Disney Hour of Code Digital Toolkit

Moana: Wayfinding with Code

I ♥ CODE

Disney BE INSPIRED

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ABOUT CODE.ORG AND HOUR OF CODE

Launched in 2013, Code.org® is a non-profit dedicated to expanding access to computer science, and increasing participation by women and underrepresented students of color. Code.org's vision is that every student in every school should have the opportunity to learn computer science. Code.org believes computer science should be part of core curriculum, alongside other courses such as biology, chemistry or algebra.

The Hour of Code started as a one-hour introduction to computer science, designed to demystify "code", to show that anybody can learn the basics, and to broaden participation in the field of computer science. It has since become a worldwide effort to celebrate computer science, starting with 1-hour coding activities and expanding to many different community efforts. This grassroots campaign is supported by over 400 partners and 200,000 educators worldwide. The Hour of Code takes place each year during Computer Science Education Week.

To learn more visit:

- **Code.org**
- **HourofCode.com**
- **csedweek.org**

ABOUT THE DISNEY HOUR OF CODE

Since 2014, The Walt Disney Company has worked with Code.org to build Hour of Code tutorials featuring Disney characters that inspire kids of all ages to try coding. Disney and Code.org's 2014 Hour of Code tutorial featured Anna and Elsa from Frozen and in 2015 the tutorial featured Rey, BB-8, Princess Leia and R2-D2 from The Force Awakens. Since that time, over 40 million students have tried Disney coding tutorials.

The Disney 2016 tutorial, Moana: Wayfinding with Code, will bring the Hour of Code to students around the world for Computer Science Education Week and beyond!

To register a Disney Hour of Code event:

- **www.HourofCode.com/Disney**

To learn more and try a Disney Hour of Code tutorial, visit:

- **Disney.com/hourofcode**

HOW TO ORGANIZE AN HOUR OF CODE EVENT

INVITATION TO PARTICIPATION

You are invited to host an "Hour of Code" during Computer Science Education Week. In 2014, Disney partnered with Code.org to support the Hour of Code (HOC) to inspire people from all backgrounds, and all ages, to try coding through fun and challenging, beginner one-hour tutorials. Disney Hour of Code tutorials with supporting resources are available for anyone to use!

HOW CAN I PARTICIPATE?

Organizers will:

- Form a team that is enthusiastic about hosting an Hour of Code!
- Register your event at **www.hourofcode.com/disney**
- Identify a target audience. Children and youth 8 years of age and older can participate. HOC tutorials are designed to inspire those who have little or no experience in computer science. Any person, including students from a school, library, community center or non-profit can participate in HOC!
- Recruit volunteers. The number of volunteers should scale with class size; recommended ratio is 1 volunteer for every 5-10 students depending on age and abilities.
- Promote your event to encourage participation.
- Host a 1 to 3-hour event at a location of your choice.
- Document your event through videos, photos, and anecdotes from students, teachers and parents. Ensure you have written parental/guardian and school permission.

RECOMMENDED RESOURCES

Your team will coordinate:

- Wi-Fi enabled venue to house the event such as a school computer lab, library or community center.
- Secure computers, iPads or large tablets for student use. The tutorial will run on iOS or Android platforms. The tutorial can be completed on several browsers including Safari, Chrome, Firefox or Internet Explorer. Phones are not recommended due to size of screen. Students can work on individual devices or share devices between 2-3 students. Sharing encourages collaborative problem-solving.
- Headphones (optional)
- Audio/Visual Equipment (optional) such as microphones, speakers and a projector.
- Tech Guest Speaker or Teacher to kick-off the event.

RESOURCES:

- Hour of Code tutorials available in multiple languages at **Disney.com/HourofCode**.
- The Disney Hour of Code Digital Toolkit.
- Additional resources are available at Code.org.

HOW TO ORGANIZE AN HOUR OF CODE EVENT

SAMPLE EVENT SCHEDULE

From start to finish an HOC event typically lasts between 1.5 - 3 hours, as outlined in this sample event schedule (unless being held in a school during regular class hours):

5 MINUTES	Kickoff with Guest Speaker, Teacher and/or Play Hour of Code Video
10 MINUTES	Event Overview
1 HOUR	HOC Tutorial
15 MINUTES	Closing Celebration

OPTIONAL:

30 MINUTES	Snack Break
VARIES	Additional speakers, videos or offline coding activities

ABOUT THE TUTORIAL

Disney's 2016 Hour of Code tutorial celebrates Moana, a master wayfinder who leads her people on New Migrations has a special connection with the ocean. When the tutorial starts students will help Moana and Maui sail through unknown territory and steer their boat using basic coding commands of sequences and loops. As students learn these coding skills and master the art of navigation, Moana and Maui are suddenly attacked by Kakamora, coconut-armored pirates attacks. There's only one way to defeat the Kakamora—counter attack!

Disney's Hour of Code uses a visual programming language, called "Blockly" where students simply drag and drop visual blocks to write code. Visual programming is a fun and easily understood way to teach the logic of coding. Exposure to visual programming through Blockly lays the foundation for text-based programming, a more complex activity.

HOW TO USE THE HOUR OF CODE DIGITAL TOOLKIT

EVENT MATERIALS

PRE

- Flyer
- Event Checklist

DURING

- Event Organizer Best Practices
- Instructor/Volunteer Best Practices
- Workshop & Tutorial Guide
- Progress Tracker

POST

- Completion Certificate
- Offline Activity Guide

ADDITIONAL

- About Code.org and Hour of Code, About the Disney Hour of Code
- Hour of Code Information and Links

Event organizers are recommended to create:

- A Press Release, Media Alert and Community Notice for outreach.
- Save the Date and Invitation to participate.
- Talking points and a script for the event.

EVENT ORGANIZER BEST PRACTICE

Read best practices below. Drawing on experience from past events can help make your Hour of Code (HOC) event a success!

EVENT PLANNING

- Register your event at HourofCode.com/Disney.
- Form a team of engaged stakeholders and volunteers.
- Communicate in a clear and timely manner.
- Tailor your message and materials to your target audience.
- Prepare and maintain event documents such as event schedule, maps and contact lists and share with stakeholders as appropriate.
- Organize an instructor/volunteer training session.
- Conduct a trial run of the event; test all technology (computers, iPads, tablets, bandwidth, projector, microphones, speakers etc.) and rehearse any presentations to be delivered.
- If you are serving refreshments, ensure there are no food allergies and follow guidelines provided by organization and facility you are working with.
- Determine if any student will have special needs and decide how you will accommodate.
- Obtain written approval from parent/guardian to take photos of kids.

PREPARING TO FACILITATE

- Educate yourself on the importance of expanding access to computer science education through the **Code.org** stats page.
- Watch inspirational videos at **Disney.com/hourofcode**.
- Review all resources in Disney's Hour of Code Digital Toolkit.
- Try the Disney Hour of Code tutorial at **Disney.com/hourofcode**.
- Be familiar with your audience, including class size, age and demographics. Be familiar with any special needs so you can provide adequate accommodation.
- Be familiar with your event space, including facility access, parking, lighting, acoustics, temperature controls and any restrictions.
- Test your technology and connectivity in the space you are hosting the Hour of Code.

ESTABLISH VOLUNTEERS GUIDELINES

- Determine requirements and provide specific guidelines for volunteers to screen volunteers and protect students at all times.
- Establish that all volunteers and team members must adhere to any guidelines and/or requirements provided by you as event facilitator and/or the organization(s) you are working with.

- Instructors/Volunteers and Team Members must NOT:
  - Solicit or obtain personal information from students
  - Be alone with an individual student
  - Take photos or post social media of a student without parental/guardian plus teacher permission (if applicable)

SUPPORTING PARTICIPANTS AND TEACHER TIPS

- Be prepared to troubleshoot technology. Before the event ensure the entire event team knows the tutorial address, best browser to use, how to connect to Wi-Fi, how to adjust computer volume, how to disable pop up blockers and how to re-load the tutorial website, if necessary
- Encourage students to collaborate and problem-solve together.
- If students are in p airs, instruct them to take turns using the keyboard.
- If a student gets "stuck" encourage them to problem-solve and work with a classmate to find a solution. If needed provide a hint to help them overcome the obstacle. Students may find a review of the screen functions and tutorial instructions on screen helpful.
- Some students will NOT complete the tutorial in one hour. Encourage kids who do not finish to keep learning at home and congratulate them on what they have accomplished! Still provide these children with a certificate of completion.
- Some students will complete the tutorial in less than one hour. In this case, distribute the "Offline Activity Guide" and any support materials required or direct them to additional tutorials they may try at **Disney.com/hourofcode**.
- Encourage students to have fun, keep learning and try additional tutorials at **Disney.com/hourofcode** and **Code.org**!

WRAPPING UP THE EVENT

- Remember to leave your event space in as good or better condition as you found it.
- Complete an event recap, soliciting feedback from all stakeholders - students, parents, volunteers etc.
- Share the recap and positive stories from the event with press and through your communication channels and on social media.

  #DisneyHourofCode
  @Codeorg
  @CitizenDisney

- Send thank you notes as appropriate.

INSTRUCTOR & VOLUNTEER BEST PRACTICES

Check out the volunteer best practices below. Drawing on experience from past events can help make your Hour of Code (HOC) event a success!

