classroom.shellyfryer.com
/workshops/scratchjr

29 November 2017

Helping Students Learn Coding with Scratch Jr. and PBS Kids Scratch Jr.

By Shelly Fryer @sfryer
www.shellyfryer.com

In September 2016 and September 2017, I taught Saturday Scratch Jr. Workshops for Kids through The Div @thedivorg

Shelly Fryer

@sfryer

Passionate about helping kids love learning. Wife of @wfryer #OklaEd 3rd grade teacher @casadyschoolokc @pbslrnmedia Innovator @Seesaw Ambassador @iPadMediaCamp

Oklahoma City, Oklahoma

shellyfryer.com/about

Joined April 2008

3rd Grade Teacher

In September to November 2017, I taught an 8 week after-school class for 2nd - 4th graders on coding with PBS Scratch Jr.

classroom.shellyfryer.com/workshops/scratchjr

Outline for Today:

1. Why do this?
2. Listen to the Students (explaining what they built with code and learned)
3. How: Suggestions for skill building and projects

Access these slides and all referenced resources!

classroom.shellyfryer.com/workshops/scratchjr

What are Scratch Jr. and PBS Scratch Jr.?

ScratchJr

Coding for young children

Coding is the new literacy! With ScratchJr, young children (ages 5-7) can program their own interactive stories and games. In the process, they learn to solve problems, design projects, and express themselves creatively on the computer.

Download on the App Store

GET IT ON Google play

available in the chrome web store

amazon Available at amazon

www.scratchjr.org

What are Scratch Jr. and PBS Scratch Jr.?

PBS KIDS ScratchJr - Learning Resources

With PBS KIDS ScratchJr, kids can create their own interactive stories and games featuring their favorite PBS KIDS characters. The storytelling possibilities are endless with this creative coding app for children ages 5-8. Below you can find resources and activities designed for educators to support the use of the app in both formal and informal learning settings.

Download on the App Store

GET IT ON Google play

pbskids.org/learn/scratchjr/

Why I love teaching students coding with Scratch Jr…

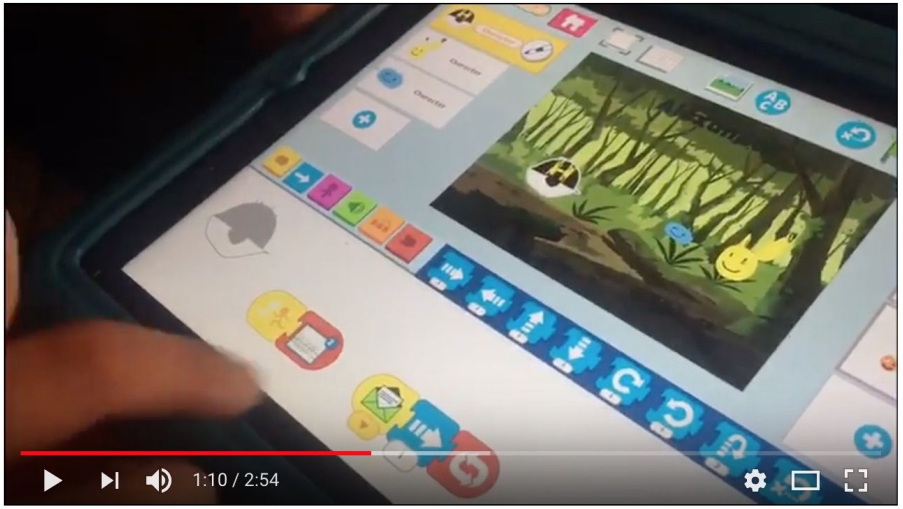
- Student engagement
- Self-directed creation (not "mad lib coding")
- More complexity
- Introduces vocabulary
- Explain what you've created

Why I love teaching students coding with Scratch Jr...

