Best Practices and Resources for Teaching Kira's MS Course

Feb. 1, 2024

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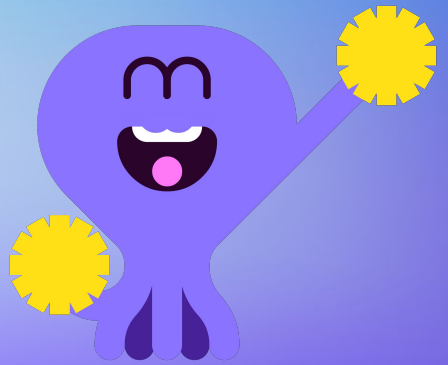
Welcome!!!

Presenters:

Jeremy Bhatia - Head of Product Growth
Rick Gaston - Head of Teacher Professional Development
Andy Hebert - Maryville, TN STEM and Kira CS Teacher



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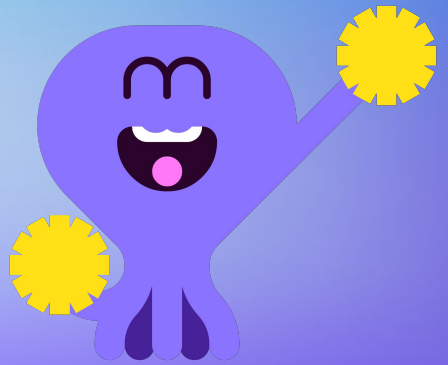
MS Course

This session addresses TN course

MS Computer Science #G25X40 or G25X41



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Housekeeping Items

Webinar is recorded

Slides available along with the recording

Enter your questions in the Q&A box

Watching On Demand, and have questions?

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support@kira-learning.com for platform/course

ashe@battelle.org for Tennessee requirements

AGENDA FOR THIS WEBINAR

- Course and platform overview - 10 mins.
- Platypus coding environment - 10 mins.
- Kira AI Tutor - 10 mins.
- Ways teachers can use Kira - 5 mins.
- TN Kira teacher resources - 15 mins.
  - Customized Tennessee teacher resources
  - Feedback and Questions
  - Guided notes - new
- Requesting Kira account - 5 mins.
- Q&A - 5 mins.

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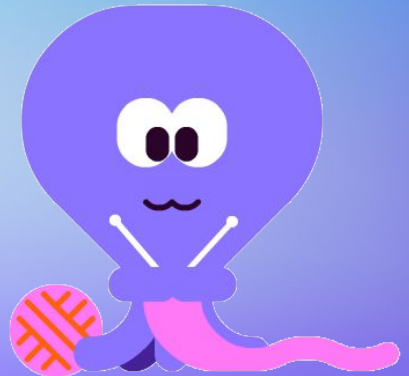
Course and Platform Overview



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Platypus Coding Environment

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Platypus Coding Environment

`while` `if` `else:` `condition` `turn_right()` `turn_left()` `swim()`

`put_down(obj)` `pick_up(obj)` `paint(color)`

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Kira AI Tutor

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Kira AI Tutor

Key Points

- Helps students get unstuck with coding exercises
- Personalized feedback for students - a key tool for differentiation
- You choose to turn it on or off for class
    - No other teacher management of it is needed
- Doesn't tell students exactly what to do, just gives tips
- In Beta mode, can make mistakes
- Demo

Ways to Use Kira

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Flexible Ways to Use Kira Content

- "Best practices" = What works best for your students and context
  - We have recommendations and provide materials → You decide
- Share ideas and learn from each other in this community
- Thanks to:
  - Monika Lambert - Franklin
  - Kevin Clinton - Ten Mile
  - Audra Monroe - Elizabethton
- We recommend a mix of:
  - "unplugged" teacher-guided lesson
  - online Kira platform and content

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Best Practices and Reflections from Teaching Kira's MS Course - Andy Hebert

New TN Resources

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Tennessee Best Practices and Reflections by Perspective

- **Student Perspective -** How do Kira's Lessons accommodate for diverse learners?
  - Differentiation
  - Engagement
- **Teacher Perspective -** How do Kira's Lessons accommodate for diverse TEACHERS?
  - Differentiation
  - Engagement
- **Administrator/Evaluator Perspective**
  - Does the lesson align with TEAM Rubric?
  - Are Formative/Summative learning outcomes measurable?