INSTRUCTOR & VOLUNTEER GUIDELINES

- Volunteers MUST adhere to any volunteer guidelines and meet any requirements provided by the event facilitator and/or organization you are volunteering with.
- Volunteers MUST NOT:
  - Solicit or obtain personal information from students
  - Be alone with an individual student
  - Take photos or post social media of a student without written parent/guardian and teacher permission

EVENT PLANNING

- Participate in volunteer meetings to ensure you understand your volunteer role and how you will support the event in advance and on the day-of.
- Review all communications from your event leader and ask for clarification if needed.
- Hold the date and time of the HOC event on your calendar.

PREPARING TO VOLUNTEER

- Educate yourself on the importance of expanding access to computer science education through the **Code.org** stats page.
- Watch inspirational videos at **Disney.com/hourofcode**.
- Try the Disney Hour of Code tutorial at **Disney.com/hourofcode**.
- Be familiar with your audience, including class size, age and demographics. Ask your event leader if there are any special needs and how they will be accommodated.

SUPPORTING PARTICIPANTS – VOLUNTEER TIPS

- Be prepared to troubleshoot technology. Ensure you know the tutorial address, how to connect to Wi-Fi, how to adjust computer volume, how to disable pop up blockers and how to re-load the tutorial website, if necessary.
- Encourage students to collaborate and problem-solve together.
- If students are in pairs, instruct them to take turns using the keyboard.
- If a student gets "stuck" encourage them to problem-solve and work with a classmate to find a solution. If needed provide a hint to help them overcome the obstacle. Students may find a review of the screen functions and programming tools helpful.

- Some students will NOT complete the tutorial in one hour. Encourage kids who do not finish to keep learning at home and congratulate them on what they have accomplished! Still provide these children with a certificate of completion.

- Some students will complete the tutorial in less than one hour. In this case, distribute the "Offline Activity Guide" and any support materials required. Your leader will have copies of the "Offline Activity Guide" printed for the event. Or encourage student to try another Hour of Code tutorial at **Disney.com/hourofcode**.

WRAPPING UP THE EVENT

- Remember to leave your event space in as good or better condition as you found it.

- Return all loaned items such as name badges etc. to the event leader.

- Notify your event leader if you'd like to take a break, or if you are leaving the event site.

- After the event, provide feedback to your event leader including what went well and opportunities for improvement in the future. Your input is valuable!

- Share your experience with others who may want to participate in the future.

- Encourage your students to keep on learning by going to **Disney.com/HourofCode**, **Code.org**.

HOUR OF CODE EVENT ORGANIZER CHECKLIST

Advance preparation ensures your Hour of Code (HOC) event is a fun and engaging experience for all. Start planning between 6-8 weeks before your event date. If this is your first time organizing an event or if you are starting with limited resources allocate more time for planning.

STEP 1 (8 weeks before event)

FORM A TEAM

- **REGISTER** your event: **hourofcode.com/disney**
- **LEARN** about the importance of computer science education at **Disney.com/hourofcode** and **Code.org**
- **REVIEW** Disney's Hour of Code Digital Toolkit
- **IDENTIFY** stakeholders.

This will include:

Co-Facilitators:
2-3 people you will share leadership responsibility with.

Community Leader(s):
people connected to your student population such as a school principal, librarian or non-profit leader.

Tech Speaker:
locate a tech speaker in your area using this Code.org resource: **https://code.org/volunteer/local**. The tech speaker will help kickoff your event.

Instructors & Volunteers:
Scale the number of volunteers with class size. Recruit 1 volunteer for every 5-10 students.

- **ENGAGE** Stakeholders

Email stakeholders asking them to join the effort. Share resources tailored to the audience.

Meet with your stakeholders to:

- Select time and date for your event. Ideally events will take place during Computer Science Education Week.
- Select a facility and confirm resources including:
  - Wi-Fi connectivity
  - Computers, iPads or tablets that run on iOS or an Android platform for student use
  - Headphones for students (optional)
  - Audio/visual equipment as needed, such as a projector, microphone and speakers

STEP 2 (6 weeks before event)

IDENTIFY TARGET AUDIENCE AND PREPARE COMMUNICATIONS

■ **SELECT** your target student group.

- Children and youth 8 years of age and older can participate in HOC. Ideal age is 10+. HOC tutorials are designed to instruct those who have little or no experience in computer coding. Families along with students affiliated with a school, library, community center or non-profit can all participate in HOC.
- Families and students globally are encouraged to participate; the Disney HOC tutorial is available in multiple languages.
- Class size should match facility size, computer resources and number of volunteers.

■ **PREPARE** materials for your audience

- Customize the toolkit flyer and slides for your presenter deck. Send a "Save the Date", invitations, flyers, press release, media & community alert.
- Try Disney's Hour of Code tutorial. As a facilitator this step is critical to event preparation. Go to **www.Disney.com/HourofCode**
- Review materials from the Toolkit and in the links provided.

STEP 3 (6 weeks before event)

RECRUIT STUDENTS AND VOLUNTEERS

■ **SAVE** the Date for Stakeholders

- Send a "Save the Date" for all parties involved. This includes co-facilitators, guest speakers, instructors, volunteers and other participants identified.

■ **INVITE** Students and Parents

- Send an invite for students and parents and record responses on a sign-up sheet. Invites can be addressed to the distribution lists of schools, libraries, community centers or non-profits.
- To make the opportunity accessible for those without email, place flyers in well-trafficked areas.
- Track the names and contact information of those who sign up.
- If you are serving refreshments, find out if there are any special dietary needs or allergy's.
- Determine if there are students with special needs and plan how you will accommodate.

STEP 3 (Continued)

RECRUIT Instructors & Volunteers

- Work with your host organization, school, library, community center or non-profit) to identify potential volunteers.
- Carefully select volunteers as they will be working with children. Establish and enforce volunteer requirements and guidelines to safeguard your participants.
- Create a sign up mechanism for your volunteers such as a volunteer website or spreadsheet.
- Invite volunteers to participate. Track the names and contact information of those who sign up.

STEP 4 (4 weeks before event)

PROMOTE YOUR EVENT

NOTIFY local press and community leaders.

- Newspapers, television stations and radio programs may help spread the word about your event. Send tailored communications including a press release, media alert letter and supporting materials like "About the Hour of Code".
- Community leaders may provide support or otherwise elevate the event. Send tailored communications to these parties.

BE PREPARED to respond

- Leverage the following resources to respond to press and community leaders: About Hour of Code and links provided.

SHARE news about the event through your own communication channels including social media.

#DisneyHourofCode
@CitizenDisney
@Codeorg

STEP 5 (2 weeks before event)

CONDUCT A TRIAL RUN

- **ORGANIZE** an instructor & volunteer training session. Have all complete the Hour of Code tutorial.
- **CONDUCT** a thorough trial run of the event. As a facilitator this step is critical to event preparation.

  A trial run of the event includes:

  - Testing all computer and Audio/Visual equipment including Wi-Fi connectivity. Ensure you have adequate power outlets or extension cords.
  - Create a script and talking points.
  - Practice your presentation materials, script and talking points.
  - Review the Event Organizer Best Practices and Workshop Tutorial Guide.
- **FINALIZE** the physical event layout.
  - Create an event map taking the following areas into consideration: student/volunteer check-in table, student work stations, snack stations, stage or other presentation area.
- **CREATE** an event schedule with time and locations allocated for staging of the event including pre-event activities, event activities and post-event activities.
- **PRINT** copies of materials required for event day such as your script & talking points, Student Progress Tracker, Workshop Tutorial Guide, Completion Certificates and the Offline Activity Guide.
- **DISTRIBUTE** pre-event information to stakeholders.
  - Share directions and event schedule with stakeholders and students.
  - Provide volunteer checklist to the appropriate contacts.
  - Send legal photo and video waivers for parents/guardians to sign if you will be taking photos and video of kids.

STEP 6

HOST THE EVENT

- **PRE-EVENT** activities:
  - Set up sign-in table for students and volunteers.
  - Check computers, iPads or tables and audio/visual equipment.
  - Pre-load presentations and videos.
  - Set up student work stations, distribute handouts and pens.
  - Host a brief volunteer meeting to set expectations and answer questions.
  - Check in with photographer or videographer to review on desired outcomes.

STEP 6 (Continued)

EVENT activities:

- Begin with kickoff message from your tech speaker and review event timeline with participants.
- Show introduction tutorial video.
- Ask participants to start the HOC and go over instructions.
- Ask students to track their progress on tracking sheet.
- Provide activity guide for students who finish early or direct to other tutorials on **Disney.com/HourofCode.**
- If there are there are technical difficulties, do offline activities in toolkit with studnets.
- At the end of your Hour of Code, distribute completion certificates and give students the Activity Guide.
- Encourage students to keep learning at **Disney.com/HourofCode** and **Code.org**!

POST-EVENT activities:

- Create Event Recap
  - Compile the best photos and videos from the event.
  - Collect student and parent feedback either in person, or through an electronic survey.
  - Meet with stakeholders, including volunteers, to document the event's successes as well as opportunities for improvement.
  - Send thank you notes to event participants and stakeholders, as appropriate.
- Send recap information to newspapers, television stations, radio programs and community leaders.
- Share your success on your own channels, including social media.

