



Animated Genres Curriculum Introduction and Summary

This curriculum introduces powerful ideas from engineering and computer science that are not usually highlighted in early childhood education. The term “powerful idea” refers to a concept that children can learn through a curriculum that will serve them beyond the lifetime of a specific classroom technology. In this case, the curriculum revolves around the ScratchJr iPad application. Powerful ideas may be applied to many disciplines and will be rewarding in students’ academic and personal futures. Throughout the following curriculum, both activities and lessons will seek to illustrate these powerful ideas.

The curriculum will be divided into three modules based on three interactive genres of ScratchJr-based projects. These genres are collage, story, and game. Each of these modules is comprised of two units:

1. A series of lessons that introduce ScratchJr features and programming blocks
2. An opportunity for children to create their own projects by applying concepts learned in module lessons

This curriculum requires one iPad per student. Occasionally, additional materials are required, and they are noted where necessary.

About ScratchJr

ScratchJr is a developmentally appropriate programming language for children ages five through seven. Using the ScratchJr iPad application, children can create their own interactive collages, animated stories, and games. The application is the product of the DevTech Research Group at the Eliot-Pearson Department of Child Development at Tufts University, directed by Professor Marina Bers, and the Lifelong Kindergarten Group at the MIT Media Lab, directed by Professor Mitchel Resnick. Funded by the National Science Foundation (NSF DRL-1118664), the ScratchJr iPad application was released in July 2014.

Pacing

This curriculum is designed to take place over the course of six weeks. Every week, two one-hour lessons are to be taught. While this particular curriculum is described in detail over the following pages, we acknowledge that teachers know their students best. Therefore, teachers should adjust activities and lessons to accommodate both the classroom culture and students’ technological experience and developmental levels.

Module 1 – Interactive Collage

Lessons (1 hour each):

1. Instructions, Sequencing, and an Introduction to the ScratchJr iPad Application
2. Same Block Sequencing and Motion
3. Start on Green Flag Block, End Block, and Choosing Characters
4. Backgrounds and Review of Programming Multiple Characters

Module 1 Project: Collage

Total Lesson and Project Time: 5 hours





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ScratchJr Blocks Learned:

- Motion: Right, Left, Up, Down, Turn Clockwise, Turn Counterclockwise, Jump, Go Home
- Looks: Bigger, Smaller, Visible, Invisible, Reset Size
- Start on Green Flag
- End

ScratchJr Skills Learned:

- Drag block to scripting area
- Connect blocks
- Choose character
- Create new character
- Start program with green flag
- Stop program with red end block
- Choose backgrounds
- Create new backgrounds

Module 2 - Interactive Story

Lessons (1 hour each):

5. Speed
6. Numbers and Repeating Sequences
7. Speech Bubbles, Sounds, Pages, Wait for

Module 2 Project: Story (two one-hour lessons)

Total Lesson and Project Time: 5 hours

ScratchJr Blocks Learned:

- Speed
- Repeat
- Repeat forever
- Voice recorder
- Speech bubble
- Change page
- Wait for

ScratchJr Skills Learned:

- Program characters to move at different speeds
- Use numbers on motion blocks to reduce the number of motion blocks used
- Use the repeat and repeat forever blocks to make a program repeat
- Record sounds and add them to projects
- Create speech bubbles for characters
- Add additional pages to a project
- Pause a character's program for a certain amount of time

Module 3 - Game

Lesson (1 hour):

8. Start on Bump, Start on Tap, Send and Receive Messages, Stop

Module 3 Project: Game

Total Lesson and Project Time: 2 hours

ScratchJr Blocks Learned:

- Start on bump
- Start on tap
- Send message
- Receive message
- Stop

ScratchJr Skills Learned:

- Use the start on bump block to activate another character's program
- Use the start on tap block to activate a character's program
- Use the send and receive message blocks to initiate another character's program
- Terminate particular characters' programs with the stop block

