

## INTERACTIVE PHYSICS for Projectile Lab(s)...

Try some of the vector and projectile simulations at [www.physicsclassroom.com](http://www.physicsclassroom.com)

Save files under Users:Physics: YourNameFolder

To start the Program click the Interactive Physics icon on the desktop, or open a file from the Users:Physics:Projectiles folder.

to solve projectile problems. (Example, use Projectile Motion.ip to solve problems on page 1

1) \*\*\*\*GOAL: To learn how to make your own Interactive Physics files 02 #1-4)

To use Interactive Physics go to Help Menu, click on Contents, Go to Workshop

Follow the Directions for:

Bouncing A Ball,

Launching A Projectile,

Tossing A Ball

Make Sure to Use the Define Menu to show velocity vectors at some point.

(Select the object, click on the define menu, and choose to display velocity vectors...

Then click on the define menu to view vectors, you can choose the x and y components and/or the vector)

2) \*\*\*\*\* GOAL: To use preconstructed projectile files. DO NOT Save changes to these!

Also run the demonstration files:

Users:Physics:Projectiles::Projectiles and Rockets: Airdrop.ip

Users:Physics:Projectiles::Projectiles and Rockets: Projectile Motion.ip

Users:Physics:Projectiles::Projectiles and Rockets: Projectile Motion2.ip

Users:Physics:Projectiles::Projectiles and Rockets: ProjectileWordProblem.ip

Users:Physics:Projectiles::Projectiles and Rockets: Outfielder.ip

Users:Physics:Projectiles::Projectiles and Rockets: SoccerPlayer.ip

Users:Physics:Projectiles:Projectiles:MaxRangeOf ElevatedLaunch.ip

Users:Physics:Projectiles:Projectiles:BasketballGuy.ip

Users:Physics:Projectiles:Projectiles:Monkey.ip

Users:Physics:Projectiles:Projectiles:Shooting The Apple in The Tree.ip

3) Using your skills, Construct a game where someone has to try and shoot a ball into a basket... (allow for adjusting of angle and/or velocity)

Use this file that you make to answer the question #4 on page 119.

4) Using your skills, Try to use the program to solve at least 2 problems from any of your projectile homeworks. (you may need to pick ones in which you know all the initial conditions....  $V_i$ , angle, gravity, etc....., page 102 1-4, page 104 #1,2 page 115 #34-38, 43-44)