#DisneyHourofCode
@CitizenDisney
@Codeorg

JOIN US FOR
HOUR OF CODE

DATE: _____

TIME: _____

LOCATION: _____

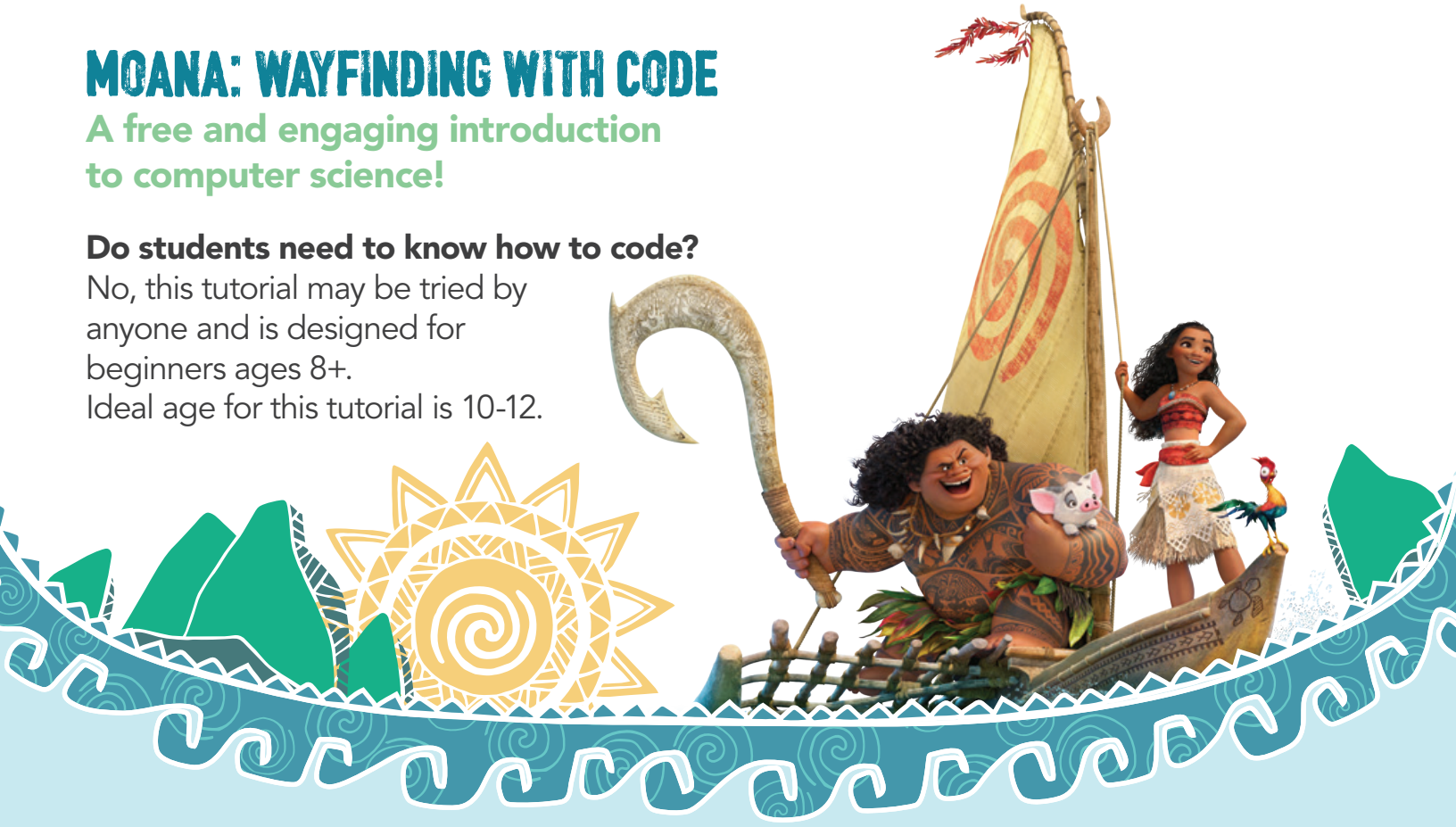
CONTACT: _____

This is an opportunity to try a basic coding with a fun and challenging **one-hour** coding tutorial created by Disney in partnership with Code.org!

MOANA: WAYFINDING WITH CODE

A free and engaging introduction to computer science!

Do students need to know how to code?
No, this tutorial may be tried by anyone and is designed for beginners ages 8+.
Ideal age for this tutorial is 10-12.



To learn more visit: **Disney.com/HourofCode** or **Code.org**

HOUR OF CODE INFORMATION & LINKS

INFORMATION

- Computer science graduates earn the **second highest** starting salaries, just after engineering graduates.
- Computing occupations make up **2/3** of all projected new jobs in STEM (Science, Engineering, Mathematics, and Information Technology) fields.
- Only **8% of STEM graduates** study omputer Science.
- **67% of parents** and **56% of teachers** believe students should be required to learn computer science.
- Computing jobs are the **#1** source of new wages in the United States.
- There are **more than 500,000** open computing jobs in the United States and there is a projected employment change of **12.5%** for computing occupations compared to a **6.5%** change for all occupations.
- **Only 1 in 4 U.S. schools** in K-12 education offer classes with computer programming.
- **Females** represent only represent **22% of AP CS A exam-takers**, **17% of CS bachelor's degrees**, and **23% of people** employed in computing occupations. Underrepresented **minorities** represent **13% of AP CS A exam-takers**, **17% of CS bachelor's degrees**, and **14% of people** employed in computing occupations.

Source:
https://hourofcode.com/us/promote/stats

SOURCE:

- **"Code Stars" - Short Film**
  (www.youtube.com/watch?v=dU1xS07N-FA)
- **What Most Schools Don't Teach**
  (www.youtube.com/watch?v=nKlu9yen5nc)
- **Computer Science is Changing Everything**
  (www.youtube.com/watch?v=QvyTEx1wyOY)
- **The Hour of Code is here**
  (www.youtube.com/watch?v=QvyTEx1wyOY)
- **Anybody Can Learn**
  (www.youtube.com/watch?v=qYZF6oIZtfc)

LINKS:

- **Disney - Hour of Code**
  (www.Disney.com/HourofCode)

ADDITIONAL ONLINE AND OFFLINE ACTIVITY LINKS:

- **Disney - Hour of Code**
  (www.Disney.com/HourofCode)
- **Code.Org®**
  (www.code.org)

WORKSHOP GUIDE

TUTORIAL WORKSHOP OVERVIEW

In this lesson, learners/students of all ages will get an introductory experience with computer science through coding. The goal for instructors is to provide a safe, fun and supportive environment for anyone to learn and try coding. Prep time is minimal as the tutorial is designed to be either instructor led or self-guided.

TUTORIAL FORMAT: BLOCKS

- The tutorial is in a drag and drop block format. This works well for younger students, those without keyboard skills and beginners.
- The tutorial is rated 8+ because it requires reading. The tutorial is best suited for anyone 10+ who is a beginner.
- The tutorial may be self-guided allowing learners to work at their own pace and skill-level.
- The tutorial is recommended for English and non-English speakers because most computer languages are written in English. In this tutorial, students may select to complete the tutorial in one of 23 languages.
- We recommend a tutorial in blocks for international students because JavaScript syntax and other computer languages are not typically translated.
- The blocks format is a good beginner introduction to coding.

OBJECTIVES OF WORKSHOP

Students will:

- Define “coding” and “computer science”.
- Identify key computer science vocabulary.
- Make connections between computer science concepts and the real world.
- Identify places to go to continue learning computer science and coding.
- Be inspired to keep learning!

EQUIPMENT & TECH

- Learner may use a desktop computer, laptop or regular sized iPad. The tutorial will not work adequately on a hand-held device or phone. It may work on an android tablet depending on the size of screen and technology it uses. Hold iPad/Tablet horizontally in landscape.
- **CHROME** and **FIREFOX** are the preferred browsers for the tutorial. The tutorial will also function on **INTERNET EXPLORER** or **SAFARI**.
- 1-3 students per device depending on age of learner and preferred learning style.
- Have offline activities available in the event of technical difficulties.
- Test your equipment, wifi and other technology in advance of workshop.
- Review and complete the tutorial yourself so you are familiar with it and can assess how your learners will do with the activity.
- Make sure that JavaScript is enabled in your browser. Consult your browser's help section for steps on enabling JavaScript.

ACTIVITY (45-60 minutes)

Depending on the age and ability of your students, you might consider:

- For younger students, we suggest you break your class into pairs and ask each pair to work together to complete the tutorial using pair programming.
- For older students, working independently on tutorials works well. Sometimes it helps to allow students to choose their own tutorial. If students aren't interested in this tutorial, they can get a similar experience with the Star Wars tutorial at **Code.org** or **Disney.com/HourOfCode**.
- For adult learners, **Wayfinding With Code** works well either as an independent challenge or as a pair programming activity.
- At the end of the tutorial, the students have the opportunity to create their own "Kakamora Warrior Dance" in a sandbox environment.
- If students finish early, encourage them to help others who are stuck; view each other's warrior dance or create another warrior dance.
- Another option is to let a group or individual attempt another tutorial by visiting **Disney.com/HourOfCode** or going to **Code.org/learn.**

RECOMMENDED PRACTICES FOR WORKSHOP

- Review digital tool kit.
- Print completion certificates in advance for every learner that will be participating and plan to give to each one at the end of the workshop whether they completed the entire tutorial or not.
- **Getting Started:**
  - Show an inspirational video from **Code.org** or **Disney.com/HourOfCode** at the start of the workshop.
  - Ask learners about the following terms: coding and computer science. Write ideas on the board and the definitions.
  - Ask what kinds of jobs and activities require someone to know how to code. Write these ideas onto the board.
  - Challenge your learners to complete the **Wayfinding With Code** tutorial.
  - At end Hour of Code, ask learners what they liked best?
  - Celebrate their accomplishment and hand-out a completion certificate to every student who participated.
  - Encourage learners to try other coding activities.
  - Consider leading further computer science courses from **Code.org.**

KEY VOCABULARY

Algorithm – A set of rules, a process or instructions to follow when doing calculations to solve a problem, especially by a computer.