- Starting with zero coding experience: Laying the foundation with basic building blocks
- Students are the CREATORS!

safeYouTube.net/w/uypc

YouTube Search



Alexander's Pokemon game www.youtube.com/watch?v=78e-KG_IDRA

No views 0 0 SHARE

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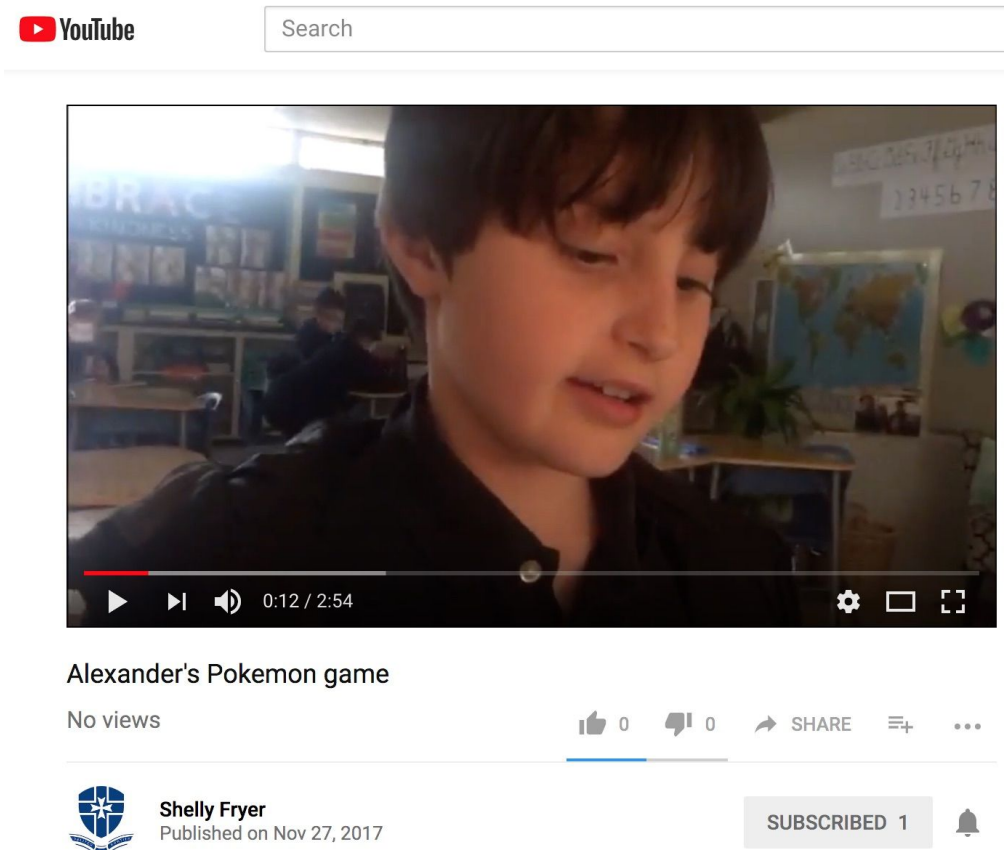
Published on Nov 27, 2017

SUBSCRIBE 1

Safe YouTube
Watch & Share Safely

Did you notice?

- Skill and ease navigating within the app (resetting code, using vocabulary)
- Originality and Creativity
- Connections to his own interests, passions, and experiences
- Ability to explain his code and how he copies code



“Low Bar - High Ceiling”

SCRATCH JR

h/t Mitch Resnik @mres

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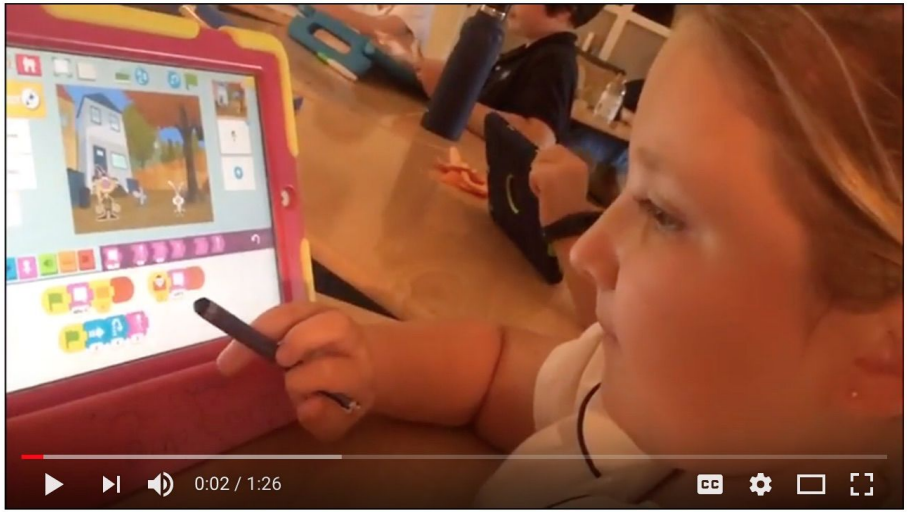