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TEAM Rubric: Domains/Indicators

- **Instruction**
- **Planning**
- **Environment**
- **Professionalism**

- Standards and Objectives
- Motivating Students
- Presenting Instructional Content
- Lesson Structure and Pacing
- Activities and Materials
- Questioning
- Academic Feedback
- Grouping Students
- Teacher Content Knowledge
- Thinking
- Problem Solving
- Instructional Plans
- Student Work
- Assessment

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Example Presentation from Unit 1, Lesson 4 Conditional Statements

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Bellringer - What is a platypus?

Write a dichotomy (two opposing statements) that #5 might read.

1. Has Feathers .....go to 2
   Has Fur.....go to 3

2. Has a pointed beak.....go to 6
   Has a rounded bill.....duck

3. Lays eggs.....go to 4
   Birth to live young.....go to 5

4. Has webbed feet.....Platypus
   Does not have webbed feet.....Echidna

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Are you thinking?

- **analytical thinking:** where students analyze, compare and contrast, and evaluate and explain information
- **practical thinking:** where students use, apply, and implement what they learn in real-life scenarios
- **creative thinking:** where students create, design, imagine, and suppose
- **research-based thinking:** where students explore and review a variety of ideas, models, and solutions to problems.
- **computational thinking:** Abstraction, decomposition, pattern recognition, algorithmic

Last Time on Kira

1. What are the similarities and differences between a string and an integer?
2. What is a variable?
3. How can you get the code editor to write out an output?

Unit 1: Introduction to Programming Using Platypus

Lesson 4: Conditional Statements

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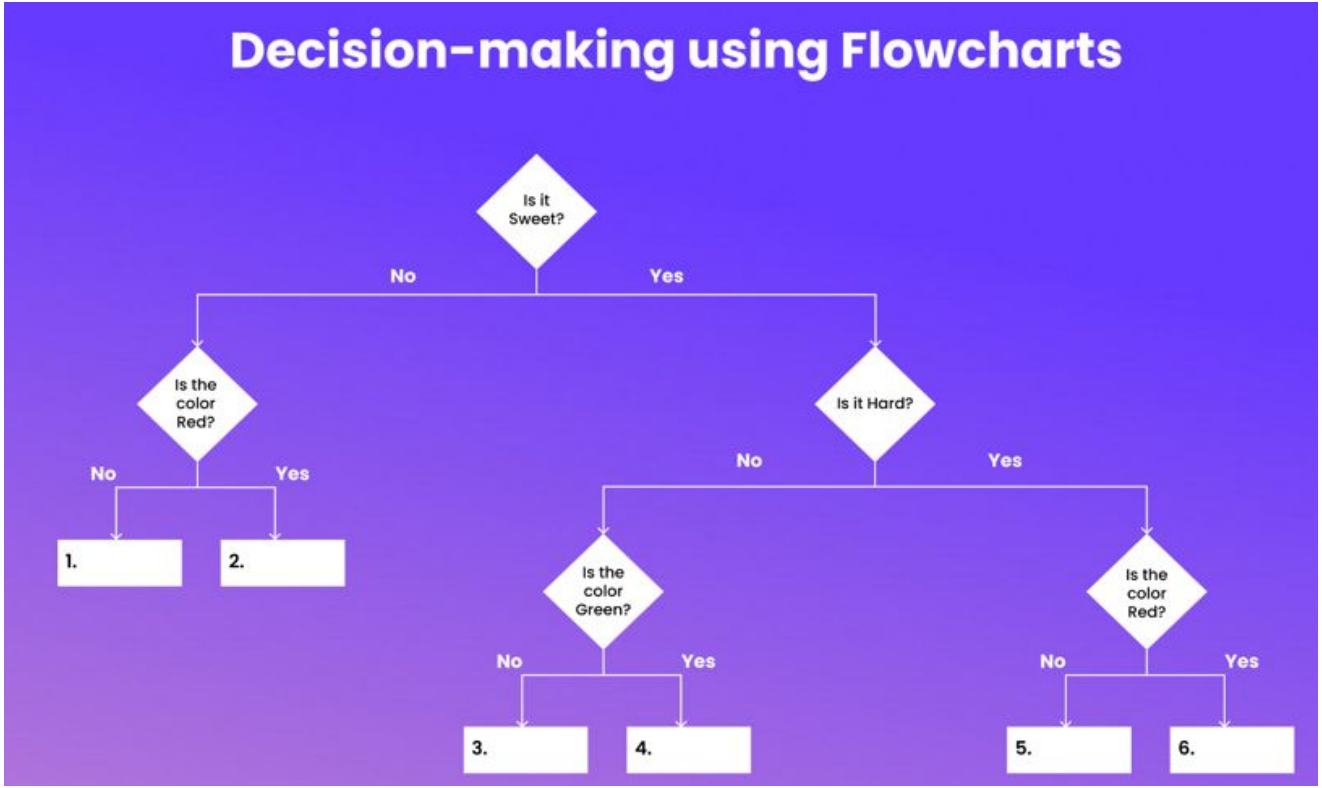
Standards

