

# WALL-E Cleans up

Anna Beth Smith and Madison Yancey, University of Georgia



## Introduction

- The goal of this project is to spark the interest of students in technology.
- To do this, we wanted to connect the robot building process with Pixar's WALL-E in order to get the students excited to learn about robotics.
- As our society moves more and more into the digital age, more jobs will be opened to those who can use advanced technology well.
- This project should be used in higher grade levels 4<sup>th</sup> grade to introduce students to engineering technology and programming.

## Materials

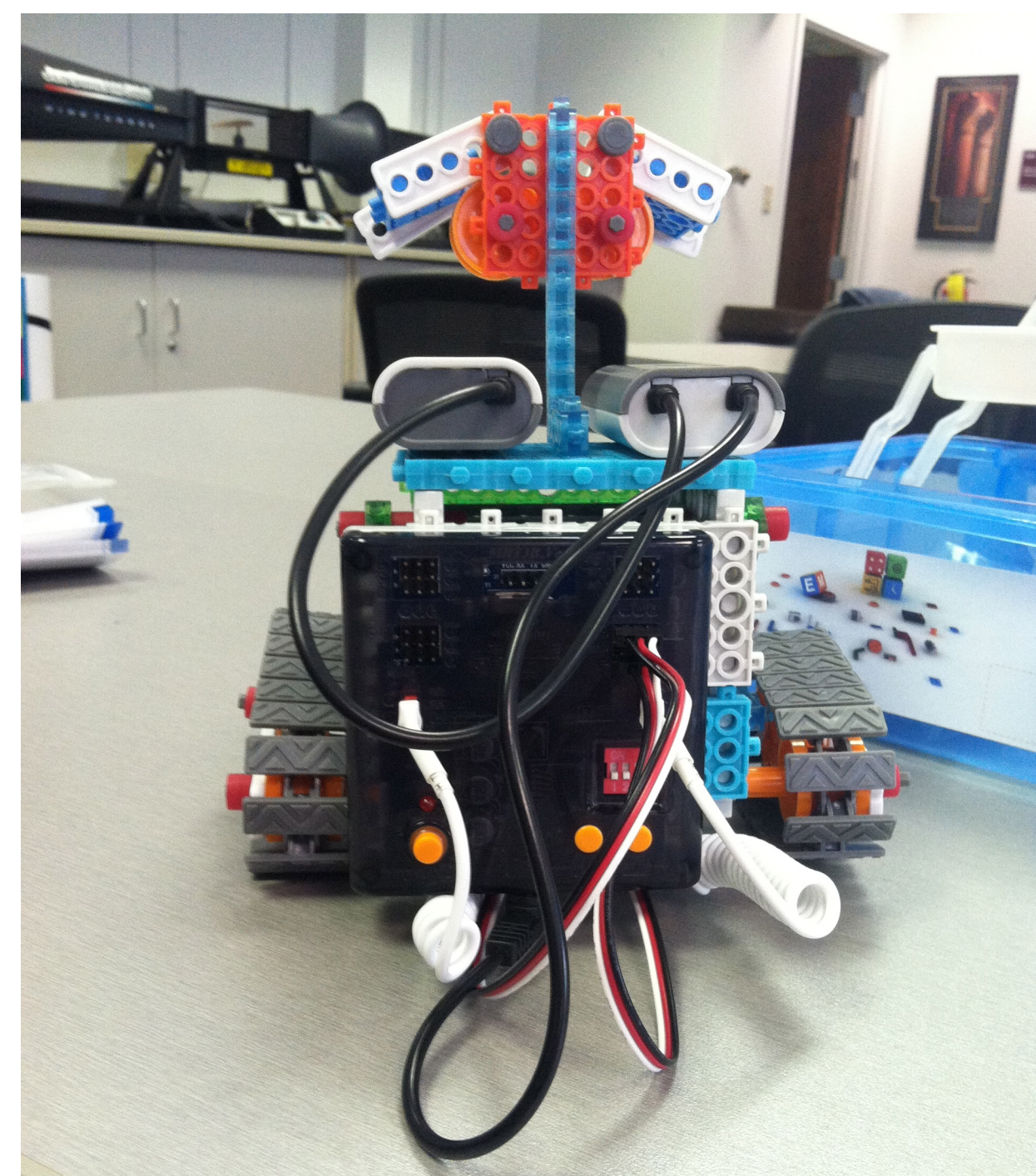
- My Robot Time 3 Workbook 2 Beginner Level
- My Robot Time Stem Class Kit
- PC Computer



