

Training Non-Math Majors in the TI Innovator System to Use With Deaf/Hard-of-Hearing Students

Author: Sarah Jennings, Department of Mathematics and Computer Science

Faculty Sponsor: Dr. Chad Smith, Department of Communication Sciences and Disorders

Abstract

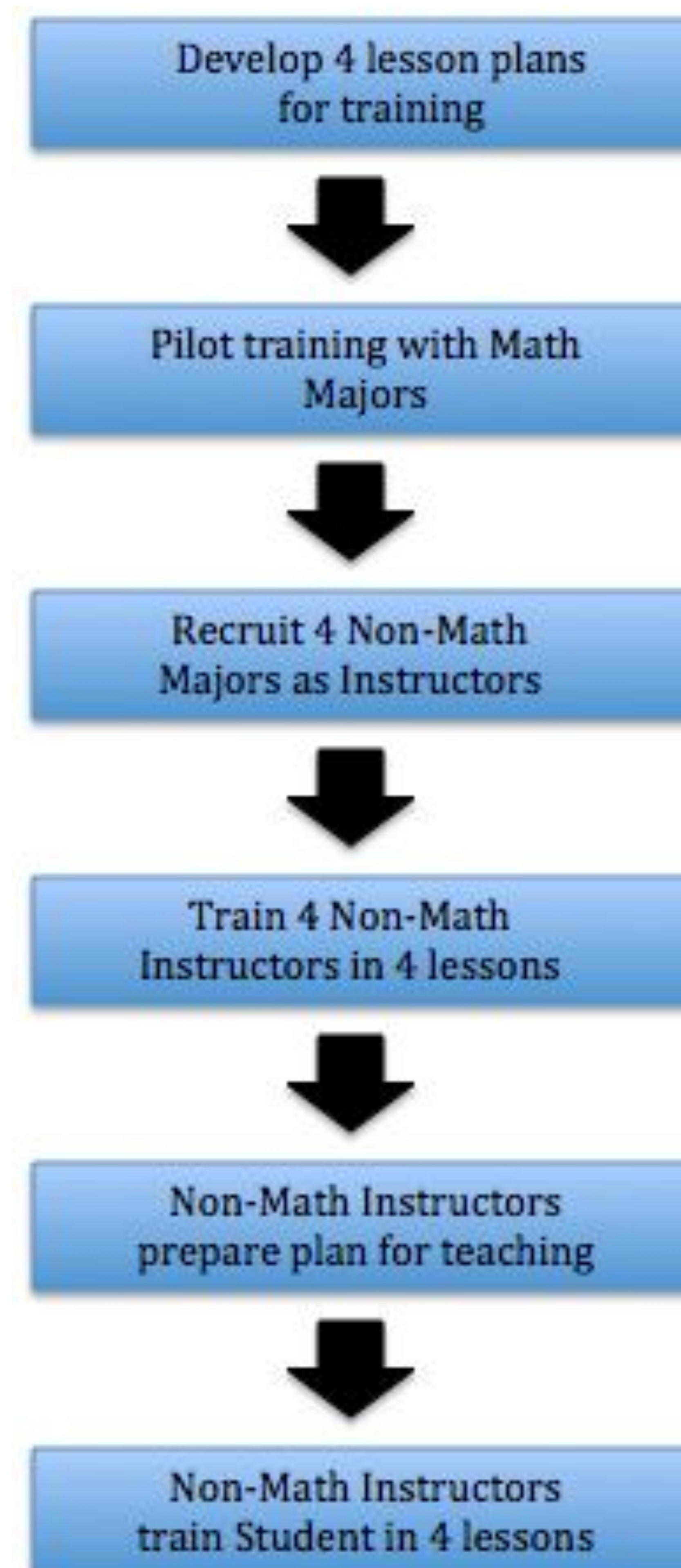
The purpose of this study is to discover if educators that are not mathematically inclined can successfully use mathematic technology in the classroom. To test this speculation, TWU students who expressed no interest in mathematics were trained in the TI Innovator System. The TI Innovator System is a modern graphing calculator that has the capabilities to code and perform specific functions. Users are able to make the rover light up, produce sounds, move, draw shapes, detect motion, etc. Questions addressed include, "Did the non-math educator successfully teach a student to replicate a function on the TI Innovator System?," "Were the students successful in their use of the TI Innovator System?," and "Were the math majors more successful in their use of the TI Innovator System than the non-math majors?"

