



LEARNING MODULES

GK-12 DISSECT at New Mexico State University

Title: Rocket Branching

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Discipline or Area: Layers of the Sun / Current Events

Teacher: Kathleen Guitar

School: Vista Middle School

Subject of class: Science

Grade: 6th

COVERAGE OF COMPUTATIONAL TOPICS

The concepts of branching and abstraction were covered.

OBJECTIVES

Students will learn how to abstract information from an article to choose a branching path, thus learning how to use branching statements.

EQUIPMENT AND MATERIALS

Article

Handout

Key Card

Rockets (Or anything taped to the floor to signify a starting point)

BACKGROUND AND REFERENCES

The purpose of this module is to get students comfortable with abstraction and branching.

PROCEDURE

Students read an article about a rocket launch at WSMR. Students all started by standing on a paper rocket we taped to the floor in the hallway. Next, we had them follow the branching statements we wrote about the article (see below). They had to abstract information from the article to decide if the statement was true or false, then move a certain amount of tiles N, E, S, or W. Once they completed the statements, we gave them a key card with two more movements. If they chose the right paths for all four steps, they ended up on the rocket they started on after following the key card. After they were done with the branching exercise they researched the different layers of the sun.

This module can be adapted to any content, as long as there is an article or something to read with information to be abstracted.

What were the “learning goals?”

The learning goals are to learn how to use abstraction to solve a problem. Another learning goal was to have students learn how to execute if/then branching statements.

How did you introduce CT?

Each CT term was introduced and discussed before the exercise was done.

How could you assess the understanding of CT in this module?

We can assess their learning of the terms by looking at what tile square they landed on.

NOTES AND OBSERVATIONS

What were challenges you encountered in the overall development of the module?

They had a lot of difficulty with directions and abstracting information. A lot of them had to do it multiple times before they got it right.

What was successful?

They enjoyed being up, and out of the classroom. They also began to understand if statements.

How was the students' reception to the content of the module?

The students enjoyed physically exploring branching statements.