

Preparing for and Teaching Kira's Middle School Course



Housekeeping Items

REC ●

Webinar is recorded



Slides available along with the recording



Enter your questions in the Q&A box

Watching On Demand, and have questions?



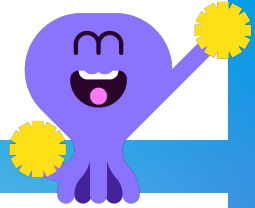
tn@kira-learning.com for platform/course

ashe@battelle.org for anything else

UPCOMING WEBINARS

Join us for our future webinars

www.kira-learning.com/events



December 12, 4 PM CT

Preparing for and teaching the Kira Learning
High School Course

Webinar Goals

- **What is the Middle School CS course?**
 - **Curriculum Guide / Learning Targets / TN Standards**
- **How does the course engage students?**
 - **Short videos**
 - **Interactive programs**
 - **Interesting examples**
- **Course demo**
 - **Introduction to Programming Using Platypus**
 - **Data Representation**
 - **The Internet and the Impact of Computing**



What is the Middle School CS course?

The Kira middle school course is a 3-Unit, 25-30 hour course (e.g., a six-week course with 50 minute periods)

Learning Targets:

By the end of this course, students will understand:

- Fundamentals of algorithmic and computational thinking
- Button-based coding in the Python Programming language
- Data representation, collection and analysis
- Networks and Internet Basics
- Ethical considerations of computing and responsible digital behavior



The course is delivered with multiple modes of instruction, and the units are modular, with minimal dependencies between them.

Every lesson and unit concludes with an assessment, and every unit also has a student project.

What is the Middle School CS course?

There is a comprehensive Curriculum Guide: <https://tinyurl.com/middle-school-curric>

Curriculum Guide	
Introduction to Computational Thinking and Programming	
<hr/>	
<u>Course Overview</u>	p.2
<u>Course Structure and Delivery</u>	p.3
<u>Course Content Outline</u>	
<u>Standards Coverage</u>	p.5
Content Overviews	p.8
<u>Unit Overviews</u>	p.8
<u>Project Overviews</u>	p.11
1	

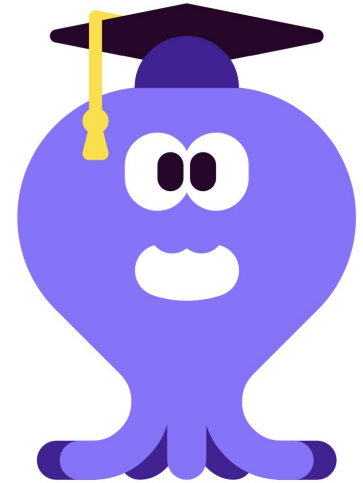


What Standards Does the Course Cover?

The middle school course covers all of the [Tennessee Middle School Computer Science Standards](#).

Example of TN Standards from the Curriculum Guide:

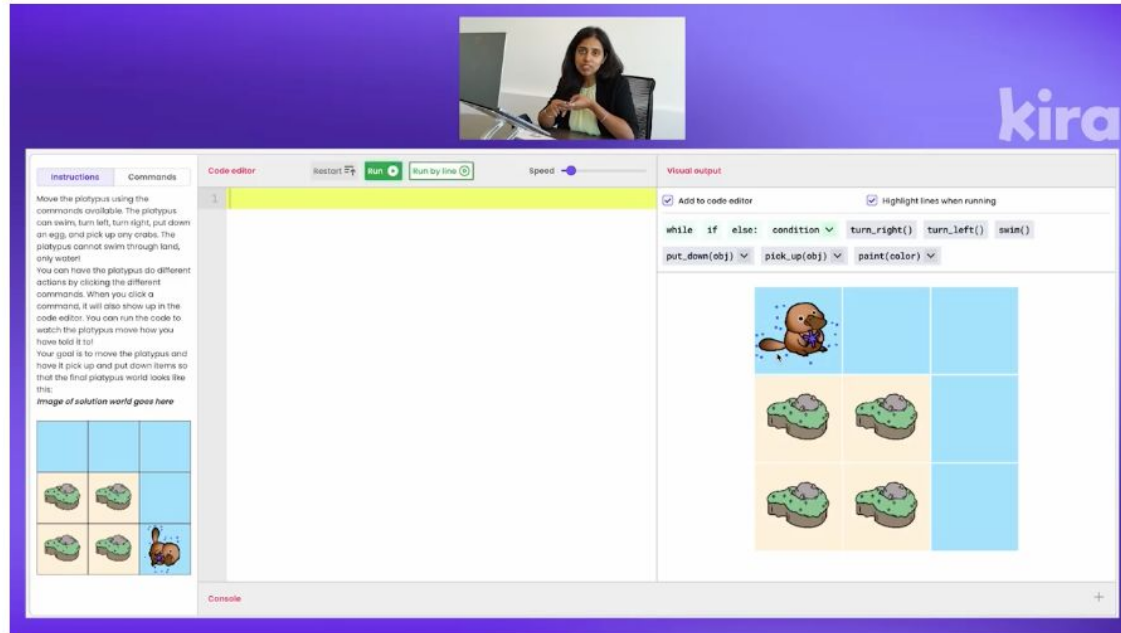
MS.PC: Programming Concepts	
Decompose problems and subproblems into parts to facilitate the design, implementation, and review of programs.	Unit 1
Create procedures with parameters that hide the complexity of a task and can be reused to solve similar tasks.	Unit 1
Seek and incorporate feedback from team members and users to refine a solution that meets user needs.	Mini Project 1
Provide proper attribution when incorporating existing code, media, and libraries into original programs.	Unit 1



How does the course engage students?

The middle school course provides interesting and engaging curriculum

Short videos with a focus on demonstration



The screenshot displays the Kira programming environment. At the top right, a video window shows a woman speaking, and the 'kira' logo is visible. The main interface is divided into several sections:

- Instructions:** Contains text explaining the platypus character and its actions (swim, turn, pick up, put down). It includes a goal: "Your goal is to move the platypus and have it pick up and put down items so that the final platypus world looks like this: *image of solution world goes here*". Below this is a 3x3 grid representing the solution world, with a platypus in the bottom-right cell and four cakes in the other cells.
- Code editor:** A central area for writing code, currently empty.
- Visual output:** Shows a 3x3 grid representing the current state of the world. The top-left cell contains a platypus, and the other cells are empty.
- Commands:** A list of available actions: `turn_right()`, `turn_left()`, `swim()`, `put_down(obj)`, `pick_up(obj)`, and `paint(color)`.
- Console:** A red-bordered area at the bottom for output and error messages.

How does the course engage students?

The middle school course provides interesting and engaging curriculum

Interactive, graphical programs with a unique programming interface



How does the course engage students?

The middle school course provides interesting and engaging curriculum

Interesting Examples

How does a message get from your computer to your friend's computer across the country?



- **Introduction to Programming Using Platypus (Unit 1)**
- **Data Representation (Unit 2)**
- **The Internet and the Impact of Computing (Unit 3)**

Final Thoughts

- The course has been designed to target middle school students
 - Middle schoolers get engaged by *doing*, which is what this course is all about
- *We want your feedback!* If you decide to teach the course, we welcome all feedback, and we promise to take all suggestions seriously

QUESTIONS?

Visit www.kira-learning.com or www.computersciencetn.org



**For questions about the Kira platform
or courses:**

tn@kira-learning.com

For all other questions:

ashe@battelle.org