What is the TI Innovator System?

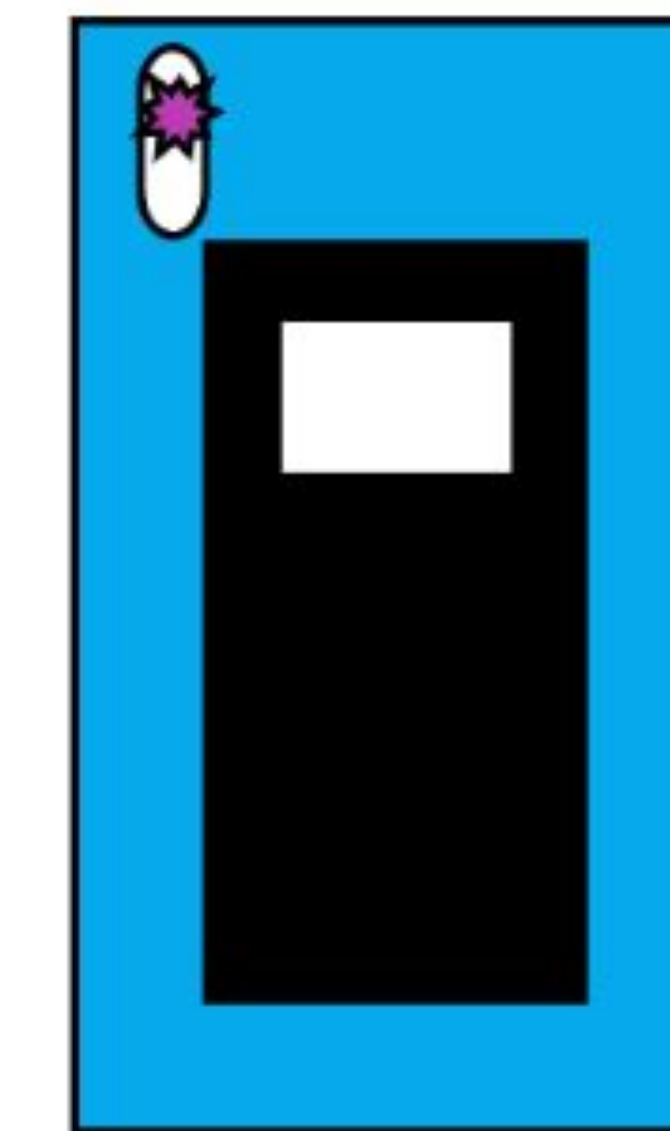


<https://education.ti.com/en-us/products/micro