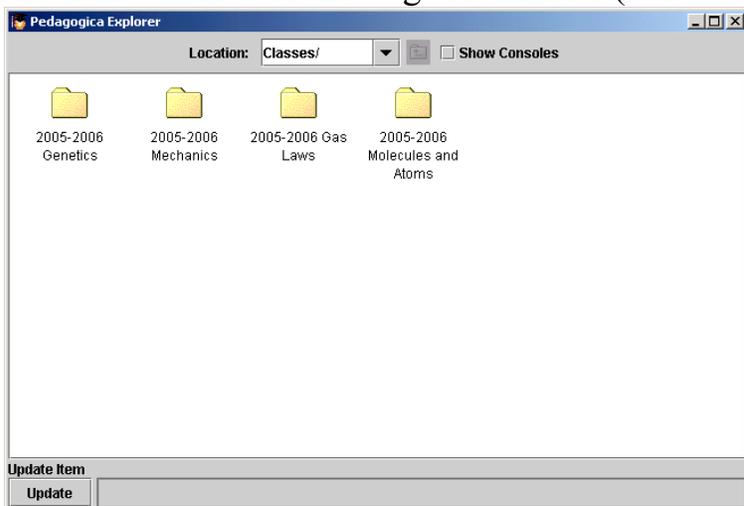


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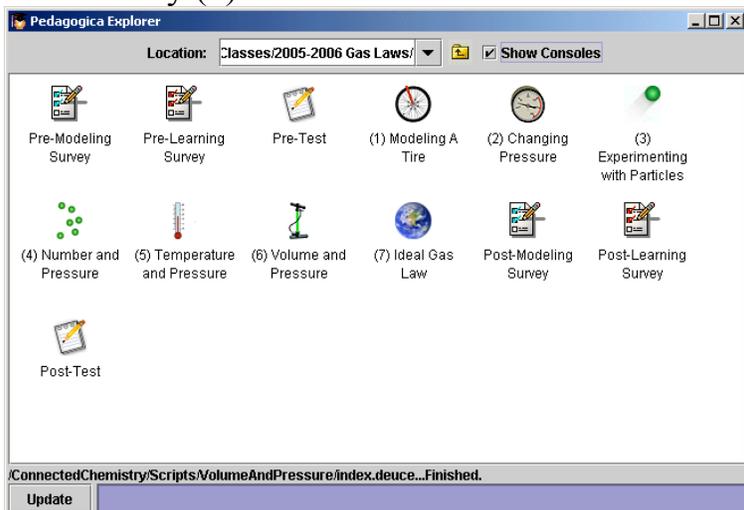
How to check if you have installed the most updated version of Pedagogica



1) When you double click on the desktop Pedagogica Icon it will launch a window containing four folders (shown below)



2) Open the Gas Laws Folder and check to see if you have the new activity (7) Ideal Gas Law



3. Double click and open Ideal Gas Law and the first page should look like the picture below.

Introduction screen 1 of 28

As you have seen in previous activities there are many things that can cause the pressure of a gas to change. You found that different relationships exist between:

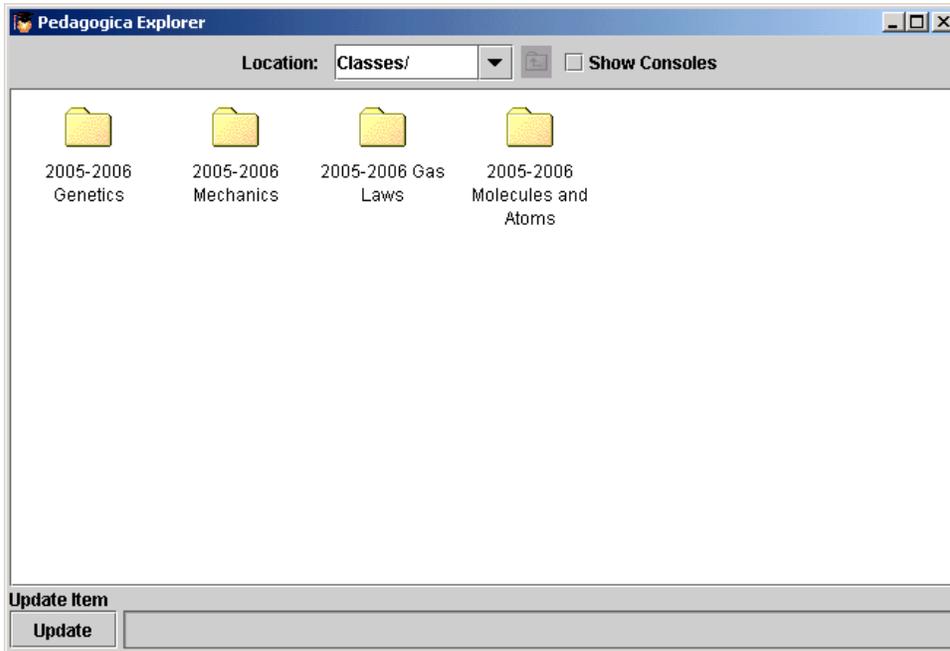
- The number of particles hitting the walls of the container and the pressure of the gas
- The temperature of the gas and the pressure of the gas
- The volume of the container and the pressure of the gas