Code/Coding – To write code, or to write instructions for a computer.

Computer Science – The study of how to manipulate, manage, transform and encode information typically using a computer.

Conditional Statement/Conditionals – An action in a computer program that happens only when a certain condition is satisfied. Sometimes called an "if-then" statement.

Debug/Debugging – Finding and fixing problems in your algorithm or program.

Program/Programming – An algorithm that has been coded into something that can be run by a machine.

Sequences – An instruction in a program that leads to an action or event that is followed by another action or event in a set order.

Special thanks to Code.org for their assistance, guidance and expertise in the development of the Disney Hour of Code tutorial as well as providing the source material for the contents in this guide and the digital toolkit.

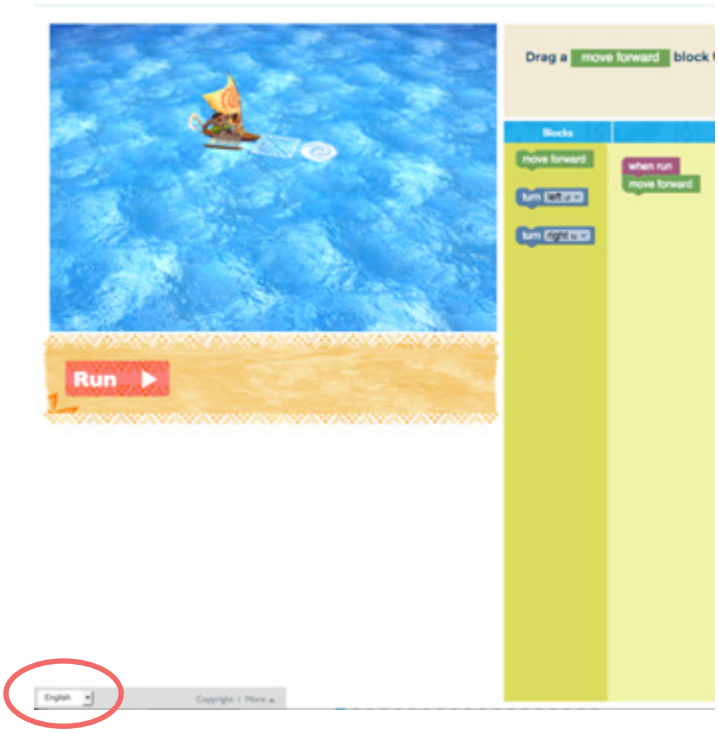
For more information about Code.org
go to www.code.org

LANGUAGE SELECTION

The tutorial is available in 23 languages:

- Arabic
- Chinese (Simplified)
- Chinese (Traditional)
- Danish
- Dutch
- English
- Finnish
- French
- German
- Indonesian
- Italian
- Japanese
- Korean
- Norwegian
- Polish
- Polynesian (Samoan)
- Portuguese
- Russian
- Spanish
- Swedish
- Turkish
- Vietnamese
- Ukrainian

To choose a language, go to bottom left and select from the drop drown the language you would like to do the tutorial in.



To select a language, click on arrow in box that reads: "**ENGLISH**" in bottom left-hand of screen and a select language in the list.

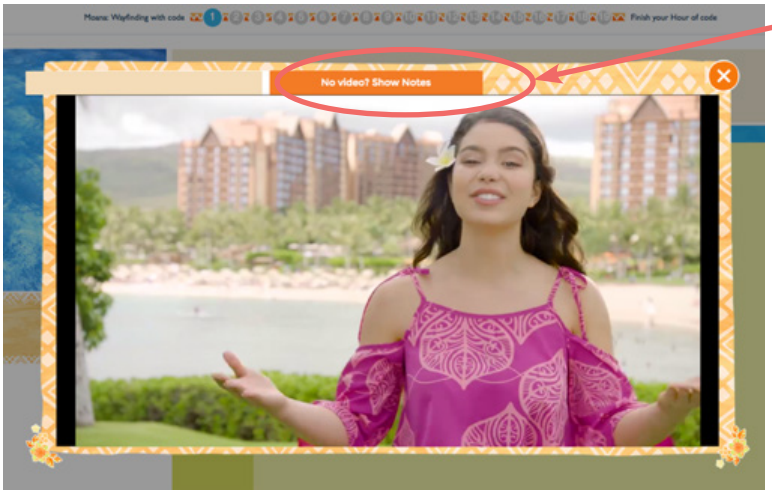
Use **SCROLL BAR** to select a language.

INTRODUCTION VIDEO

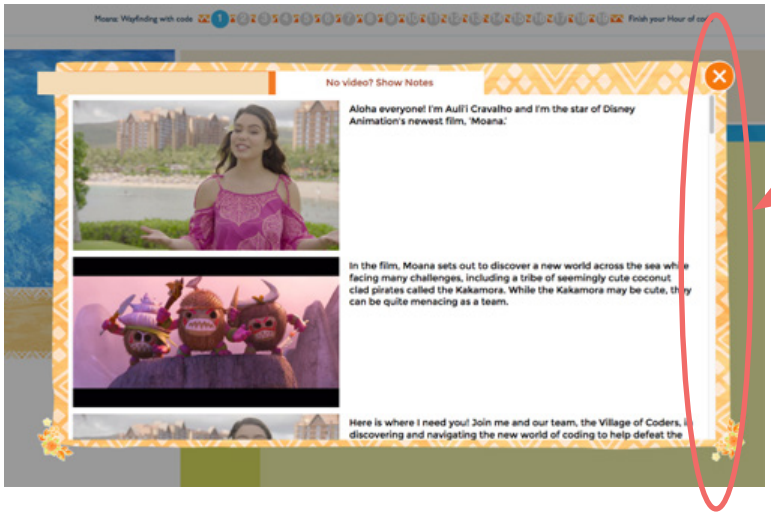
The introduction video is composed of 3 sections that play successively.

Instructor Tip:
If student prefers to read OR if video player, sound or wifi connectivity is poor:

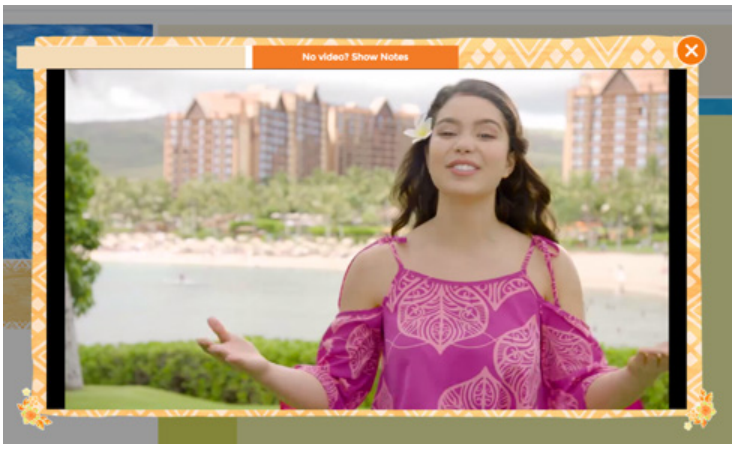
- Skip videos by clicking on tab at top right of video player frame where it says: "No video? Show notes".
- Use scroll bar on right side of video player frame to read entire script of videos.



