a spring
- Tension: the force exerted by a rope or cable
- Normal Force: the force exerted by an object against another
- Friction: F_exerced by the surface
- Static Friction: F that keeps object in place (stuck).
- Drag: A force that resists motion (pulled or pushed).
- Thrust: A force exerted by thrust, i.e., 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 around the object
4. Locate every point on the boundary of this curve where the object touches the object of interest.
5. Name and label each contact force acting on the object.
6. Name and label long-range forces.

<table>
<thead>
<tr>
<th>Force</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A push or pull</td>
<td>A force can be either a contact force... or a long-range force</td>
</tr>
<tr>
<td>A force acts on an object</td>
<td>A force requires an agent.</td>
</tr>
<tr>
<td>A force is a vector</td>
<td></td>
</tr>
</tbody>
</table>
Second Reading Notes

Inquiry questions to clarify my understanding of the material:

1. What is a Force?
2. What force keep an object at rest or keep it in motion?
3. What is the difference between kinetic friction and static friction?
4. How do Newton's laws apply to forces?

Summarize Reading (Actual time spent (\underline{\frac{3}{2}} \text{ Hrs}))

The most important points of the reading were: Learning how forces are applied in the particle model. Forces are combined to produce a NET FORCE, given by the vector sum of all the forces. The various forces that were introduced (F, F_v, F_r, F_n, F_f, F_t, F_{normal}). Being able to take a picture and labeling all the forces that act on the object.

Actual time spent reading:

Integrate Knowledge

The relationship between this new information and my previous computer knowledge and experience is:

Physics

- Force is also a vector, because the direction and magnitude are important. In order to quantify a force, knowing vectors is very important.

Assessment of Learning Performance

I suggest the following change(s) in my reading habits to improve my learning performance:

An approach similar to this work sheet will be very helpful. Simply looking at basics boxes and doing the homework did not go well for me on the first exam.

My reason for making this suggestion(s) is:

I need a more conceptual understanding of Physics so that I have the basic tools to solve the complex problems.

The following two factors most affected (positively or negatively) the quality of my reading performance:

1. Re-reading the material.
2. Dissecting the reading to pick out the key learning objectives.

Rereading Notes

Significant new understanding of major computer technology concepts:

Physics

I enjoyed reading the "Atomic-model" for understanding the behavior of large objects. Thinking of atoms and bonds as basic "balls and springs" helped with understanding the Normal Force and Tension Force.