-controllers/innovator>

Methodology

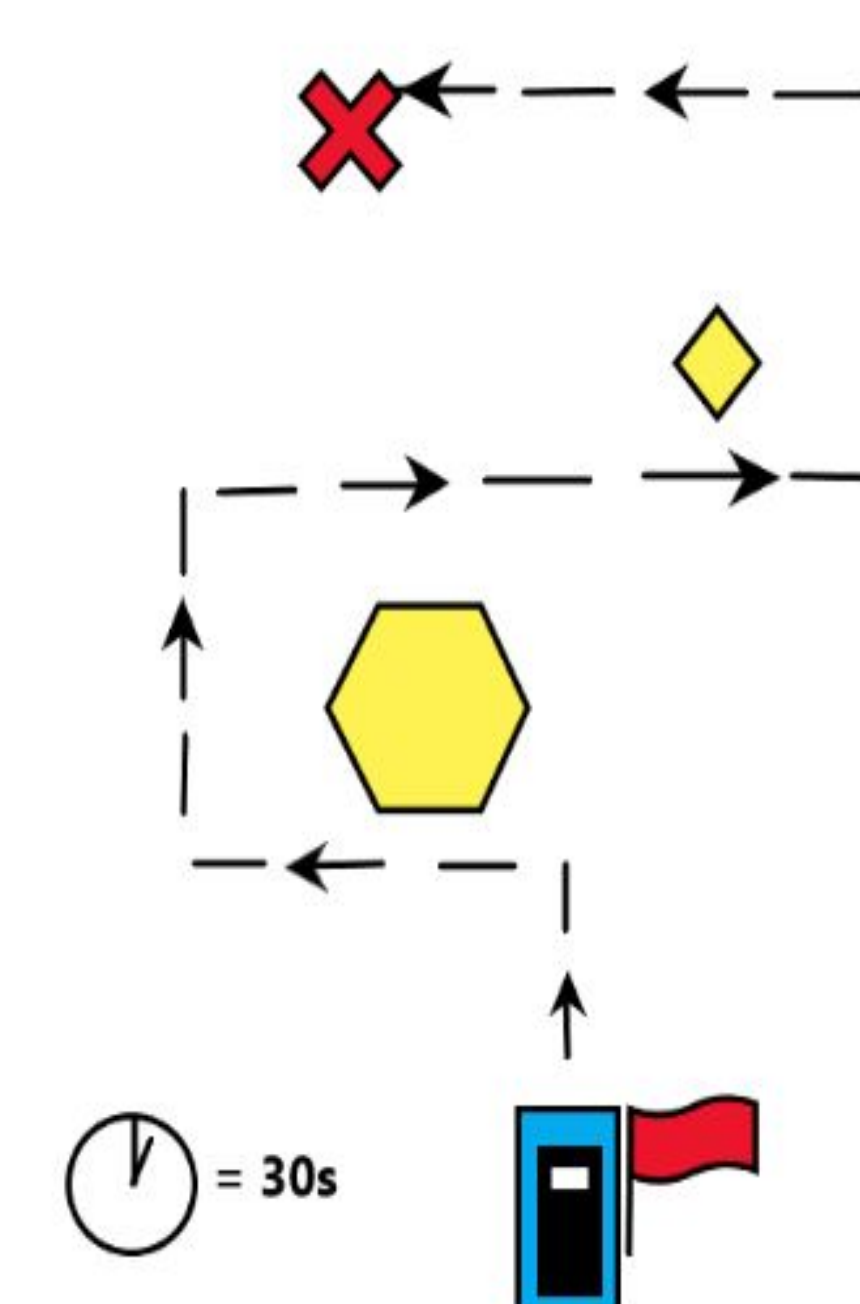
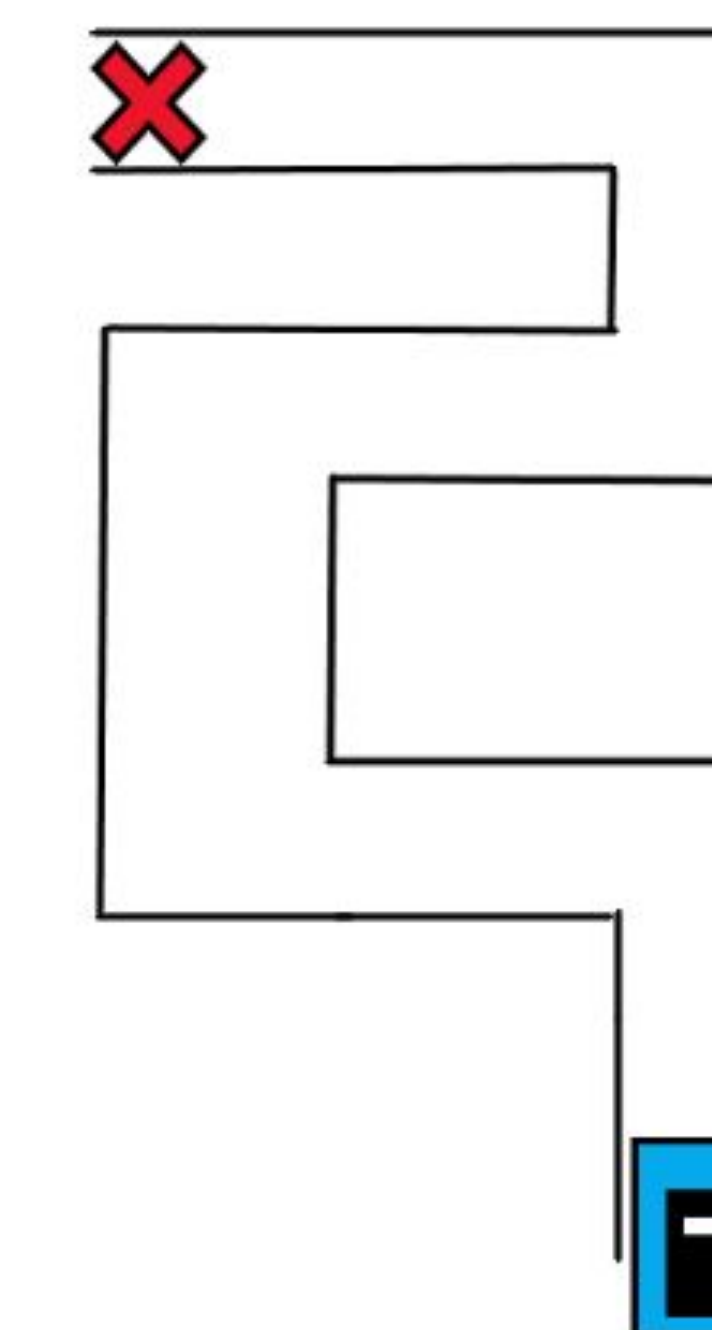