You have also seen how changing more than one property, such as the number of particles and the volume of the container, affects the pressure of the gas in a combined way. The combined effect of the two changes may either reinforce each other, or cancel each other out.

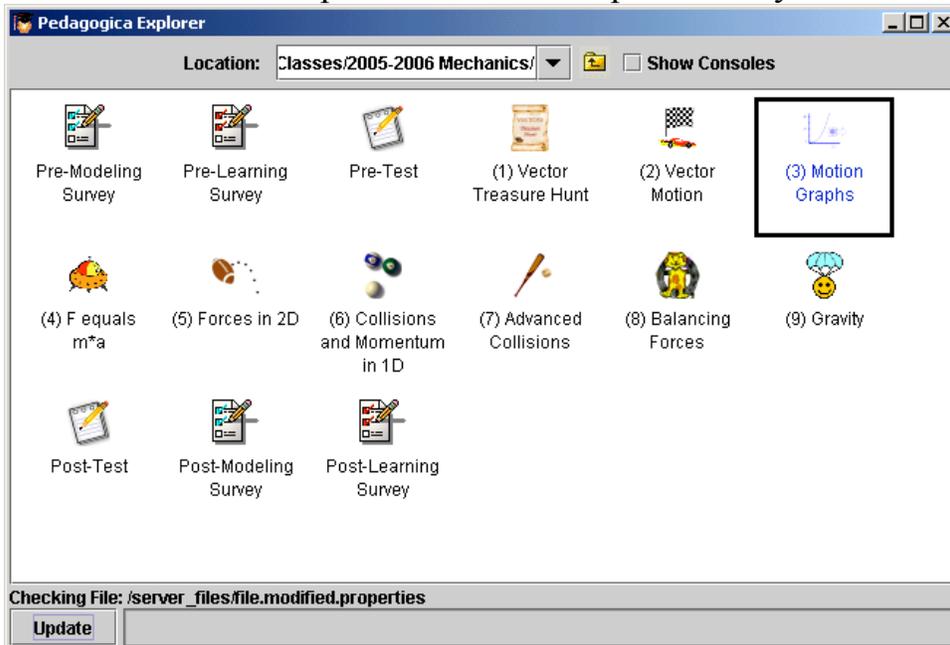
In this activity, you will explore how pressure, the number of particles, temperature, and volume are interrelated for **Ideal Gases**. You will also explore a new model that simulates the atmosphere and will re-examine the assumptions we have used in the models.

Extension model: The inner walls of this container are very fragile. These walls break after they have been hit by particles many times. [Use the slow motion slider if you wish]

4. Close the Ideal Gas Law activity, and go back the main menu and open the Mechanics Folder.



5. Double click and open the Motion Graphs Activity



6. When the Table of Contents appears, click and open the Position vs. Time Graphs section

Motion Graphs: Introduction

Welcome to the Motion Graphs activity.

Have you ever wondered how graphs can be used to describe motion?

In this activity, you will encounter graphs that plot the distance, velocity and acceleration of various objects in motion.

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7. Go through the activity as a student would.

8. Press F12 to bring up the screen node on the top of the screen.

Motion Graphs: Position vs. Time Graphs

1 square = 1 meter

4
Seconds

Pause Reset

This introductory activity will show you the relationship between the motion of a ball and the Position vs. Time graph. It will help you to determine the velocity of a ball moving uniformly and at a constant velocity.

Run the model. Observe how the graph plots the motion of the ball.