## Activity

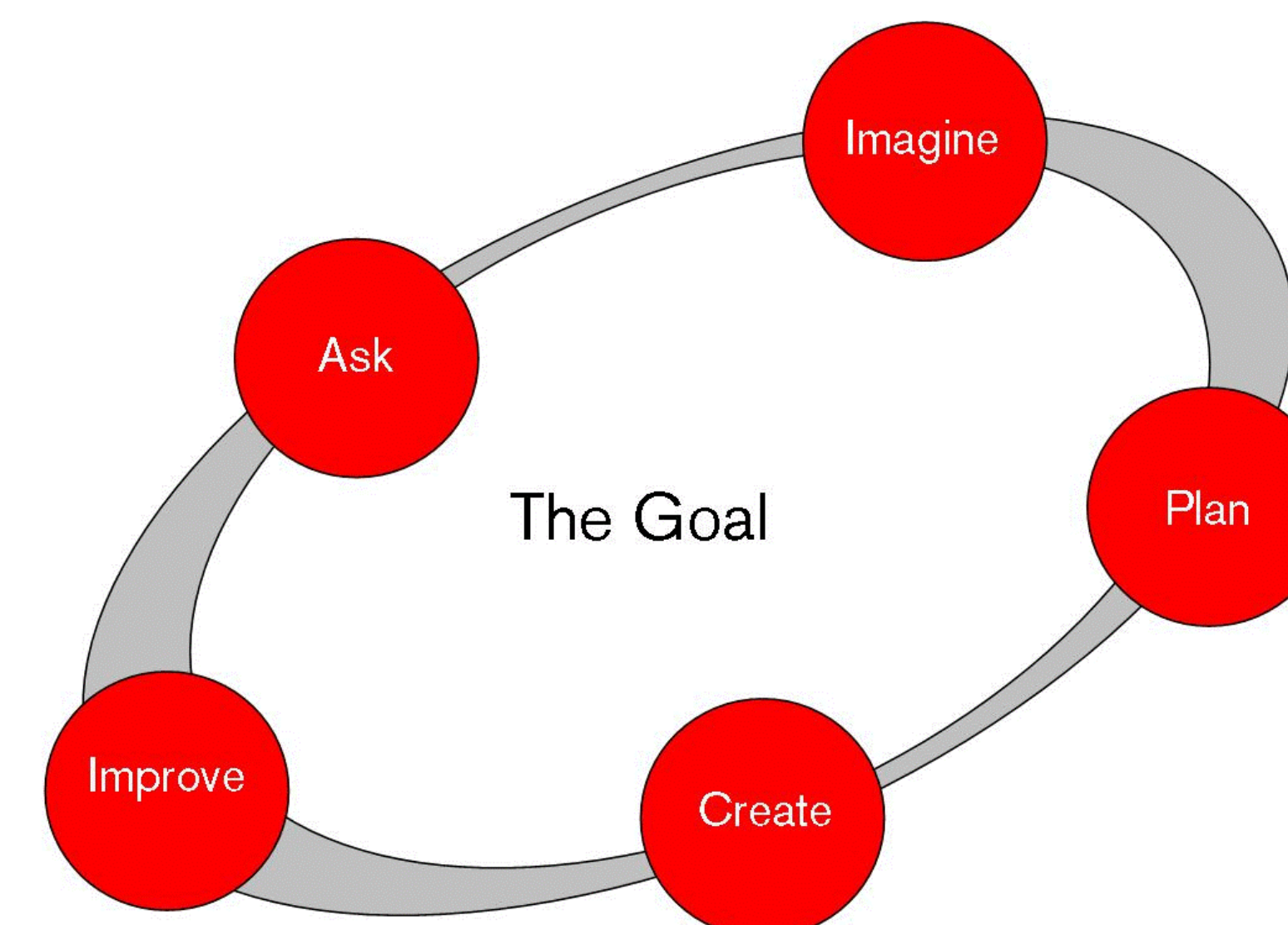
WALL-E needs to transport the parts he found back to his home! Can you help him?

- Build the robot from the directions on page 47 in the My Robotics Time Workbook and the materials found in the Kit.
- Download the robot program on to the computer.
- Program the robot by connecting it to the computer with a USB drive cable
  - He should be able to detect clear and safe paths.
- Test robot on a table.
- Final Test: WALL-E should be able to navigate through an obstacle course to get "home."
- Students will then record their times and present their final data and experience to class.
- ❖ Remember that pay close attention to which socket you plug the sensors and motors into.



## Objectives

This activity may look like a fun toy instead of an education tool but students will learn a lot using this program!



From this students learn:

- How to effectively download software.
- Definition of robots.
- How to program a robot.
- How robots help us everyday.
- Problem solving skills.
- Cooperation (if project is done in groups or pairs).
- Following instructions.
- How to demonstrate and present information to the class.

STEM (Science, Technology, Engineering, Math) lessons like this one, are great ways to get students interested in engineering and how to create a plan, test it and then improve upon it.



## Conclusions

Building the robot was very easy and a lot of fun! At first we had some issues with the programming but we eventually were able to make maneuver through obstacles and sense when it can too close to a drop in elevation.