Lessons



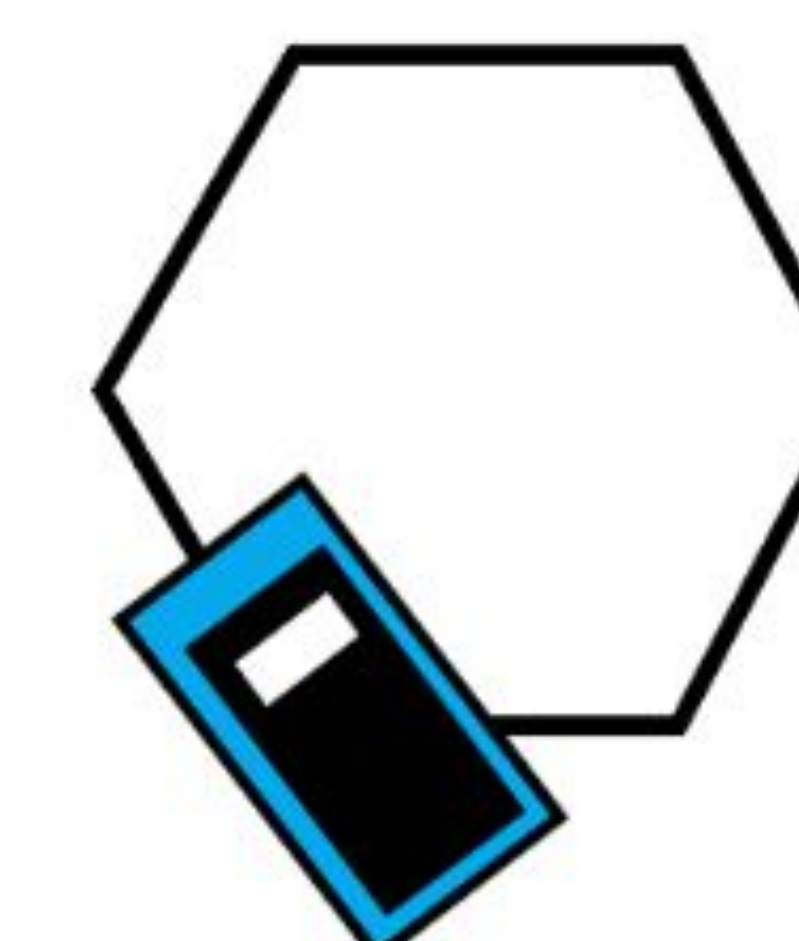
Lesson 1:
Code the Hub
to create color
from the
Rover's LED
light.

Lesson 2:
Code the
Rover to
drive through
a maze and
reach the
target.