Position (m)

Time (s)

Hints

9. Run this node and enter “12” for Question 1 and “9” for Question 2 and “Check It!”

10. Next, close the Motion Graphs activity by clicking the X box at the top right

Motion Graphs: Position vs. Time Graphs

1 square = 1 meter

4 Seconds

Pause Reset

1. Run the the model, how far did the ball travel in 4 seconds?
12 m ✓ Check it!

2. Looking at the graph, how far did the ball travel in 3 seconds?
9 m ✓ Check it!

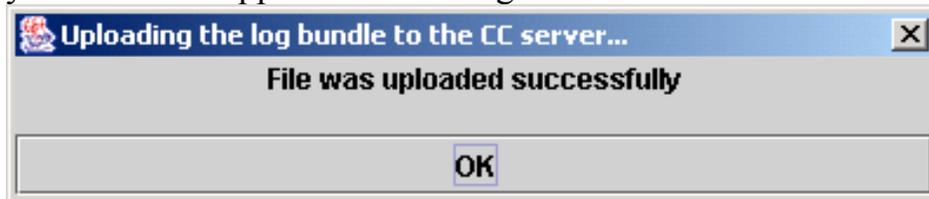
Correct! Go on.

Position (m)

Time (s)

Hints

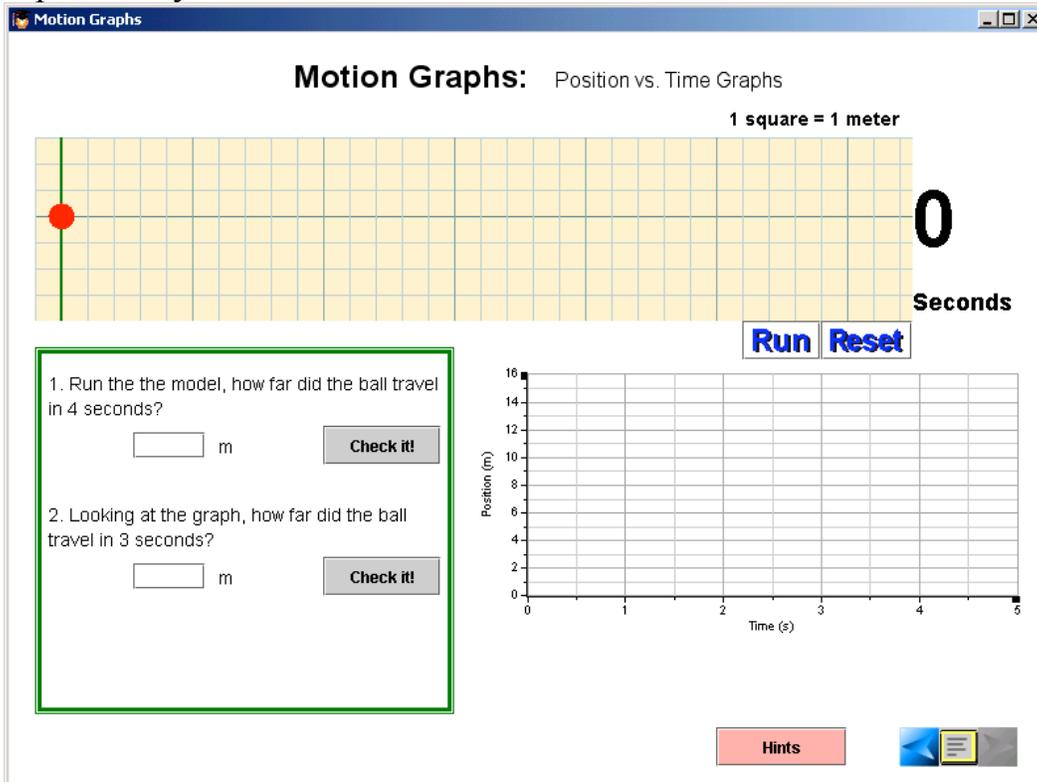
11. Make sure that Pedagogica loads the log files to the server. WAIT until you see “OK” appear in the dialogue box



12. Re-open Motion Graphs. When you open it, you should get a pop up window like the one below:



13. Click the Yes box and it should take you back to the window that you were previously on.



Attention: Pedagogica will only save the last window that you exit through. If you exit through the Table of Contents, it will load back up at that point not within the last section that the student completed.