Toi Hinton / Lincoln Lawrence

**Lesson plan (# )**

| **Adopted from:** **Authors: (Your sub group’s name here) Lincoln Lawrence, Toi Hinton** | **Grade: K** | **Lesson duration: 40 minutes** |
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| **Topic/Title of lesson: Algorithms** |

| [**STANDARD(s) ADDRESSED**](https://www.nj.gov/education/cccs/2020/2020%20NJSLS-CSDT.pdf)*(Include the performance expectation number and text of each standard.)* | **8.1.2.AP.1 - Model daily processes by creating and following algorithms to complete tasks.** |
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| **CS PRACTICE(s)** *that students will engage in throughout the lesson.* P [13-15](https://www.nj.gov/education/cccs/2020/2020%20NJSLS-CSDT.pdf) of NJSLS | **Identify complex, interdisciplinary, real-world problems that can be solved computationally.**  |
| **CS CORE IDEA(s) or** **SUB-CONCEPT(s)** *related to the performance expectation(s).* P [20-34,](https://www.nj.gov/education/cccs/2020/2020%20NJSLS-CSDT.pdf) includes core idea and performance expectations which are useful for designing general goals, specific objectives, and learning criteria down below | **Individuals develop and follow directions as part of daily life. A sequence of steps can be expressed as an algorithm that a computer can process.** |
| **CENTRAL FOCUS** *(The central focus is an overarching goal of the lesson or big idea for student learning.)* | **An algorithm is a set of directions designed to accomplish a specific task** |
| **EU/EQ** (*The enduring understanding(s) and/or essential question(s) that guide the lesson.)**Here are some useful examples from math:* [*https://jaymctighe.com/downloads/Essential-Questions-in-Mathematics.pdf*](https://jaymctighe.com/downloads/Essential-Questions-in-Mathematics.pdf) |  |
| **PRIOR KNOWLEDGE AND CONCEPTIONS** *(What prior knowledge, skills and/or academic language do these students need to have that will help them be successful with this lesson? Any misconceptions you may anticipate?)* | **Students will have to understand that there are some things that have to happen in a specific order in order to work or be done correctly. We can start the lesson by asking students questions about how to complete a recipe or complete a basic task like getting ready for school in the morning.**   |

**UDL/PLANNED SUPPORT**

*(Discuss the universally designed decisions guided by learner diversity and/or individualized adaptations for the variety of learners in your class/group who may require different strategies/support (e.g., children with IEPs or 504 plans, English language learners, children at different points in the developmental continuum, struggling readers, and/or gifted children).*

| **UDL:***How are you universally designing your lesson with all your learners in mind? What other characteristics of diverse learners should be considered?* | **Multiple means of** [**representation**](https://udlguidelines.cast.org/representation) | **Multiple means of** [**action and expression**](https://udlguidelines.cast.org/action-expression) | **Multiple Means of** [**engagement**](https://udlguidelines.cast.org/engagement/?utm_source=castsite&utm_medium=web&utm_campaign=none&utm_content=aboutudl) |
| --- | --- | --- | --- |
|  |  |  |
| **Additional ADAPTATIONS, MODIFICATIONS, and SUPPORTS for individual learners (IEPs, 504s, ELLs)** *If you were not able to meet your focus learners needs through UDL, what individual adaptations will you use to meet your focus learners needs (especially ELLS)* |  |

| **ACADEMIC VOCABULARY/****LANGUAGE (including different coding languages)/****SYNTAX (rules of how to combine symbols to make “correct” statements)**  | *Vocabulary:**Language:**Syntax:* | *Describe the additional supports for each language demand in this lesson. Address both the whole class and individual needs.* |
| --- | --- | --- |
| **LEARNING OBJECTIVES** | **LEARNING CRITERIA** *(How will you know that students have met and/or are moving toward meeting that LO?)* | **ASSESSMENT** *(What will be the pre assessment, formative, or summative assessment(s) in this lesson?)* |
| **Should include both core ideas and concepts, and practices**  | ***During whole group instruction, the teacher will model the expectations and select students will give directions on how to navigate the maze. The teacher will assist students with moving from the start to finish of the maze.***  | ***During the lesson, we will have the students demonstrate their learning by telling ways to get from one point to the next by using the commands, left, right, up, and down.***  |

**MATERIALS, RESOURCES, and INSTRUCTIONAL TECHNOLOGY**

| **What resources and technology do you need to teach the lesson:**  | **What materials, technology will students need? Whiteboard or Smartboard to draw the arrows or any paper with arrows in all four directions.** |
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| **Whiteboard or Smartboard to draw the arrows or any paper with arrows in all four directions.****Paper and pencils or a white board and dry erase markers** | **Should reflect the UDL planned supports identified above****Whiteboard or Smartboard to draw a basic table with blocks or spaces to be navigated by the students.****Markers to draw arrows on the table in all four directions to navigate the maze.** **Sample Table:**[**https://docs.google.com/document/d/1xYv5WbMVwWmBIFFNnMZ-R4oFDOejccW7JLV4868wDvw/edit?usp=sharing**](https://docs.google.com/document/d/1xYv5WbMVwWmBIFFNnMZ-R4oFDOejccW7JLV4868wDvw/edit?usp=sharing)**Sample Table as as maze:**[**https://docs.google.com/document/d/1WyKGIfbAtCWy1VNt0VvdQGmLzsOwgb7UMuvOwufm6Zo/edit?usp=sharing**](https://docs.google.com/document/d/1WyKGIfbAtCWy1VNt0VvdQGmLzsOwgb7UMuvOwufm6Zo/edit?usp=sharing) |

**INSTRUCTIONAL STRATEGIES AND LEARNING ACTIVITIES**

*(Describe explicitly what the teacher and the students will do to meet learning outcomes. Use bulleted or numbered list)*

|  | **What is the teacher doing?** | **What are students doing? (including adaptations)** |
| --- | --- | --- |
| **LAUNCH/****Beginning ( mins)***How will you engage students and capture their interest? 3-7 minutes* |  |  |
| **LEARNING ACTIVITIES/****Middle ( mins)***“I do” “We do” “You do” How will you explain/ demonstrate knowledge /skills required of each objective? How will you ensure that students have multiple opportunities to practice? How will you address the academic language demands?* | **Activating prior knowledge of students following specific directions or going through a process and completing a task by using that process.****Model the “game” by Explaining the rules of the “game” and Model it on the board.** | **Students will create directions (an algorithm) using arrows to move a character through a maze.** |
| **CLOSURE/****End ( mins)***How will students summarize and state the significance of what they learned? 3-7 minutes* |  |  |
| **Extension/Reinforcement/Homework:**  |
| **Family/Community Engagement—** |

**\* Please attach copies of assessments and/or handouts to be used**