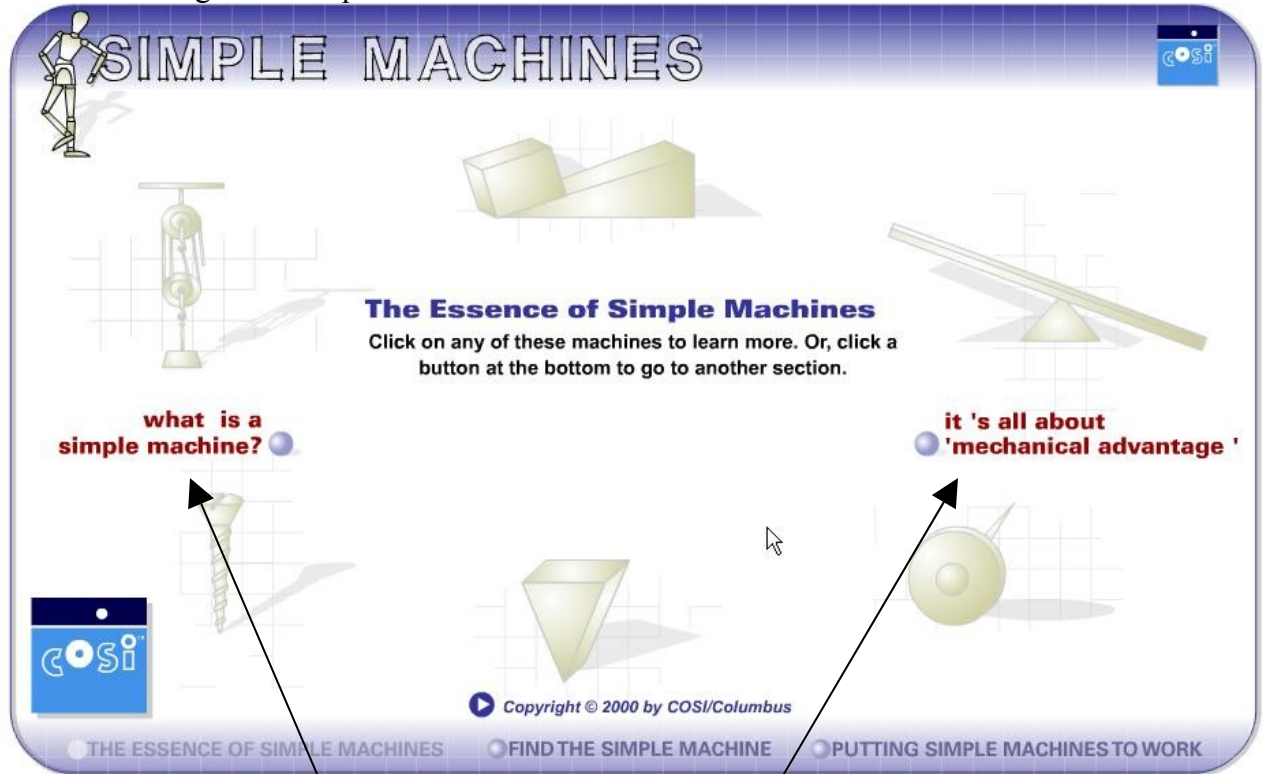


It's time to learn about simple machines!!! Click on the link to start.

[Click here](#) to go to a Simple Machine site. You should see this screen:



Click on “What is a Simple Machine” and read the information as it is displayed. You will need this info later to answer the questions.

