

## The 4 Functions of Hardware Game

### Challenge:

Create a matching game that requires the player to click and drag computer components into the square the correctly represents the function of that particular computer component.

### Things You'll Need to Know:

- How to draw
- How to import graphics
- How to handle collision
- eToys Scripting
- How to prevent graphics from flipping

### Things to Think About:

- How to determine when a component is in the correct "box"?
- How to increment the score?
- How to handle it when the user drags a component into the incorrect function box?
- How to make it interesting so that the components don't all move in the same direction or at the same rate?
- Is there a better way to approach the moving components – playfield vs world. (Problem in letting the components "wander" the world is that they end up moving over the correct square for their type and automatically stay and cause a score to occur.)

### Extensions:

- Add a timer so that the player has a limited time OR so that players can challenge each other to see who gets done fastest.

### Alternatives:

- Use the same concept (or PLEASE be creative and come up with different ideas for interface options) and build other matching games for various aspects of the A+ Computer Repair and Maintenance curriculum or for programming. (Ideas: Hardware vs software vs firmware, Northbridge bus vs Southbridge bus components, variable types in programming (include constants, arrays etc), good and bad practice in coding).