Tab to select "**NOTES / READ SCRIPT**"

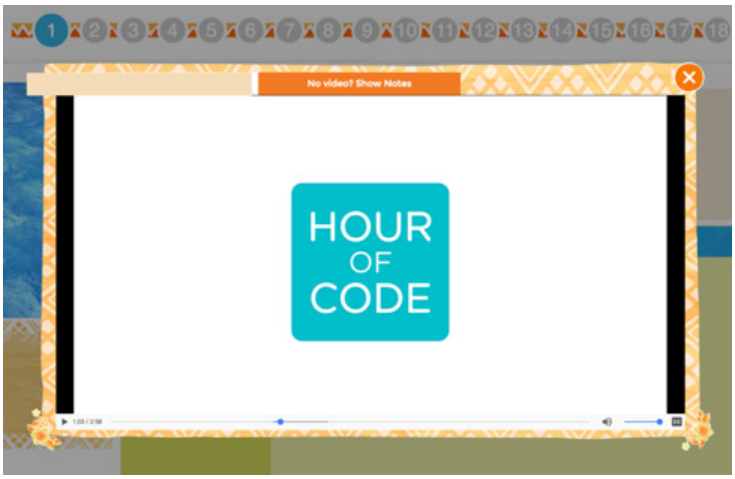


Scroll Bar



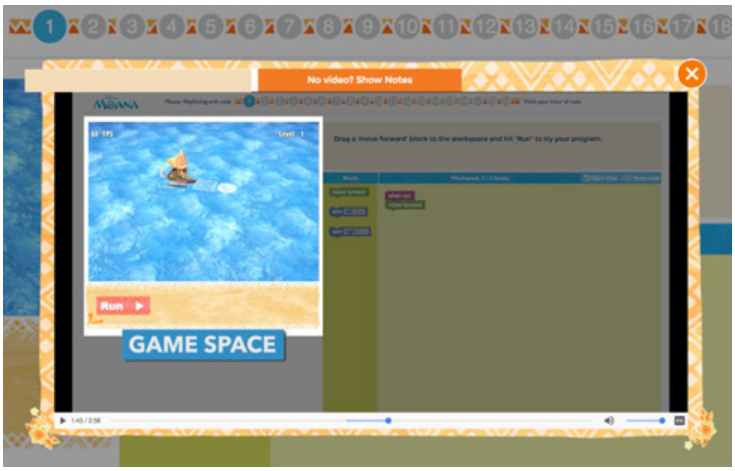
INTRODUCTION VIDEO
Section 1

0:00 - 1:00
Join in the Hour of Code



INTRODUCTION VIDEO
Section 2

1:00 - 1:33
Welcome to the Hour of Code



INTRODUCTION VIDEO
Section 3

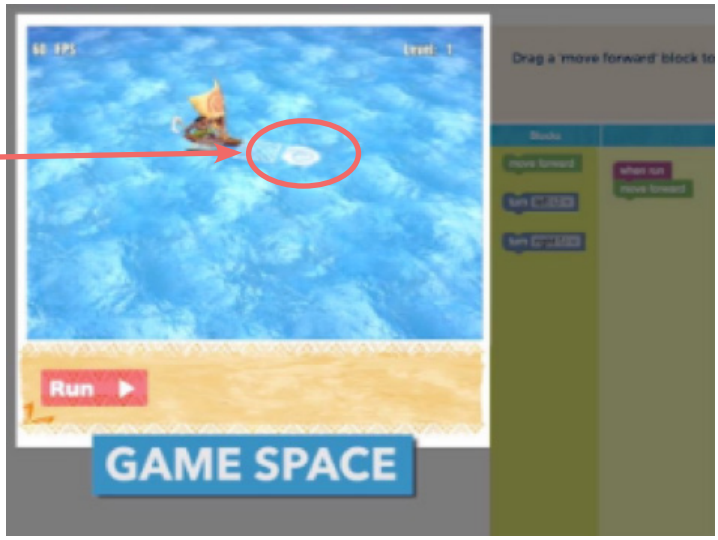
1:34 - 2:38
How to use the Workspace

HOW TO USE THE WORKSPACE

The screen is split into 3 parts:

GAME SPACE

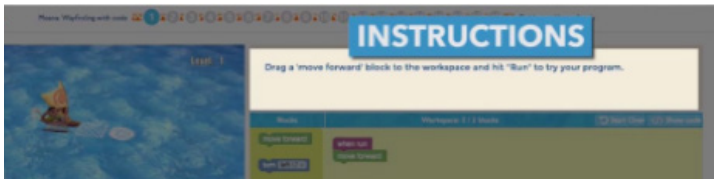
On the left where code will run. To complete a puzzle, the objective is to move Moana and Maui along the square path to reach the **circle**.



INSTRUCTIONS

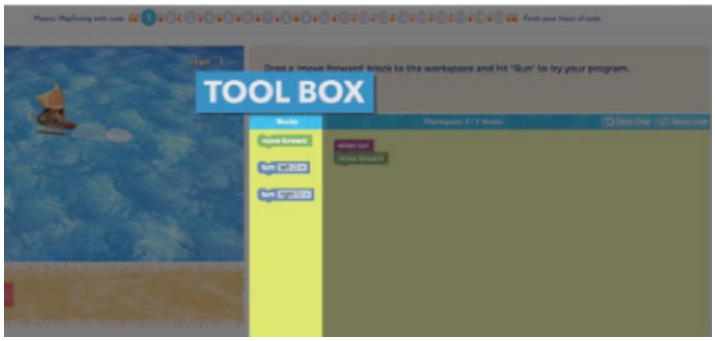
Instructions for each level are written ABOVE the game space.

Instructor Tip: if student gets stuck, ask them to read the instructions again!



TOOL BOX

The middle area is the toolbox. Each blocks in the tool box is a command for MOANA and MAUI. Students select a block from the tool box and drop into workspace on right.



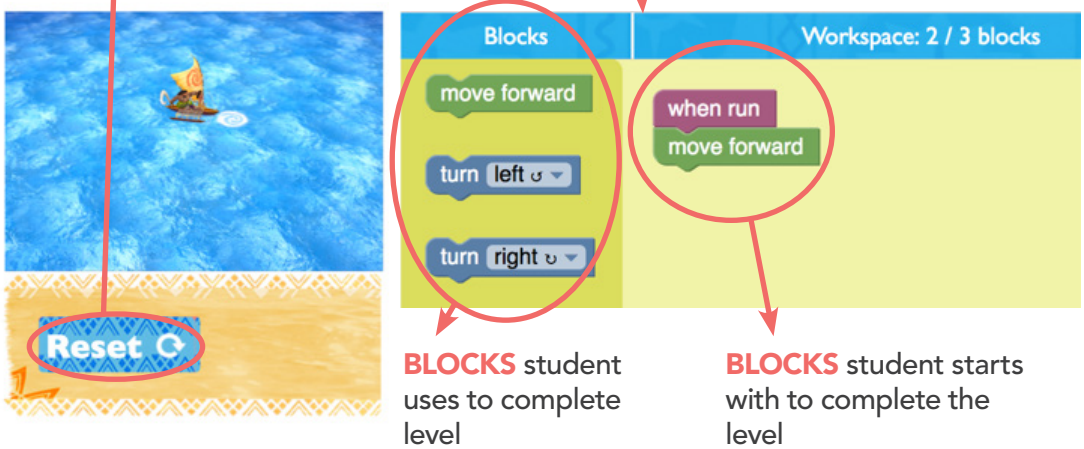
Top bar with numbers indicates in **BLUE** the level the student is on

Indicates **NUMBER OF BLOCKS** needed to complete a level.

Click to **RUN** the program.

Click to **START OVER** or **TRY AGAIN**

Click **RESET** to START OVER or TRY AGAIN



BLOCKS student uses to complete level

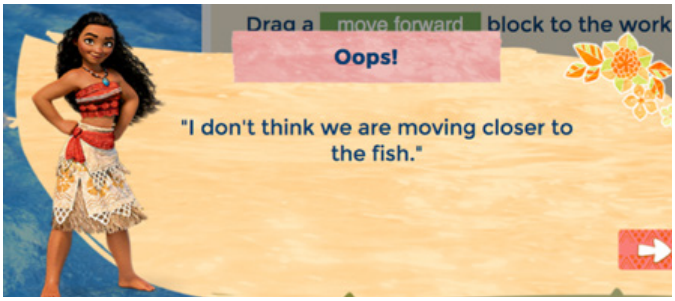
BLOCKS student starts with to complete the level

SUCCESS MESSAGE

"Well done" pop-up =
SUCCESS MESSAGE: student moves on to next level.

TRY AGAIN AND HINT MESSAGE

"Oops" pop-up =
TRY AGAIN MESSAGE: student must try again to complete the level.

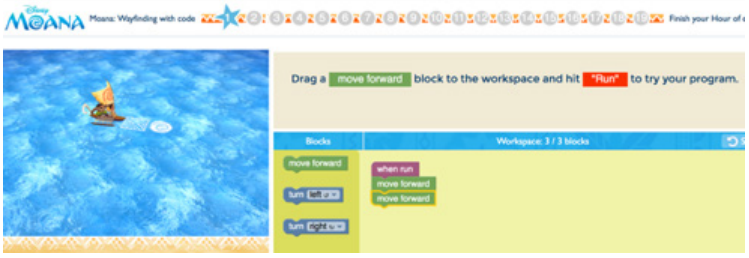


A **HINT MESSAGE** follows the "Oops!" message giving student a hint on how to complete level.

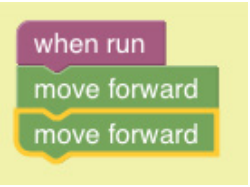
CONCEPT: SEQUENCES

In levels 1-5, students learn how to give a computer a command using blocks from the tool box to move the characters using a sequence. In computer science, a sequence is an instruction in a program that leads to an action or event that is followed by another action or event in a set order.