Planning Stages of Allison's Adventure

www.youtube.com/watch?v=ECkrAfnMP7c

No views

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SUBSCRIBE 1

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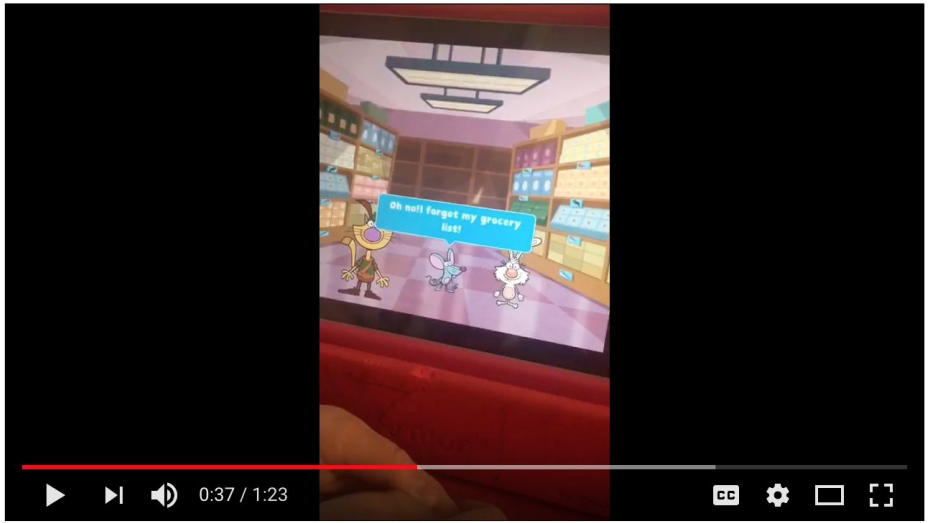
Did you notice?

- Builds “coding a conversation” skills
- Sending and receiving messages
- Great language arts activity: Learning about beginning, middle & end of a story

“Integrating coding across the curriculum”

