## Unit 2

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## Ceneral Accomodation by Ability Level

## **Schedules**

- Schedules are a guide.
- Time for tasks and breaks should be individualized based on attention span and behavioral needs.
- Observational data should be collected to document these needs.

## **Pre-Teaching**

#### Group 1

- Students with little or no formal communication systems, low tech AAC, sight word or non-readers will need 1:1 or 1:2 instruction
- **m** Manipulatives
- Direct Modeling by the teacher
- mand-under-hand to instruct, and hand-over-hand to model responses.
- Systematic Prompting
  - Least prompts, Most to Least, Guided Practice (independent; verbal cue; model; physical prompt, if tolerated)
  - Select the individualized prompts and record student response data
- Lessons broken into smaller segments
- Repeated practice

#### Group 2

- Students who use AAC and/or other visuals for comprehension and have some sight words or pre-K reading levels may need small group instruction
- Lessons broken into smaller segments
- Small group instruction
- Direct modeling by the teacher
- Repeated Practice

#### Group 3

- Students who have a grade 2 reading level or higher, formal communication systems (verbal or AAC) may need content to be broken down into smaller segments
  - Select content reading level grade 2 or grade 4 for each student
  - Video Modeling or Direct Modeling by the teacher
  - Visuals and manipulatives for improved comprehension
  - Probe length of time on task and needs for breaks and adjust instructional times (record if different from times in the suggested schedules)

## Design and Reflection Journals

#### Group 1

- **p** For student with little or no formal communication system:
  - Model and prompt the response
  - May need to only answer like/dislike the task using individualized communication (point to symbol; answer a question with a yes/no response)
  - Have the instructor record the response in the student's journal

#### Group 2

- Students who use AAC and/or other visuals for comprehension and have some sight words or pre-K reading levels may need small group or individual instruction
  - Model expectations and repeat the task for those who did not complete the task
  - Responses may be written, oral with a scribe writing the response in the journal, or may draw a picture.

#### Group 3

- m Students with a grade 2 reading level or higher
  - May need repeated instruction for the first few lessons

Notes:	

Unit 2 SESSJOY 1

## Performing Services

## Session Schedule



Pre-teaching (10 minutes)



Activity Part I (5 min)



Break (2 min - As needed)



Activity Part 2 (15 min)



Break (2 min - As needed)



Activity Part 3 (15 min)

## Pre-Teaching Topics & Terms

## Topics:

Explain events and parallelism to students, and demonstrate how they work in general, and how they function in Scratch.

#### Terms:

Terms	Description and Symbol
Sequence	A pattern or order
Parallelism	Two things that happen at the same time.
Event	Anything that happens.
Script	Written directions of what to say and do
Reset	To re-start from the beginning

### **Expectations:**

Tell students that they will be asked to explain what events and parallelism are as computing concepts and how they function in Scratch.



## Session Objectives

This session aims to introduce students to the concepts of events (one thing causing another thing to happen) and parallelism (multiple things happening at the same time).

## Learning Objectives

By the end of this session, students will be able to:

- 1. Explain events in terms of what they are and how they work in Scratch.
- 2. Explain parallelisms in terms of what they are and how they work in Scratch.

## ACTIVITY DESCRIPTION



#### **Activity Part I**

- m Have a projector connected to a computer with Scratch open to display which blocks and scripts will be performed.
- Ask two volunteers from students with a grade 2 or higher reading level.

#### **Activity Part 2**

Prompts the two volunteer students to act out the following series of instructions.

- 1. Have one student volunteer walk across the room
- 2. Have that student "reset" (walk back to the starting position)
- 3. Have that student walk across the room and talk simultaneously
- 4. Have that student "reset" (walk back to the starting position)
- 5. Add the second student volunteer by having the second student simultaneously (but independently) walk across the room
- 6. Have both students "reset" (walk back to the starting position)
- 7. Have both students do a dependent task, like responding to each other as they walk
- 8. Have both students "reset" (walk back to the starting position)

## **Activity Part 3**

Ask students with pre-K reading level or higher to reflect on the experience to discuss the concepts of events and parallelism using reflection prompts in their design journal. Ask students to discuss the reflection prompts with their peers or USATs.. Discussions include AAC, showing the drawings. For students who cannot engage in discussions or choose not to do so, ask if they like/don't like the project. The USAT should note student names and responses.

### Resources:

**p** Projector

## Notes to the Teacher

- **¤** Give frequent breaks for students with short attention spans or behavioral needs.
- **¤** Extended time for students as specified in the IEP.
- **¤** For students with tendency to persevere on a topic, involve teacher aid/USATs for individualized assistance.
- **u** Use common and familiar words in your verbal instructions for students having difficulty communicating.