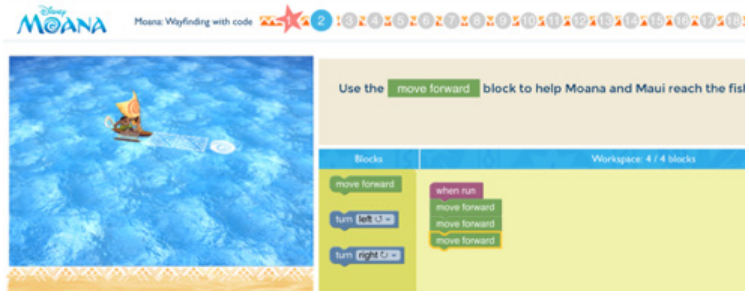
LEVEL 1



ANSWER 1



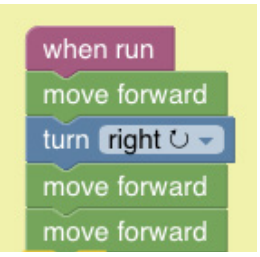
LEVEL 2



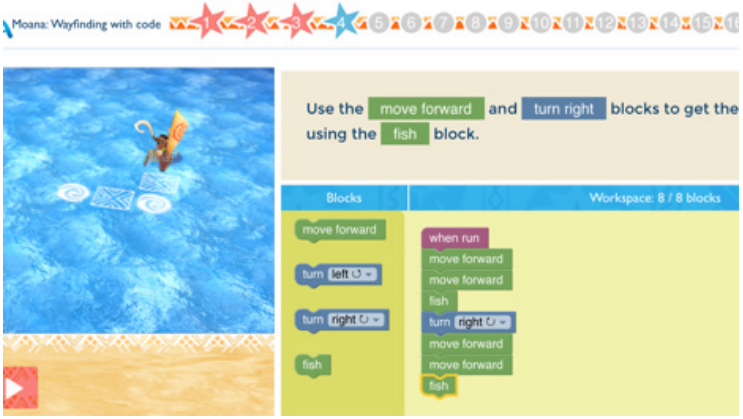
ANSWER 2

LEVEL 3

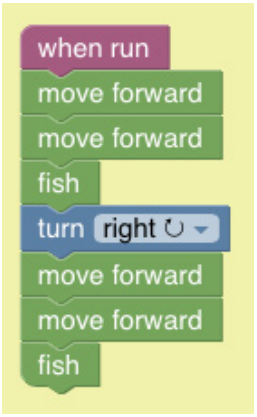
ANSWER 3



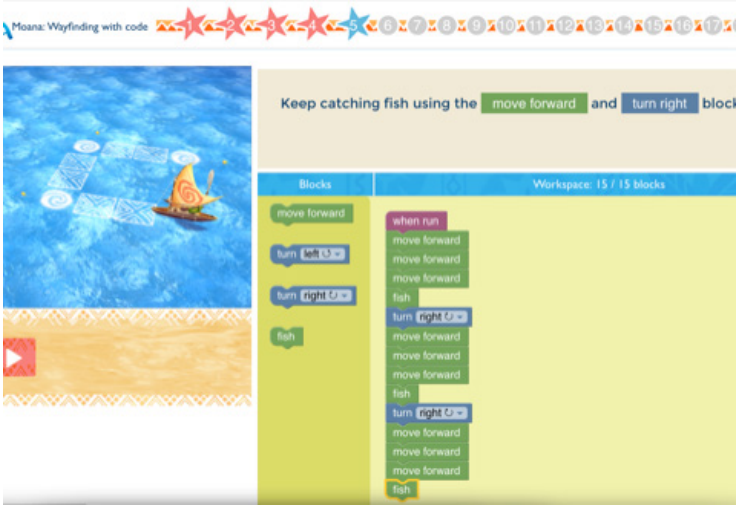
LEVEL 4



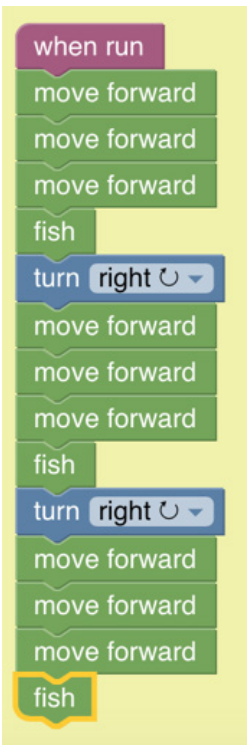
ANSWER 4



LEVEL 5



ANSWER 5



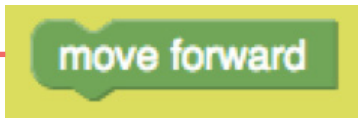
CONCEPT: LOOPS

- **Loops** are a way for a **computer engineer** to shorten the amount of **code** that they write when they'd like an event to repeat several times.
- Instead of writing the same line of code over and over again, you can just set that code on repeat until you decide that it is time to stop.
- This is helpful when writing a lot of code because it saves time when building the code, making the computer do the repetitive task instead of the computer engineer.
- In the following levels, students may use "**repeat blocks**" to give the computer a command to "**loop**" or "**repeat**" an action.
- Students may play a video before Level 6 or select the tab to read the script notes to see how to use the repeat blocks and make a command loop.

REPEAT BLOCK

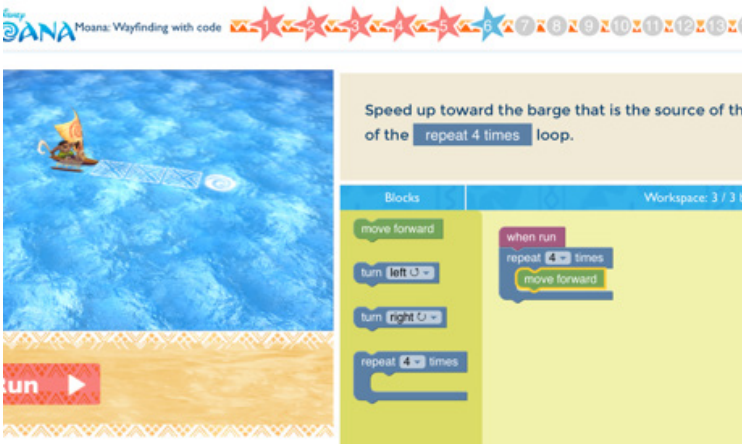
Use drop-down arrow to select how many times you want a command block to repeat

COMMAND BLOCK

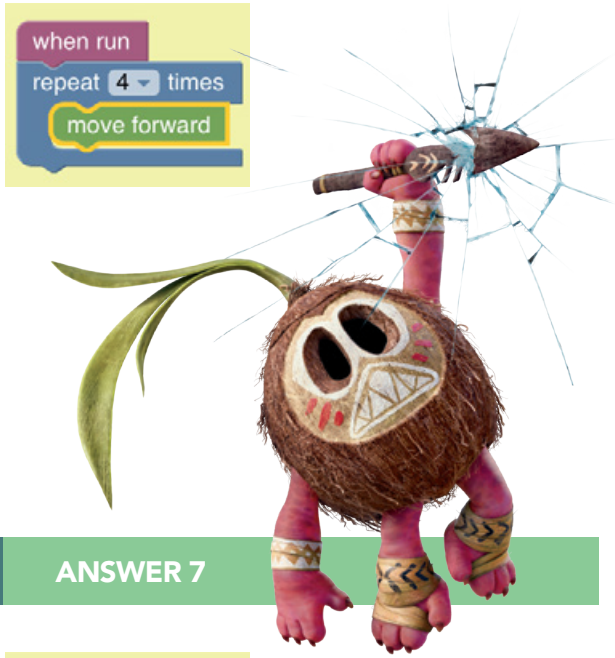


Insert any **COMMAND BLOCK** into a **REPEAT BLOCK** to repeat or "loop" the instruction you have given the computer.