safeYouTube.net/w/rzpc

YouTube Search



Allison's Adventure

No views

www.youtube.com/watch?v=wwArKbWDDsU

0 0 SHARE

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SUBSCRIBE 1

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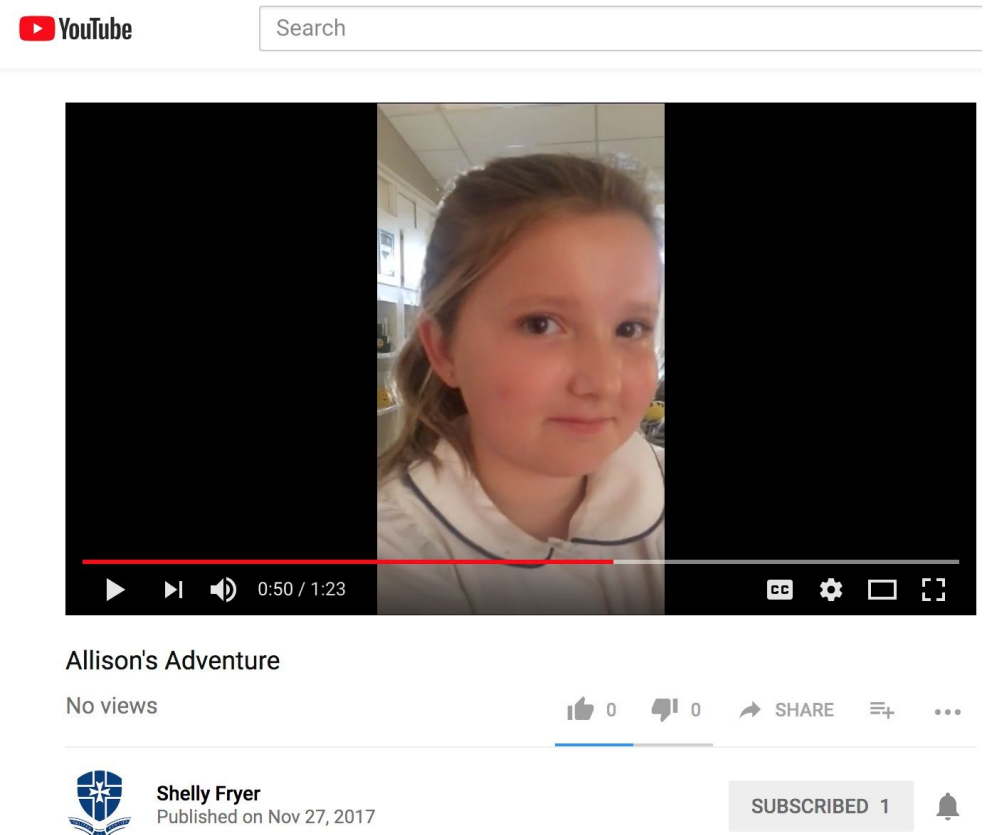
Did you notice?

- Movement, multiple backgrounds, conversation
- Story has beginning, middle and an end
- How she went beyond the basic lesson
- “Hard fun”



Asking students to “read their code” and explain their thinking is essential!

Seesaw
The Learning Journal

How: Skill Building & Projects

Scratch: Imagine, Program, Share

Search this site

- Scratch Camp
  - April 2016
  - July 2012
  - June 2012
  - March 2013
  - May 2016
  - May 2017
  - Scratch Resources
  - September 2016
  - September 2017
- Sitemap

Div Jr

Learn more about The Div!

Our Scratch Camp is

Scratch Camp > sites.google.com/site/divjrscratch/home/september-2017

September 2017

These are resources for the September 16, 2017 PBS Scratch Jr Code Camp in Edmond, Oklahoma, sponsored by The Div Jr (@thedivorg) and led by Shelly Fryer (@sfryer).

Table of Contents:

Contents

1 Introduction to PBS Scratch Jr.
2 Activity 1: Simple Animation
3 Activity 2: Moving Game
4 Activity 3: Story Project
5 Activity 4: Maze Game
6 More Scratch Jr. Resources

Check out “How To” on the startup screen

The “Blocks Guide” explains different types of blocks

TRIGGERING BLOCKS

Start on Green Flag

Starts the script when the Green Flag is tapped.

Start on Tap

Starts the script when you tap on the character.

Start on Touch

Starts the script when the character is touched by another character.