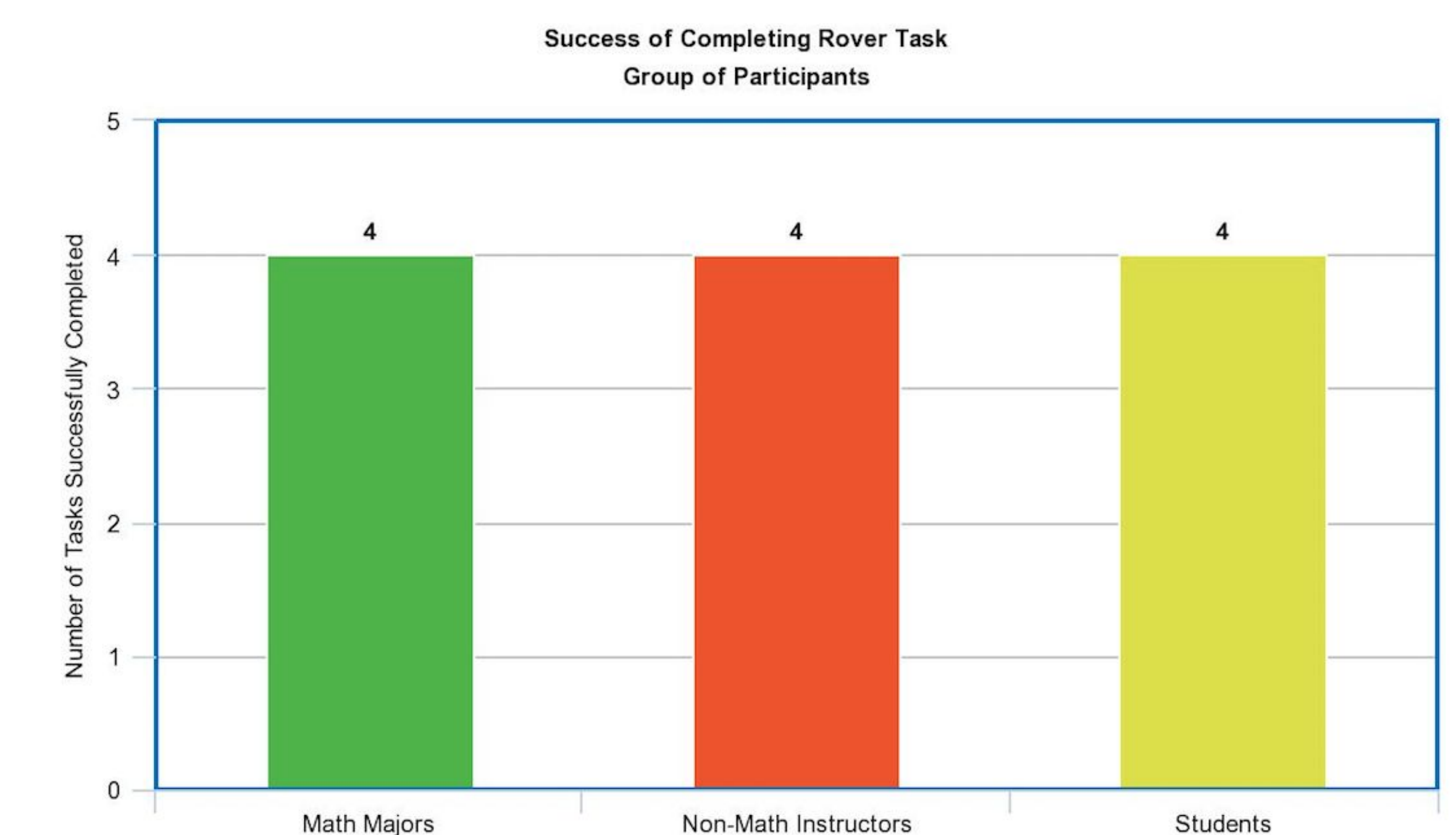


Lesson 3:
Code the
Rover to
maneuver
around
obstacles
and reach
the target in
30 seconds.

Lesson 4:
Code the
Rover to
draw a
shape, then
shrink/
expand the
shape.



Results



- Non-Math majors performed equally as successful as Math majors.
- Non-Math majors were able to explain specific functions in a meaningful way with depth.
- Each Instructor was able to replicate a task in the lesson and extend their understanding.

