**Hour of Code: Scratch**

**Session Facilitator Preparation**

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| **Platform** | Web browser with Adobe Flash Player |
| **Setup Prior to Session** | None |
| **Session Facilitator Preparation** | 1. **Go to the Scratch Hour of Code website** at <http://scratch.mit.edu/projects/editor/?tip_bar=hoc> 2. Walk through the instructions below: watch the videos and practice creating a Scratch program |

**Hour of Code: Scratch**

**Student Activity Agenda**

1. **Introduction: What is Computer Science, and What is the Hour of Code?**
   1. Please present the introduction below in terms the grade levels you are teaching will best understand.
   2. “Today we’re participating in an activity called the Hour of Code. During this hour, you will use a free tool called (name of tool) to learn how to code. Another word for coding is programming. Has anyone heard of the words *coding* or *programming* before? Where did you hear about them?”
   3. “When you code, you are writing instructions for what a computer should do. You are in charge, and you tell the computer what to do.”
   4. “A computer scientist is someone who writes code in order to solve problems and invent new things. Think about things in your everyday life that use computer science: a cell phone, a microwave, a computer, a traffic light… all of these things needed a computer scientist to help build them.”
   5. “Computer science blends human ideas and digital tools to increase our power. Computer scientists work in so many different areas: writing apps for phones, curing diseases, creating animated movies, working on social media, building robots that explore other planets and so much more."
   6. “Let’s watch a video that explains why computer science is important.”
      * 5 minute video: <https://www.youtube.com/watch?v=nKIu9yen5nc>
2. **Programming Activity Instructions**
   1. Go to the Scratch Hour of Code website at <http://scratch.mit.edu/projects/editor/?tip_bar=hoc>
   2. **Show students the video on each page.** Be sure to make each video **Full Screen** so students can see it better. After each video, **give students time to complete the task on their own**.
      * **Hour of Code Scratch Tutorial**
      * **Explore Ideas for Your Card**
      * **Delete the Cat**
      * **Add Sprites**
      * **Make the Sprites Interactive**
      * **Move**
   3. After showing the **Move** video, be sure the students understand how to execute their Scratch program.
      * After the students drag their block onto the Scripts area, they should **click on the block** to make the sprite perform the action.
      * When adding another block, be sure to snap the block above or below other blocks.
   4. Continue showing videos and allowing students time to complete the task.
      * **Say Something**
      * **Make a Sound**
      * **Change Color**
      * **Change Costume**
      * **Add a Background Image**
      * **Add a Background Sound**
      * **Set up the Project**
   5. Show students that each sprite’s blocks (if they chose to add blocks to every sprite) should begin with **when <green flag> clicked**. This is found under the **Scripts tab > Events**. When their program is saved and posted on the Scratch website, others can play their card by pressing the Green Flag icon. If each sprite’s blocks begin with a green flag, then the sprites start acting as soon as the green flag is clicked.
   6. Show students that a sprite can also respond when someone clicks on it. This sprite’s block would start with **when this sprite is clicked** to make the sprite do something else when clicked. This is also found under the **Scripts tab > Events**.
      * Additionally, a sprite whose first block starts with **when <green flag> clicked** could have a separate second block that starts with **when this sprite is clicked**. This would make the sprite do something at the start of the program, and then do something else when clicked.
   7. Continue showing videos and allowing students time to complete the task.
      * **Share Your Project**
   8. Saving the project on the Scratch website is optional. If the student chooses to save their project online, they must create an account. If the student is under 13, they may use their parent’s email address to create an account.
      * The student should include a description of how to interact with the holiday card when saving/sharing their program.
   9. Students can share their holiday card with friends and family by giving them the link to card, which is displayed in the address bar.
3. **Closing**
   1. **Did you have fun today?**
      * Ask students to describe what they enjoyed about the activity and what was challenging.
   2. **Would you like to learn more?**
      * “If you enjoyed this activity, you can continue using Scratch on your own! Scratch is free.”
      * “There are also lots of other free tools to help you learn to code. If this tool was challenging for you, you could try a different tool.”
      * Pass out the handout that includes a list of free tools that teach coding/programming concepts.
      * “In Middle School and High School, you can sign up for classes that help you learn more about Computer Science. 7th and 8th graders can sign up for Instructional Technology Applications, and 9th through 12th graders can sign up for Computer Science.”
   3. **For Older Students: There are lots of jobs for people interested in Computer Science!**
      * “A recent Forbes Magazine article stated that the Austin area is ranked #1 in creating the most technology jobs. That means that if you want to work in computer science or other technology fields, there are lots of jobs right here in the Austin area!”
        + <http://www.forbes.com/sites/joelkotkin/2013/11/20/the-surprising-cities-creating-the-most-tech-jobs/>