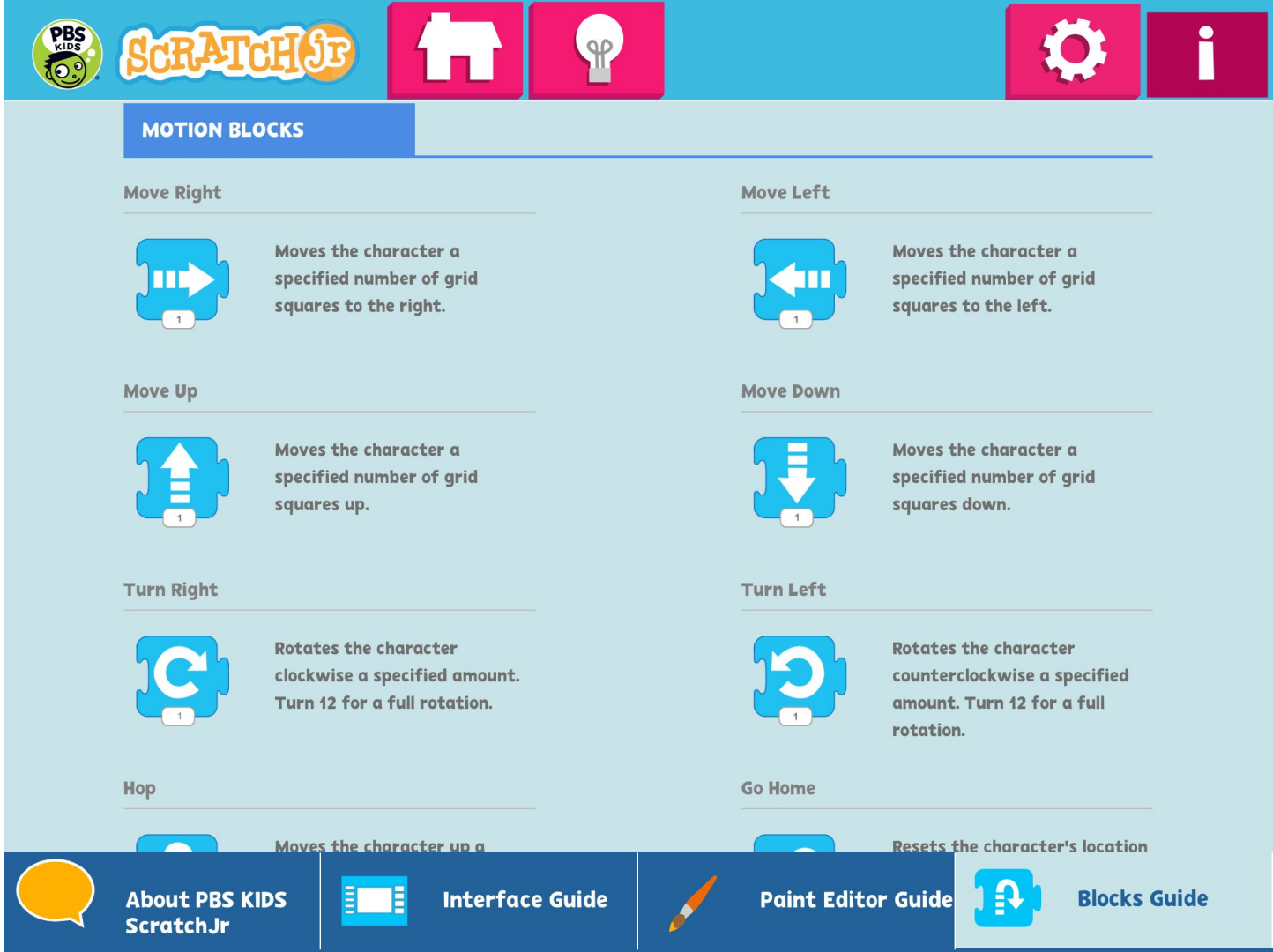
Start on Message

Starts the script whenever a message of the specified color is sent.

Send Message

Sends a message of the specified color.

Motion Blocks



Looks Blocks

LOOKS BLOCKS

Say

Shows a specified message in a speech bubble above the character.

Grow

Increases the character's size.

Shrink

Decreases the character's size.

Reset Size

Returns the character to its default size.

Hide

Fades out the character until it is invisible.

Show

Fades in the character until it is fully visible.

Sound Blocks

Control Blocks

CONTROL BLOCKS

Wait

Pauses the script for a specified amount of time (in tenths of seconds).

Stop

Stops all the characters' scripts.

Set Speed

Changes the rate at which certain blocks are run.

Repeat

Runs the blocks inside a specified number of times.

About PBS KIDS ScratchJr | Interface Guide | Paint Editor Guide | Blocks Guide

End Blocks

END BLOCKS

End

Indicates the end of the script (but does not affect the script in any way).