LEVEL 6

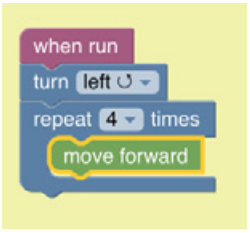


ANSWER 6



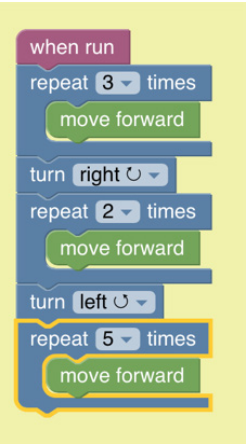
LEVEL 7

ANSWER 7



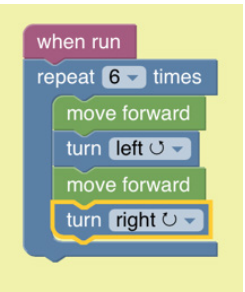
LEVEL 8

ANSWER 8



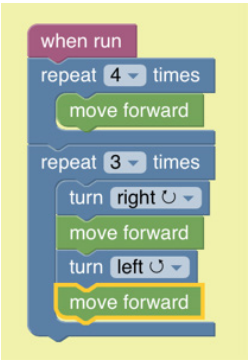
LEVEL 9

ANSWER 9



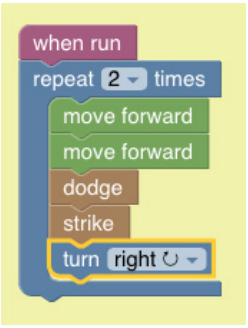
LEVEL 10

ANSWER 10

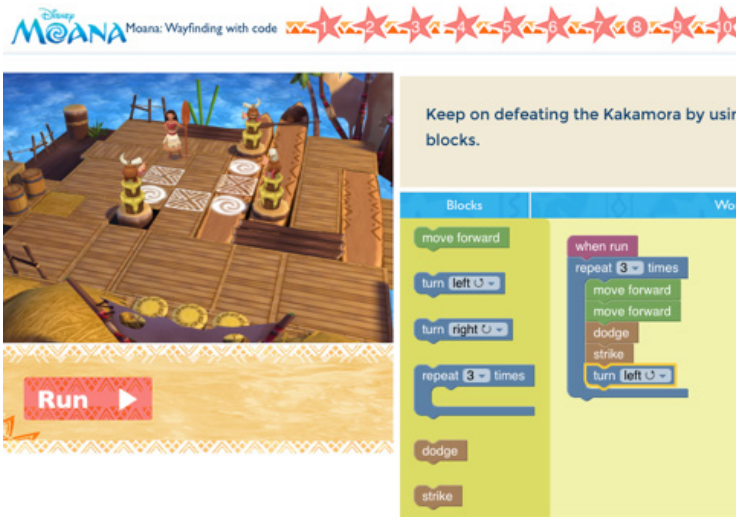


LEVEL 11

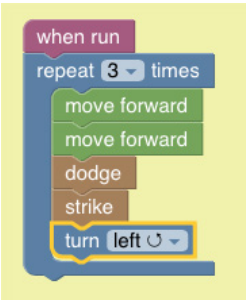
ANSWER 11



LEVEL 12



ANSWER 12

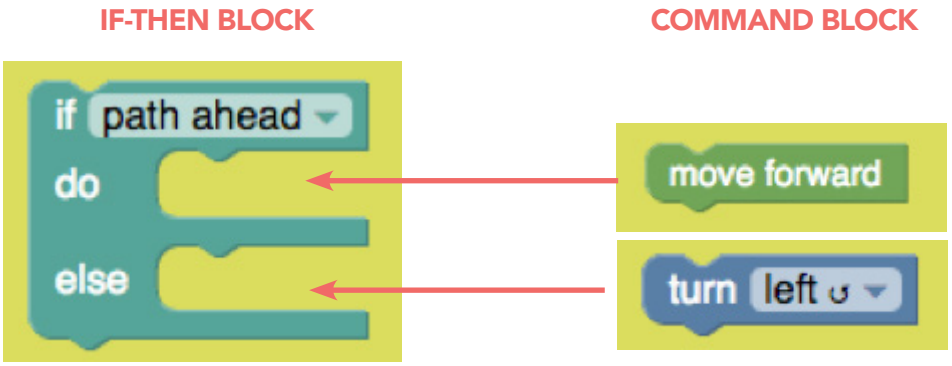


LEVEL 13

ANSWER 13

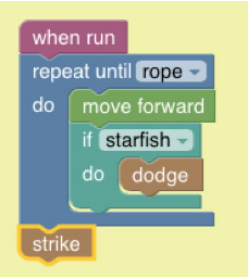
CONCEPT: CONDITIONALS

- When you set a **conditional**, you give the characters the ability to make a decision.
- This means that when the character encounters a certain situation or thing, it makes a decision to do a specific action. Sometimes **conditionals** are called **if-then statements** which we will see in the blocks you drag and drop in the next set of lessons.
- In the following levels, "**If-then blocks**" are available for you to create conditionals.