## Notes by the Teachers


## Unit 2 SESSION 2

## Build A Band

## Session Schedule



Pre-teaching (10 minutes)



Activity Part I (10 min)



Break (2 min or as needed)



Activity Part 2 (10 min)



Break (2 min or as needed)



Activity Part 3 (15 min)



Break (2 min or as needed)



Unit 2 / Session 2

## Pre-Teaching Topics & Terms

## **Topics:**

Show students how to create a Scratch project with more one sprite which play sounds when events, like 'when this sprite is clicked', occur

#### Terms:

Terms	Description and Symbol
Band	A group that makes music together.
Music Extension	The place on scratch where you can find music blocks.
Sound tab	The place on scratch where you find sounds to use.
Sound	What you hear.
Costum Interactive Sprite	A sprite you can make move, or make sounds by clicking on it.

Unit 2 / Session 2

### **Expectations:**

Explain to the students that they will be creating a Scratch project with at least one sprite, i.e., a musical instrument, containing at least one sound, which plays when an event attached to the sprite occurs.

## Session Objectives

The purpose of this session is to teach students how to create a project that combines interactive sprites with interesting sounds.



## Learning Objectives

By the end of this session, students will be able to:

1. Create a Scratch project consisting of at least one sprite that plays a sound upon an event attached to the sprite occurs.

## ACTIVITY DESCRIPTION



#### **Activity Part I**

- Show example projects from the Build-a-Band studio . For students who have little or no formal communication systems use one-on-one instruction. For students who need prompting to stay on task use 1:2 instruction .
- m Let all students watch the Build-a-Band studio instructional video

#### **Activity Part 2**

- Have students with a pre-k and higher reading level follow the Build-a-Band handout. For students with little or no formal communication and for students who are struggling with the handout, demonstrate the steps, paired with each step of the handout as students model each step.
- Create a demo interactive instrument on the projector for students who continue to struggle with the above steps or who have little or no formal communication system in a 1:1 or small group setting.
- Ask students engage with videos watch the Build-a-Band demo instructional video
- Ask USATs to work with students who are struggling in a small group setting to create interactive instruments by pairing sprites with sounds

#### **Activity Part 3**

- gas Give students with a pre-K reading level or higher time to create interactive instruments by pairing sprites with sounds.
- Encourage students to experiment with different ways to express sounds in Scratch by exploring other blocks in the Music (extension) category or using the editing tools within the Sounds tab.

## **Activity Part 4**

- Allow students with a pre-k or higher reading level to demonstrate their projects to one another and/or USATs, or ask them to share with the class on the projector. (individualize based on data from previous lessons and document).
- Ask students to use the reflection prompts as they explain their bands
- Ask students to think back on the design process by responding to the reflection prompts in their design journals in written, drawn, and/or symbol format. Reflections include AAC, showing the drawings.
- For students who cannot engage in discussions or choose not to do so, ask if they like/don't like the project.

## **Resources**:

- **p** Projector
- Build-A-Band Handout
- m Build-a-Band studio instructional video at https://youtu.be/DSsJV6Cgp48
- Build-a-Band demo instructional video at https://youtu.be/x4xlHzZz\_ho

## Reviewing Student Work

- m Were students able to open Scratch and find the Tips Window?
- Were students able to create a dancing cat project consisting of at least two Scratch blocks snapped together?
- m Were students able to save and share projects?

## Notes to the Teacher

- mathread Create a studio for the class to collect student work. Start a class Studio for each session or unit using your Scratch account. For students who struggle or do not participate give the students (student names) the link to add their projects for the session or unit. Ask USATs to help students who struggle or have little or no formal communications systems(student names) to go to the class studio for the sessions or units.
- **\mathbb{g}** Give frequent breaks for students with short attention spans or behavioral needs.
- Extended time for students as specified in the IEP.
- **p** For students with tendency to persevere on a topic, involve teacher aid/USATs for individualized assistance.
- **u** Use common and familiar words in your verbal instructions for students having difficulty communicating.

## Notes by the Teacher:

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Unit 2 SESSION 3

# Orange Square, Purple Circle

## Session Schedule

Pre-teaching (10 minutes)



Activity Part I (15 min)



Break (2 min)



Activity Part 2 (20 min)





## Pre-Teaching Topics & Terms

## **Topics:**

Show students how to use the Paint editor to create different shapes and how to add the shapes as Sprites to a Scratch project. Show them one or more examples from the "Orange Square, Purple Circle" studio.

#### Terms:

Terms	Description and Symbol		
Looks Blocks	What you use to make your sprite look different.		
Paint Editor	What you use to make changes to your sprites on scratch.		
Orange Square	A square sprite that is orange.		
Purple Circle	A circle sprite that is purple.		

## **Expectations:**

Tell students that they are expected to create a simple project having an orange square and a purple circle object.

## Session Objectives

This session aims to teach students how to create an art-themed simple Scratch project, and to improve their fluency with Looks blocks and the paint editor.