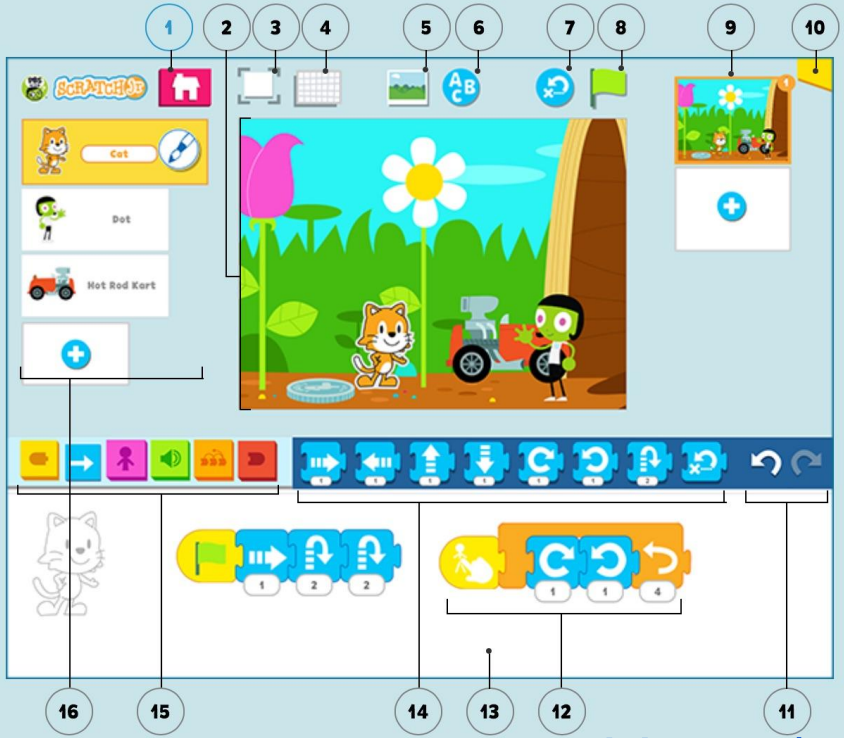
Repeat Forever

Runs the script over and over.

Go to Page

Changes to the specified page of the project.

Build vocabulary: characters, stage, green flag, pages, blocks, etc.



