

Honors Physics

Free Body Diagrams

Photo Assignment

Introduction

According to the Physics Classroom website, free-body diagrams are diagrams used to show the relative magnitude and direction of all forces acting upon an object in a given situation.

To note:

1. The size of the force vector in a free-body diagram reflects the magnitude of that force.
2. The direction of the arrow shows the direction that the force is acting.
3. Each vector in the diagram is labeled to indicate the exact type of force.
4. You may represent the object with a small box or dot.
5. The force vector is drawn from the center of the box outward in the direction that the force is acting.

Your Assignment

Instead of giving you generic textbook scenarios for which to sketch free body diagrams, you will take your own photos (or use existing photos) and then annotate them using Preview.

You need photos for **TWO** of the following scenarios:

1. A hanging object
2. An object on an inclined plane (stationary)
3. An object being pushed (stationary)
4. An object being pushed (moving; you need a video clip of this as well)
5. Bonus: object on a spring

Important: Your photos MUST be landscape.

Then

1. Open each image in Preview or on your iPad.
2. Use the annotation tools to sketch a proper free body diagram. Include your coordinate system (with appropriate label) and all force vectors (with appropriate labels and relative magnitudes; do not overforce your diagram).
3. Save your image as 21HPhysLastNameFBD1 or 21HPhysLastNameFBD1.
4. Insert your annotated photos into a Google Doc (21HPhysLastNameFBDs)
5. Add your images to the FBD Slideshow. Only one photo per slide.