- **CS Standard - MS.AT:** Create algorithms which include methods of controlling the flow of computation using “if…then…else” type conditional statements to perform different operations depending on the values of inputs

Learning Targets - By the end of the lesson, students will be able to:

- apply the decision-making process in computers using if-else statements.
- evaluate syntax of if-else statements and how to structure them correctly
- write if-else statements for different scenarios.
- comment code for better readability and collaboration
- embrace and demonstrate a computational thinking mindset

Do Now Activity: Think, Pair, Share



- Green Apple (Sweet)
- Strawberry (Sweet)
- Cucumber (Not Sweet)
- Mango (Sweet)
- Green Grapes (Sweet)
- Avocado (Not Sweet)

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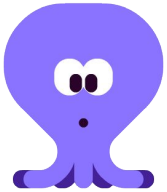
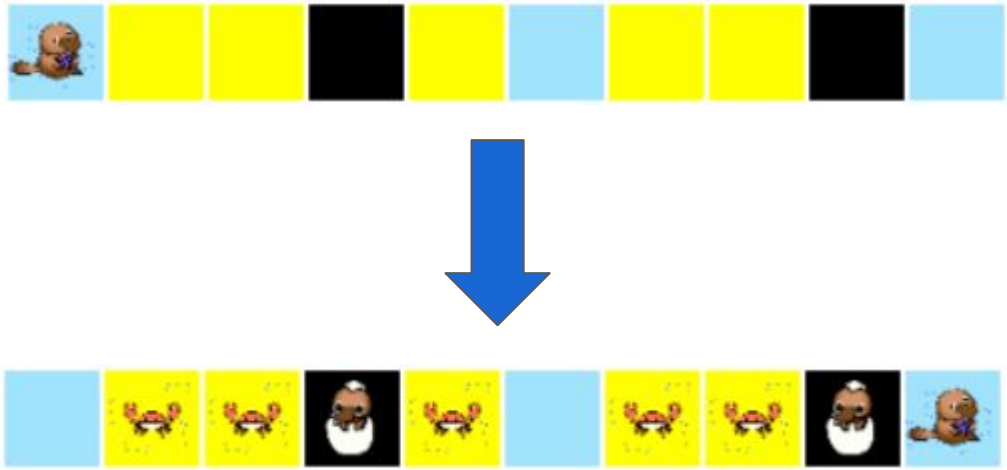
Words to Look For

1. Condition
2. Decision-making (tree)
3. if statement
4. if-else statement
5. Control flow



What to Expect this Lesson

- Accessing prior knowledge on while loops and variables.
- Learning to create conditional statements such as *if* or *if/else*



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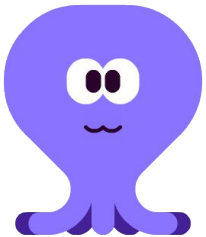
Exit Ticket

- Write a conditional statement that you use to make decisions throughout your day.