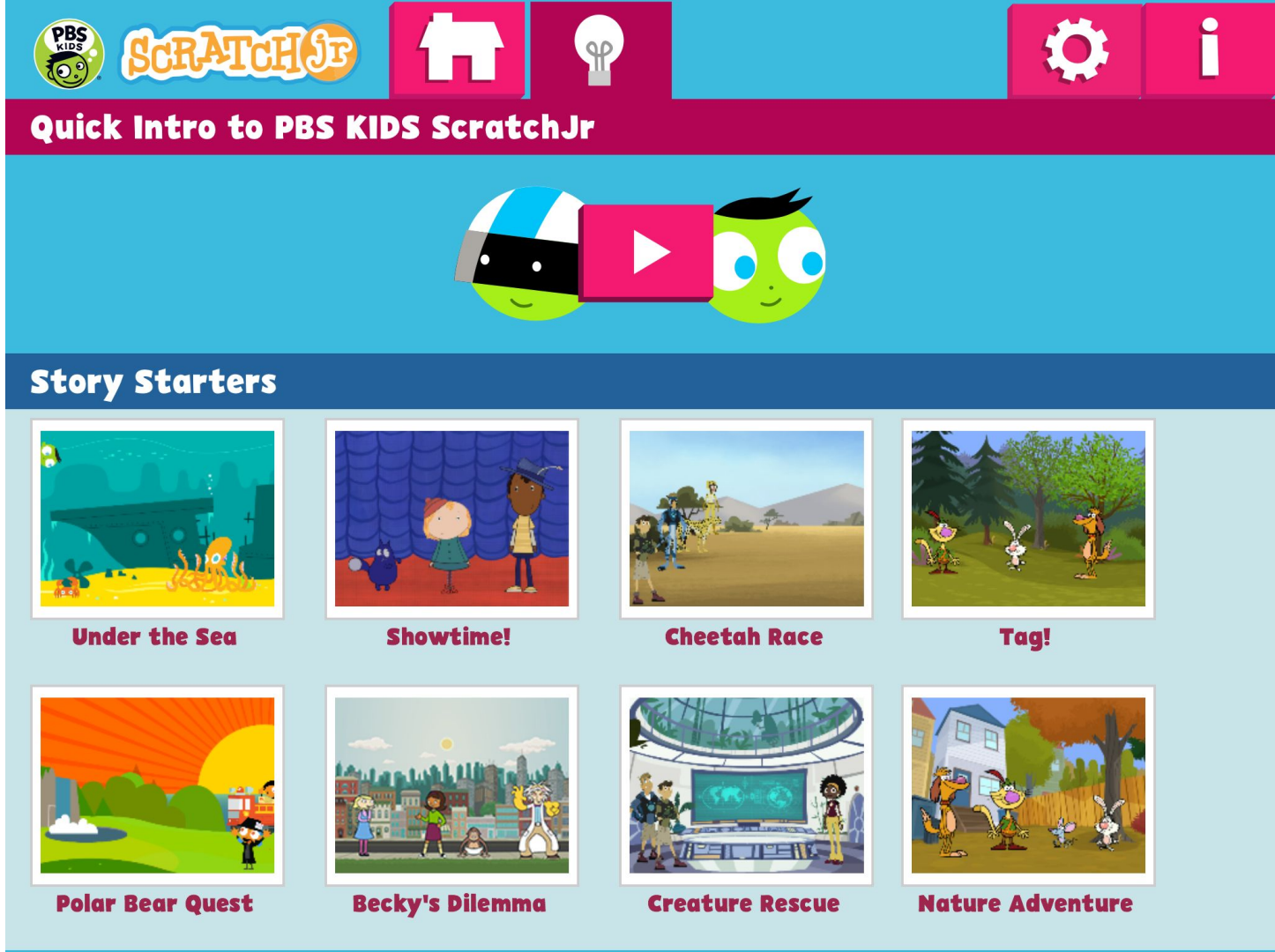
1 | Save

Save the current project and exit to the Home page.

www.scratchjr.org/learn/interface

About PBS KIDS ScratchJr | Interface Guide | Paint Editor Guide | Blocks Guide

Tap the “light bulb” for Story Starters



Recommended Skill Progression and Project Sequence

ScratchJr

Introduction to PBS Scratch Jr.

An introduction video for the "regular" Scratch Jr app is also available.

sites.google.com/site/divjrscratch/home/september-2017

Activity 1: Simple Animation

Race Game Animation

Learn to create an animated math flashcard in Scratch Jr.

sites.google.com/site/divjrscratch/home/september-2017

Activity 2: Moving Game

Download a finished example of this "Moving Game" to your tablet and open it in the PBS Scratch Jr. app. Then show it to students FIRST before showing the videos.