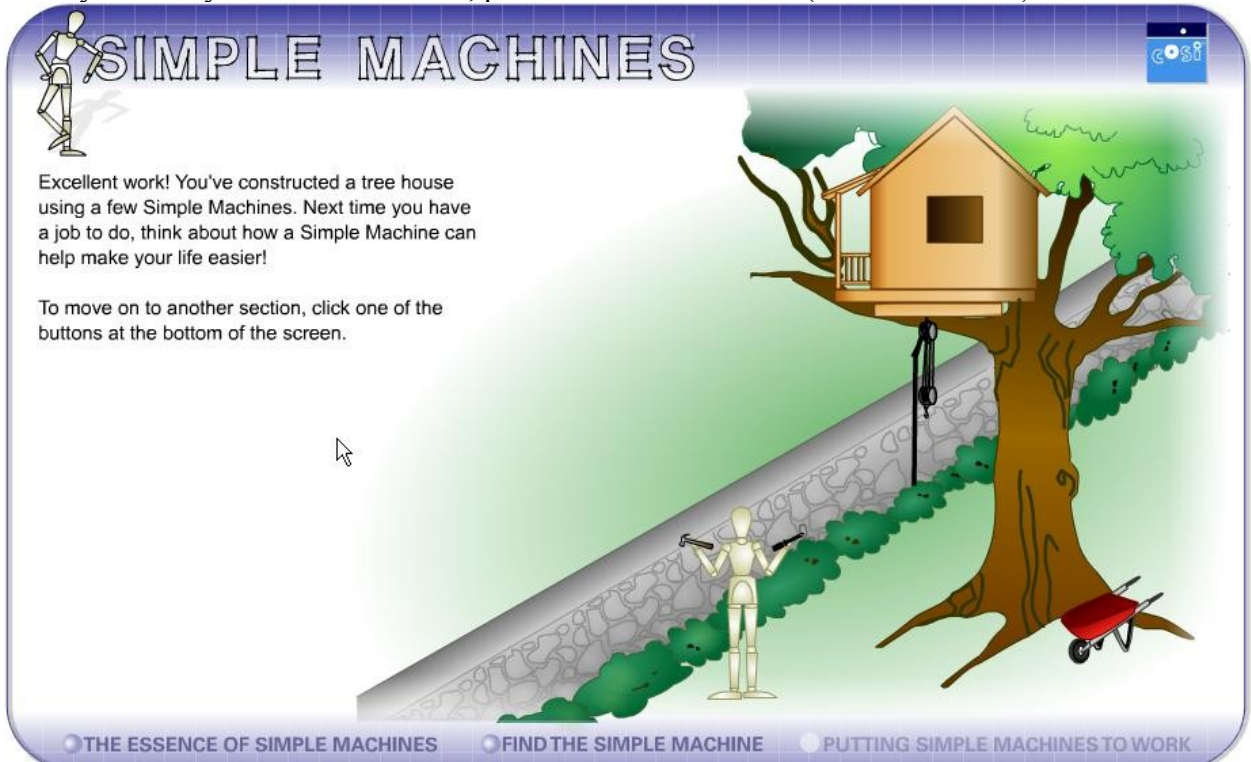
Next, read the section, “It’s all about Mechanical Advantage (on the right).”

Finally, click on each simple machine (inclined plane, lever, pulley, screw, wedge and wheel and axle. Answer any questions that might be displayed.

When you are done with that, click on the “Find the Simple Machine” link at the bottom middle of the page. Find all of the simple machines of the lawn mower. Make sure to print out the final page that says you are done.

The final section is “Putting Simple machines to Work” link at the bottom right of the screen.

Once you have your tree house built, print out the final screen (it looks like this):



Make sure to put your name on both sheets of paper. Now use what you have learned from this website to answer the following questions (you can review the web site if you are having problems remembering).

1. What class of lever is the fulcrum between the resistant and effort arms? \_\_\_\_\_
2. What class of lever is the resistance in the middle? \_\_\_\_\_
3. Which of the following is an example of a Third class lever; a bottle opener, a teeter-totter, a shovel or a crow bar?
4. What is the mechanical advantage of an inclined plane that is 30 feet long and 3 feet high?
5. What is the mechanical advantage of a wheel and axle if the wheel is 8 times larger than the axle?
6. Which simple machine is the least efficient?
7. True or False: A screw with 8 threads per inch has more mechanical advantage than a screw with 12 threads per inch.
8. A pulley system is sometimes called this: \_\_\_\_\_ -

9. If a pulley system has 8 ropes, how much weight could be lifted with 20 lbs. of effort?
  10. Which of these is not a simple machine family? Lever, wedge, or inclined plane
  11. What is the efficiency of a machine if 100J are put in and 95 J are output?
  12. What class of lever is a wheelbarrow?
- 

**Section B**

Next, obtain a simple machine CD – place it in the CD player and follow along with the presentation.

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13. What simple machine are axes utilizing? \_\_\_\_\_
  14. What simple machines does the bicycle use? \_\_\_\_\_
  15. The staircase uses what simple machine? \_\_\_\_\_
  16. What two simple machines are used in the fishing pole? \_\_\_\_\_
  17. What simple machine is used in this flag pole? \_\_\_\_\_
  18. What simple machine is the bird holding? \_\_\_\_\_
  19. The wheelbarrow used what two simple machines? \_\_\_\_\_
- 

**Section C**

[Click here](#) to learn about Potential Energy and Kinetic Energy. Read the first section. When you get to the pole vaulter, click play until you can ask the following questions.

20. When is the pole vaulter's KE the highest? \_\_\_\_\_
  21. When is the pole vaulter's PE the highest? \_\_\_\_\_
-



**Section D**

[Click on this link](#) to begin. Please note that the period of a pendulum is the time it takes to swing back and forth once. For more accurate results, you may want to time 10 swings and then divide by 10 to get an average period.

22. Using the stopwatch, measure the period of a pendulum that is 1.000m long on the Earth.  
\_\_\_\_\_. (2 sec)
23. Increase the length to 4.060 m. What is the period now? (4 sec). \_\_\_\_\_
24. Increase the length to 9.910m. What is the period now? (6.4 s) \_\_\_\_\_

**To record your answers, [click here](#).**