Activity description: CODESPELLS: Java programming disguised as magic spells.

Age level: 10+

Comments: this will need a lot of hands-on guidance from those familiar with programming. In order to modify the spells students will need to look at other spells and understand the purposes of different parts of the spells. Most of the actual programming is then cutting and pasting the relevant parts.

OVERVIEW:

This game, called **CODESPELLS**, asks you to imagine that you are a young heroine. In the nearby village there are a several gnome-like creatures. The heroine must learn the ways of magic in order to help the villagers with their tasks. The gnomes know some magic, so they can help her out a little, but they don't have the power. The heroine, on the other hand, has the power, but not the knowledge. Thus they must work together to master the spells needed to complete the quests.

The Quests:

1. **Learning to read your spell book**. There are seven spells that the young wizard can learn. If she can successfully cast all seven spells, she will earn all seven badges and will master Reading Her Book. You can read about the spells here: https://sites.google.com/a/eng.ucsd.edu/codespells/home/level-1-spells

2. **Helping Others**. There are 6 tasks that the heroine must complete in order to master this quest:
   a. **picking stuff up**: help the gnome pick up his crate of presents.

   b. **cross the river**: if you touch the water or jump over the river the RIVER MONSTER WILL ATTACK! So maybe magic will help her get across?

   c. **new heights**: once over the river her gnome friend with the presents tells her about a gnome in trouble on the roof of a cottage. How will she get up to the roof?

   d. **out of reach**: the gnome on the roof apparently tried to use a spell to make bread, but something went wrong. The heroine must collect the bread by flying around.

   e. **firefighter**: the heroine is asked to help put out a large bonfire, and then…

   f. **light fire**: the heroine must learn how to start fires.

GETTING STARTED:

See the tips below for installing this on a windows machine. If you have a mac then you to go to https://sites.google.com/a/eng.ucsd.edu/codespells/home and click the "Download it!" link to download and install the game.   If you are using the LUMACS laptops this should already have been done for you.   *Please log in as LUMACS Admin to run this software*.

Start the game and you should see a window like this (if it asks you for setup pick 800x600 in the first dropdown and then simple in the second dropdown):

➔   try using the arrow keys to walk forwards, backwards, and turn to the left or right

➔   move towards one of the gnomes with the flashing triangles over their heads. Click on the gnome to hear what it has to say.   I would recommend that you start with the green triangle gnome first.

HINTS:

✘   other keys you can use for looking around are R to look up, F to look down, space bar to jump

✘   to cast a spell drag the spell from the sidebar over the object you want to cast it on (the object will turn pink)

✘   you have to copy a spell before you can change it to do what you want. BUT when you change it the spell has to be just right, otherwise it might do something weird. Don't be afraid to ask us for help!

✘   if your spell doesn't seem to work you can stop it by clicking on the box with its name that appears in the top left of your screen

✘   sometimes you need to click on the object that you have levitated in order to unlock the badge

notes for installing on Windows machines (log in as LUMACS Admin for these steps):
-   download and extract the codespells software to the Shared Documents folder. It would be handy to create a shortcut to the CodeSpells_Windows_Version, and put the shortcut on the desktop

-   this software needs Java JDK. It might already be installed, but if not you can download it from here: www.oracle.com/technetwork/java/javase/downloads/index.html
    o   download the file called jdk-7u45-windows-i586.exe then double-click on it to install it
    o   modify the path: go to My Computer, then View System Information, click the Advanced tab, and click the Environment Variables button. Then click on the Path Variable, and click Edit.
    o   put this at the end of the stuff already there   **;c:\Program Files\Java\jdk1.7.0_45\bin**

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