sites.google.com/site/divjrscratch/home/september-2017

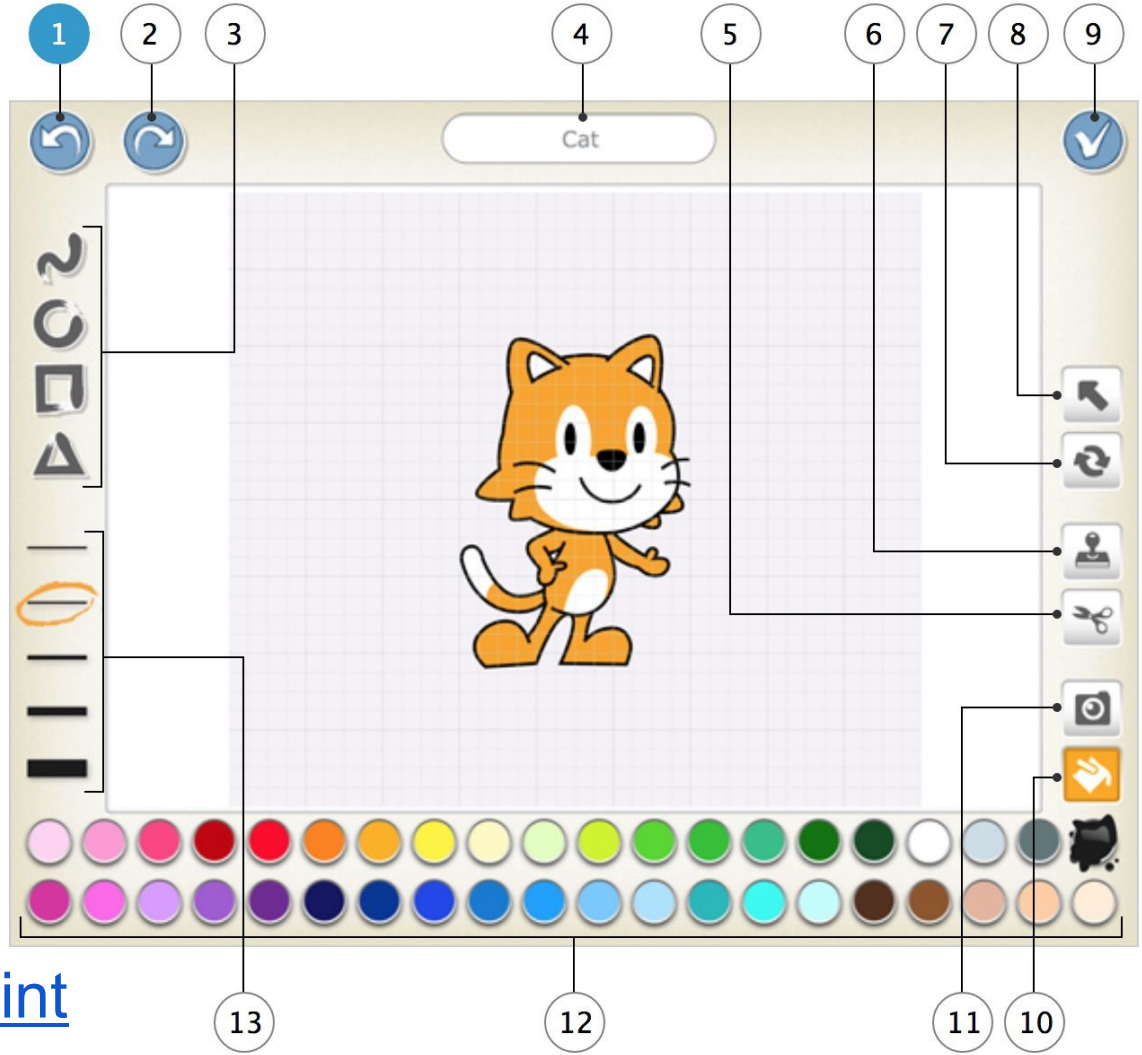
Activity 3: Story Project

Additional Video Tutorials are:

1. Coding: Creating a Conversation (Scratch Jr)
2. Building a Dialog in Scratch Jr

Conversation Project: Make Your Characters Talk! (PDF)

Provide time for students to explore and create in the Scratch Jr. “Paint Editor”



www.scratchjr.org/learn/paint

Activity 4: Maze Game

sites.google.com/site/divjrscratch/home/september-2017

YouTube Search

safeYouTube.net/w/s0pc

Safe YouTube
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PBS ScratchJr Passion Project (4th grade) www.youtube.com/watch?v=uXAA9AZtcK0

154 views

1 0 SHARE

M **Mrsfryer**
Published on Jun 25, 2016

SUBSCRIBED 37

Did you notice?

PBS ScratchJr Passion Project (4th grade)

154 views

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Mrsfryer
Published on Jun 25, 2016

SUBSCRIBED 37

- How he read his code like reading a paragraph
- How proud he was of the complexity of his code
- This project took time!
- His coding skills translate to other apps

Lots of Additional Resources!

www.scratchjr.org/teach/activities

Lots of Additional Resources!

ACTIVITIES

Tree Problem
Help rescue PEG + CAT from a tree

Creature Powers
Animate animal traits with the WILD KRATTS

Something Odd
Solve odd problems with coding and creativity

Space Exploration
Create an adventure with READY JET GO!

How Plants Grow
Grow a digital garden with NATURE CAT

Becky's Choice
Explore cause and effect with WORDGIRL

Story Mash-up
Create a mash-up with PBS KIDS characters

pbskids.org/learn/scratchjr/

You can do this! Your students will help & will LOVE coding with ScratchJr

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