

Computational Thinking Using *Hour of Code* and *Scratch*

Solar System Project

I. First, please go to this link for the Hour of Code: <http://studio.code.org/hoc/1>

- a) Complete the following cases: #1, #2, #4, #6, #8.
- b) If you have additional time, challenge yourself by completing more!

II. Physical Movement to represent the solar system:

- a) Make a circle facing the Sun (the instructor represents the sun and you represent the earth).
- b) Rotate (counter clockwise or clockwise?) as the Earth (you are the earth) rotates/revolves around the sun!
- c) Please remember your steps (how many) from the sun, direction/degrees of your body movement when you rotate around the sun.

III. Scratch –

- a) Go to <http://scratch.mit.edu> and create your own account by clicking on “join Scratch” on the top right of the screen. Choose a username and password. Answer the questions on the screen (you will need to enter your email address and go to your email to confirm it).
- b) Go to this link <https://scratch.mit.edu/projects/101840846/> to begin your program. Click the “see inside” button to begin the code to start creating your solar system.
 1. The earth is 92.96 million miles away from the sun. To imitate this distance, create a variable for the number of miles (93) and when the program is started, add code to the Earth model (snippet) to go to position x, y on the Stage, where x=miles and y=0).
 2. The Earth revolves around the sun (counter clockwise or clockwise?). Add the necessary code to the earth model (snippet) to imitate this motion (Hint: we do not want this motion to stop!)
- c) Add two components to the Solar System project. For example: additional planets, different angles/direction, stars, etc. Use additional loops, variables, and more. Make it creative!
- d) When you are done remember to click SHARE which will allow you to take the URL from the top and share the link with others! Remember to go to the dropbox and insert this link and answer questions for your instructor.



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