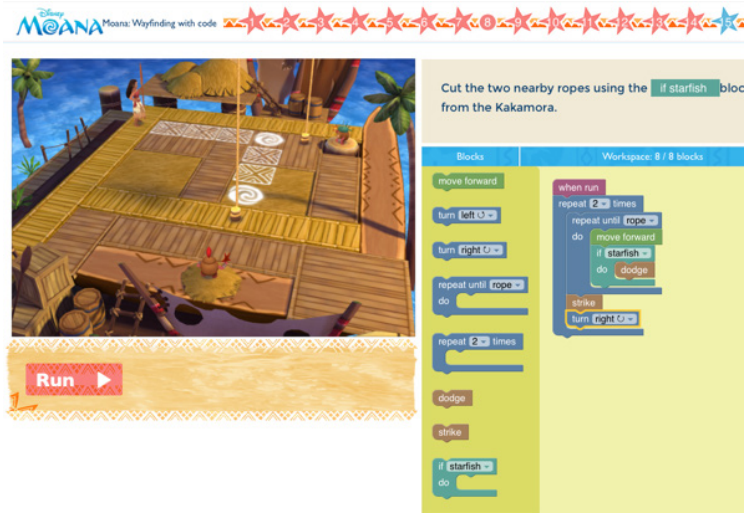


LEVEL 14

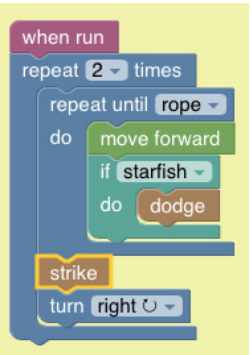
ANSWER 14



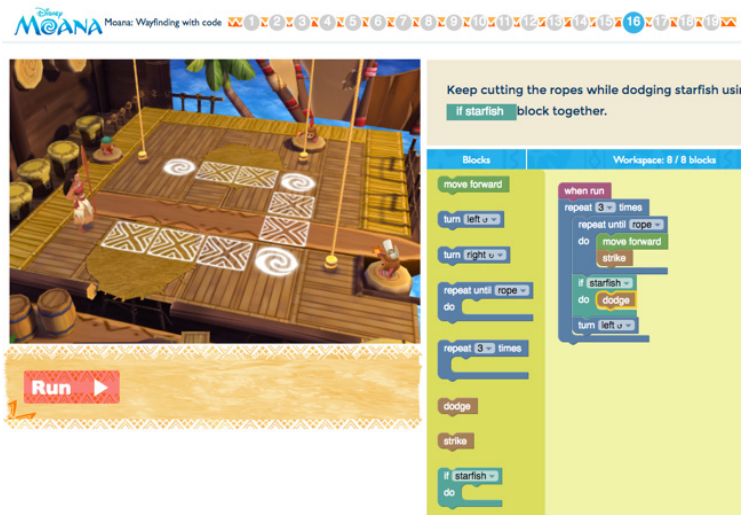
LEVEL 15



ANSWER 15

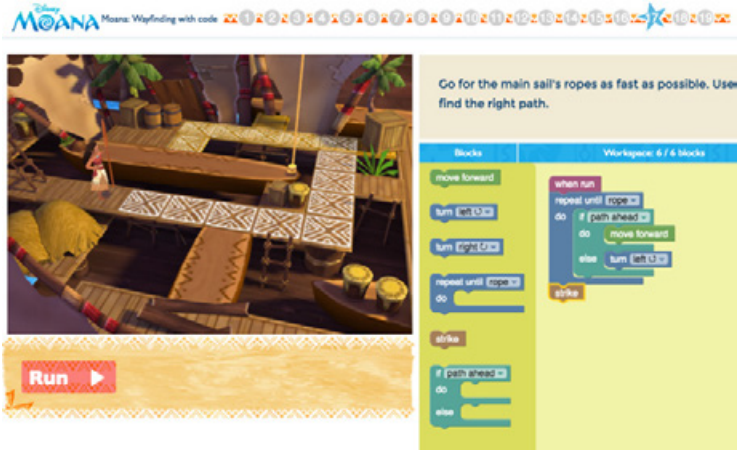


LEVEL 16



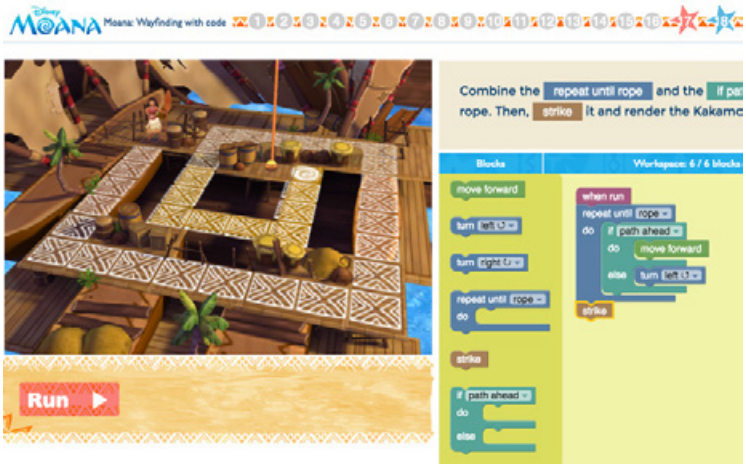
ANSWER 16

LEVEL 17



ANSWER 17

LEVEL 18

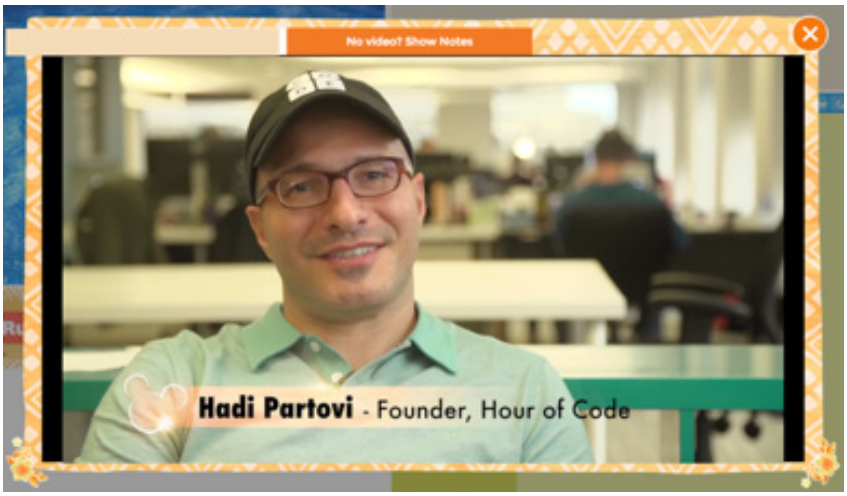


ANSWER 18

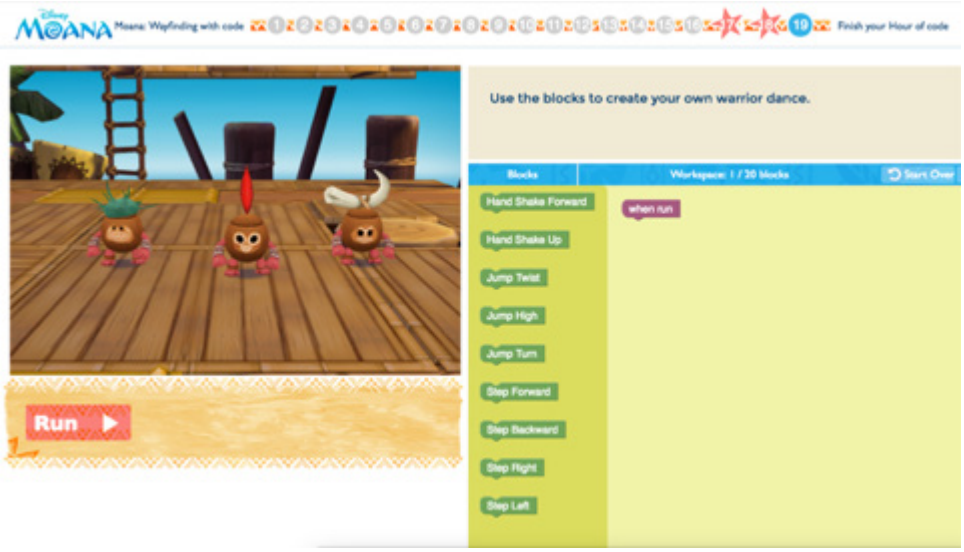
CONGRATULATIONS VIDEO

The final tutorial video plays just before level 19 - the free-play, creative level.

Instructor Tips:
Reinforce with students to keep learning at **www.Code.org**



LEVEL 19



In this level, students get the chance to have free-play time using command blocks and their own creativity to make a dance for the Kakamora Warriors.

Instructor Tips:

- Encourage students to try a number of combinations and to have fun building their own creation.
- When they are finished, they may select "done" and print their certificate.
- It is recommended that instructors pre-print certificates to hand-out at the end of the session.

ASSESSMENT:

- Ask learners what level they liked the most and why. Have students explain concepts they have been introduced to: coding, sequences, loops, conditionals, computer science.
- Ask learners why learning computer science is a good idea — post on a board or screen for learners to see
- Encourage students to keep learning by going to **www.Code.org**!

BEYOND THE HOUR OF CODE

Continue teaching computer science and encourage learners to keep learning! Go to code.org or try Pixar in a Box found at khanacademy.org.

SOME IDEAS SUGGESTED BY CODE.ORG:

- Teach the Code Studio Computer Science Fundamentals courses.
  - Courses are designed for young or beginner learners.
  - Students work their way through a series of puzzles that teach them to code, and educators have access to engaging lesson plans that help make the learning coming alive.
  - **Code.org** offers free professional development for these courses, online or in-person.
- Research some of the careers in coding identified during Hour of Code.
- Invite a computer science expert to talk to your class about his or her work.
- Show **Code.org** inspirational videos to introduce the Hour of Code and computer science to learners.
- Keep having fun learning!

Disney MOANA
HOUR OF CODE PROGRESS TRACKER

Use the Progress Tracker below to check off each lesson you complete.

Remember:
You learn by doing! Sometimes making an error is the best way to learn. If you get stuck – try again, read the instructions or ask a teacher or classmate for help.

CONGRATULATIONS!

You did it – to keep on learning, go to:
Disney.com/HourofCode and **Code.org**!

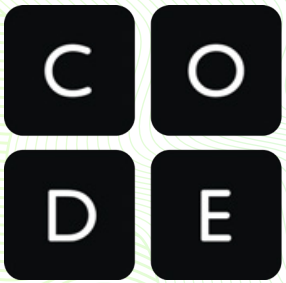
Certificate of Completion

This certificate is awarded to

for successful completion of

The Hour of Code

and demonstrating an understanding of
the basic concepts of Computer Science.



www.code.org

Hadi Partovi

Hadi Partovi, Co-founder and Chief Executive Officer, Code.org

To learn beyond your first hour, visit Code.org

Disney MOANA HOUR OF CODE ACTIVITY GUIDE

Continue your coding adventure with more coding activities!

For offline coding activities visit:
- **www.code.org/curriculum/unplugged**

For online coding activities visit:
- **Disney.com/HourofCode**
- **Code.org**

LOOPS ACTIVITY

As we learned in the Moana Wayfinding with Code tutorial, loops are a set of coding instructions that cause an action or process to repeat a certain number of times. For a computer programmer, coding a loop is more efficient than writing the same line of code multiple times.

GUIDED ACTIVITY

1. Look at the dance moves provided.
2. Following the dance moves on the worksheet, practice entire dance slowly.
3. Now try the dance again at full speed.
4. Do you notice any loops in the instructions?
   - What would the dance look like if we repeated it 2 times?
   - What if we repeated it four times?
5. Can you find anything else in the dance that we could use a loop for?

DO IT YOURSELF DANCE ACTIVITY

1. Cut out the dance moves on the DIY handout.
2. Create your own dance by rearranging the dance moves you've cut out.
3. Identify places where you could replace the squares with a loop. Remove the dance move tiles and replace with a LOOP tile.
4. Practice your own dance slowly.
5. Try the dance again at full speed!

CONDITIONALS ACTIVITY

As we learned in the Moana Wayfinding with Code tutorial, a conditional is a statement that a computer programmer writes which tells the computer what to do, under certain conditions. For a computer programmer, coding conditionals controls which specific action or process occurs, and when!

CONDITIONAL STATEMENT:

If (card shows Kakamora jump high)
    Award your team 5 points.

Else
    If (card shows Kakamora tuck arm)
        Award your team 5 points.

Else
    Award Kakamora 2 point.

WRITE YOUR OWN CONDITIONAL STATEMENT:

If (_____)

    If (_____)

        Award _____ (which team) _____ (# of points)

    Else

        Award _____ (which team) _____ (# of points)

CONDITIONALS ACTIVITY

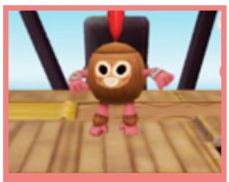
GUIDED ACTIVITY

1. Look at the conditional statement at the top of the worksheet. Read the statement out loud and confirm you understand the conditions.
2. Look at the score sheet and locate where points are tallied for the "Moana & Maui team" versus the "Kakamora team".
3. Shuffle the cards in your stack. Then, put them in a single pile with the characters facedown. Pick up the first card in the deck and flip it over.
4. Using the conditionals, determine which of the two teams is awarded points.
5. Write down the score for each round. Repeat 4 times.

DO IT YOURSELF ACTIVITY

1. Who won the game? What do you notice about the conditionals?
2. If you could add a conditional, what would it be? Practice writing your conditional using the format
3. Play 4 more rounds, using your conditional.

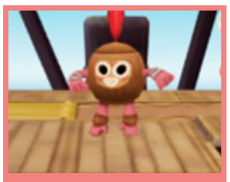

RAISE HAND

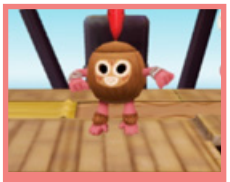

JUMP HIGH

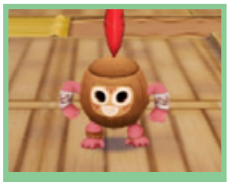

RAISE HAND


JUMP SPIN


PUNCH


JUMP HIGH

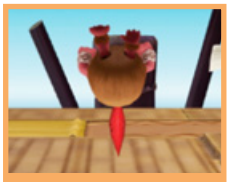

JUMP HIGH

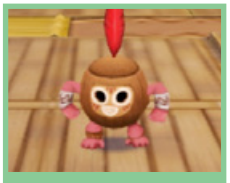

TUCK ARMS

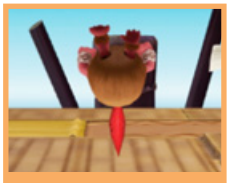

PUNCH


PUNCH

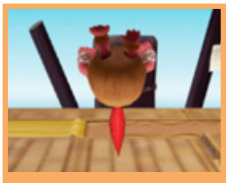

JUMP SPIN

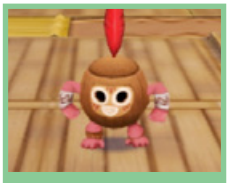

JUMP FLIP


TUCK ARMS


JUMP FLIP


RAISE HAND


JUMP FLIP


TUCK ARMS


JUMP SPIN

LOOP

LOOP

LOOP

LOOP

LOOP

LOOP