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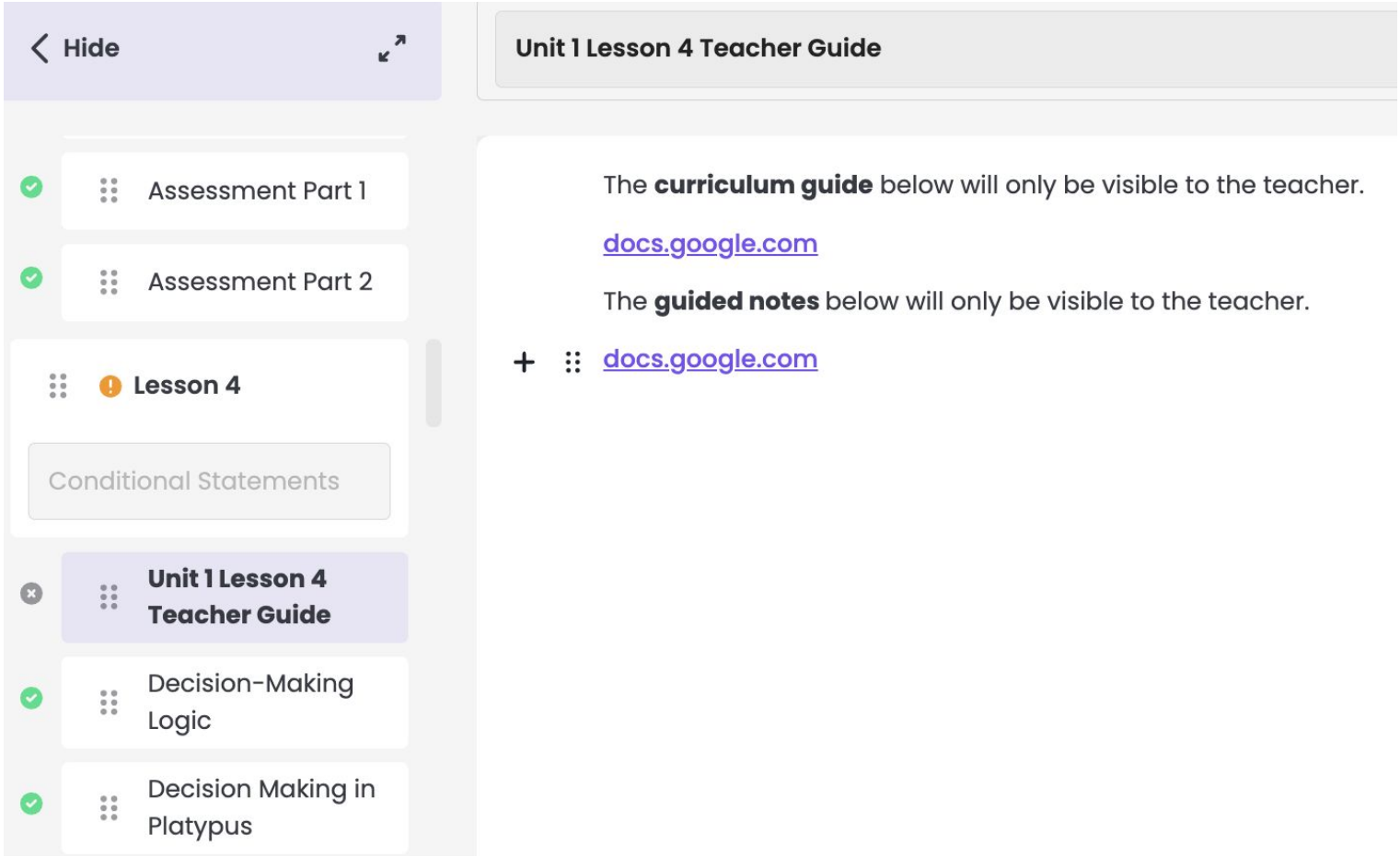
Thank you for your hard work!

We hope you keep learning and finding ways to use your new computational thinking!

GUIDED NOTES IN TEACHER GUIDE IN EACH LESSON



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GUIDED NOTES - Example

Unit 1 - Conditional Statements Lesson

Decision-Making Logic

1) A _____ statement is a statement that is either true or false.

Decision Making in Platypus

1) You need a colon at the end of an if statement or else you'll get a _____ error.
2) The line(s) of code inside the if statement needs to be _____.

More Decision Making in Platypus

1) An _____ statement can be used, in addition to an if statement, when there are two possible outcomes that we want to handle.
2) The line of code with an else statement needs to have a _____ at the end of it.

Decision Making with Interactive Programs

1) A line of code that starts with a hashtag symbol ("#") is a _____.
2) Computer programs _____ any line of code that starts with a hashtag symbol.

Answers

Unit 1 - Conditional Statements Lesson

Decision-Making Logic

1) A **conditional** statement is a statement that is either true or false.

Decision Making in Platypus

1) You need a colon at the end of an if statement or else you'll get a **syntax** error.
2) The line(s) of code inside the if statement needs to be **indented**.

More Decision Making in Platypus

1) An **else** statement can be used, in addition to an if statement, when there are two possible outcomes that we want to handle.
2) The line of code with an else statement needs to have a **colon** at the end of it.

Decision Making with Interactive Programs

1) A line of code that starts with a hashtag symbol ("#") is a **comment**.
2) Computer programs **ignore** any line of code that starts with a hashtag symbol.

Questions?

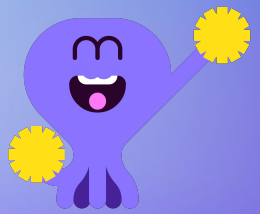
Visit www.kira-learning.com **or** www.computersciencetn.org

For questions about the Kira MS course or teacher resources email Rick:

rick@kira-learning.com

For platform support email:

support@kira-learning.com



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