



MSOSW Curriculum

Lesson Four: Introducing Whyville

Welcome to Vampire Manor and WhyPower

Overview: In this lesson, the student will identify standby power usage through exploration of a virtual environment.

Objectives:

The student will:

- Identify devices found in a 3D environment that use standby power.
- Explore careers related to energy.
- Explore additional STEM careers.

Standards Addressed:

- ESS3.D Global Climate Change
- Technology Apps: 2(A) participate in personal learning networks to collaborate with peers, experts, or others using digital tools such as blogs, wikis, audio/video communication, or other emerging technologies

Suggested Grade Levels: Middle School (6th-8th)

Timeline: 2 class periods

Materials:

Day 1: Access to teacher *Whyville* account
Active student email accounts
Access to computers/Internet if possible

Day 2: Access to 1 to 1 computers/Internet

Procedure Day 1:

- Log into teacher *Whyville* account to introduce students to the environment. Make sure you are familiar with *Whyville* prior to introducing it to the students.
- Tell students they will be getting a *Whyville* account that is linked to the classroom and the project. Tell them they will be able to create their own personal avatar that will represent them in *Whyville*.
- Show students how to navigate through *Whyville* using the bus menu. Go to *WhyPower*. You can point out that *Vampire Manor* is in the background and can be accessed from either the bus menu or from *WhyPower*. Explain that *WhyPower* is the power plant that runs all of

Whyville. There are multiple types of power sources to explore as well as purchase to place in *Whyville* to earn clams.

- Explain the *Whyville* economy –earning points, clams, pearl, badges and jobs. There are also contests in *Whyville* each week.
- Now go to *Vampire Manor* to explore activities related to the Going Green! Curriculum.
- Click on Count Ampula for a brief overview. Click on the tombstone, *Plugged and Forgotten*, for more information on vampire power. Click on the book near the sidewalk to get more information about how to measure standby power in *Vampire Manor*.
- Go into *Vampire Manor*. Explain that they may see other avatars there as well – anyone in *Whyville* can go into any room.
- Hover over a plugged in appliance to see how to measure the power usage in watts, kwh, dollars and CO₂. Look for the helpful hints to determine whether the item should be unplugged.
- Show students how to access their Vampire Power Journal. Students can see the results of their exploration.
- Have students access their “Real World Measurements” tab.
- Explain to students how they can search and contribute to the database of information. (Explain what a database is if students are not familiar with the term.)
- Show students there are multiple rooms in *Vampire Manor* to be explored. When the student has unplugged something to save energy, it is possible that the vampire will fly through and plug it back in. The students can earn points for unplugging again. Having the vampire plug it back in allows other participants in *Whyville* to have a chance to unplug appliances that are using standby power.
- If you have 1 to 1 access to computers, have the students sign up under your account for a *Whyville* student account. If there is not access, have the students sign up for an account for homework. Make sure you give the students the proper link that will put them in your teacher backpack. For homework the students can also create their avatar and explore *Whyville*.

Procedure Day 2:

- Students should come to class with their *Whyville* accounts activated.
- Tell students that the unit will also allow them to explore STEM-related careers and specifically energy-related ones in *WhyPower*.
- Have students log into their *Whyville* accounts. Guide them to *WhyPower*. Click on the badges hanging on the wall. It will lead to a list of energy-related careers – both technical and professional.
- Have students explore the careers to determine what is needed to earn the career they choose. Once they earn the job, they will earn clams in *Whyville*.

- Continue the career exploration by going into the *ACT Career Club*. Here students can apply for jobs or participate in a Career Quest. As in the real world, only a specific number of jobs are available in each career cluster. The number of available jobs will vary each day.
- Set an expected date, adjusting dates for students' learning level and needs, for students to earn their Engineer Level Vampire Power Badge and complete a career assignment. Consider having a career fair day at the end of the unit.
- Homework: Work on career challenges to be completed by dates determined by teacher.

Follow up:

- Looking at the dead line you have given students, being sure to provide some scheduled time for students to access *Whyville*. Be mindful of students who may not have computer access at home and allow them "school lab time" when possible.

Extension Options for this Lesson:

- To have students explore more about careers in earth and physical sciences, go to <http://www.sciencebuddies.org/science-engineering-careers>. Browse through detailed information on over 100 careers to discover what scientists really do and what it takes to prepare for these careers. Each career profile provides basic career information such as salary, job outlook, degree requirements, etc. The site also includes videos featuring interviews with real scientists or on the job profiles.
 - The following questions can be answered about specific careers by using the Science Buddies website:
 - What do they do?
 - What type of education is needed?
What is projected job growth for next ten years?
 - What is the median salary?
 - What do you need to study in high school to pursue this career?
 - Ask an Expert forum to gather more information
- To have students explore more on their own, have them take the STEM Type Quiz to see what may an area of interest they many not have considered. Go to <http://stemjobs.com> and click on STEM Type Quiz.