## Learning Objectives

By the end of this session, students will be able to:

1. Create a simple Scratch project that has an orange square and a purple circle shape.

## ACTIVITY DESCRIPTION



#### **Activity Part I**

- Show students with visual, auditory, and multi-sensory learning channel preference one or more example projects from the Orange Square, Purple Circle studio.
- Ask them to watch the "Orange Square, Purple Circle Studio" and "Orange Square, Purple Circle" instructional videos.
- mathemathcharper Square, Purple Circle" handout available to guide students with visual learning channel preference.
- **p** For students who are struggling, have the USATs use guided practice procedure.
- For students who have little or no formal communication system, use 1:1 instruction with systematic prompting.

#### **Activity Part 2**

- Give students time to create a project that includes an orange square and a purple circle
- Invite students to experiment with Looks blocks and the paint editor to explore their artistic abilities
- m Ask USATs to help.

## **Activity Part 3**

- Utilizing the reflection prompts, encourage students who prefer working in groups to share their creative work with their peers and/or USATs.
- m Have students add their projects to "Orange Square Purple Circle" class studio
- Ask students who prefer working alone to reflect on their design process using the reflection prompts in their design journals in written, pictorial and/or symbol format.
- para For students who do not have a formal communication system and could complete Activities 1 & 2, ask if they like the activity as listed in general accommodations section.
- Document each students' responses.

#### Resources:

- page Square, Purple Circle handout
- Orange Square, Purple Circle studio at https://scratch.mit.edu/studios/475527/
- Orange Square, Purple Circle Handout instructional video
- page Square, Purple Circle instructional video

## **Notes to the Teacher**

- mage Move students who seem agitated, uncooperative, being destructive, and/or showing repetitive, idiosyncratic speech patterns, and/or inappropriate behavior to an individual workstation, a calming, or quiet area.
- maxiety to a familiar environment to reduce their anxiety levels
- **¤** Facilitate ways to calm students down
- pair students who does not initiate interaction but will accept initiations from others with students who prefer studying in groups
- **u** Use common and familiar words in your verbal instructions for students having difficulty communication
- Do not enforce a time limit for students who are having difficulty comprehending instructions and/or completing tasks
- page 5 For students with tendency to persevere on a topic, involve teacher aid/USATs for individualized assistance.

- page 2 For students with tendency to persevere on a topic, involve teacher aid/USATs for individualized assistance (Student names here).
- **u** Use common and familiar words in your verbal instructions for students having difficulty communicating providing symbols or other visuals as needed.

Unit 2 / Session 3

## Notes by the Teacher:


## Unit 2 SESSJOY1 4

## ts Alive



Pre-teaching (10 minutes)



Activity Part I (10 min)



Break (2 min or as needed)



Activity Part 2 (20 min)



Break (2 min)



Activity Part 3 (10 min)

## Pre-Teaching Topics & Terms

## Topics:

Show students one or more example projects from the "It's Alive!" studio. Create a simple animation to model the process.

#### Terms:

Terms	Description and Symbol		
Loops	Code that repeat an action many times.		
Animation	A sprite that changes its costume over time.		
Sprite	Character in Scratch.		
Costume	Clothes worn to make a person look different.		

## **Expectations:**

Tell students that they are expected to create a project to animate an object using loops.

## Session Objectives

The purpose of this session is to teach students how to use loops to create an animation, and the difference between sprites and costumes.



## Learning Objectives

By the end of this session, students will be able to:

1. Create a simple Scratch project that animates an object using loops

## ACTIVITY DESCRIPTION



#### **Activity Part I**

- Show students with visual, auditory, and multi-sensory learning channel preference one or more example projects from "It's Alive!" studio.
- Ask students with visual, auditory, and multi-sensory learning channel preference to watch "It's Alive!" Studio instructional video.
- Ask students with visual, auditory, and multi-sensory learning channel preference to watch the "It's Alive!" instructional video.
- May Have the "It's Alive!" handout available to guide students with visual learning channel preference.
- par For students who cannot complete the process and for student with little or no formal communication system and who do not respond to the video, use 1:1 instruction with systematic prompting.

#### **Activity Part 2**

- Introduce the concept of an animation as looping through a series of incrementally different pictures, such as in a flipbook or a Claymation film.
- Encourage students to explore loops by changing costumes or backdrops to create a project with an animation.
- Ask USATs to help students who prefer working in groups using guided practice.
- p or students who have little or no formal communication system, use 1:1 instruction with systematic prompting.

### **Activity Part 3**

- Invite students who prefer working in groups to share their work with their peers and/or USATs. Have these students put their projects in presentation mode and invite them to walk around and explore each other's projects.
- Ask students who prefer working alone to think back on their design process by responding to the reflection prompts in their design journals in written and/or symbol format

#### Resources:

- "It's Alive!" handout
- m "It's Alive!" Studio at https://scratch.mit.edu/studios/475529/
- "It's Alive!" Studio instructional video at https://youtu.be/GP6NFhfkrOk
- m "It's Alive!" instructional video at https://youtu.be/SJm2a4LJRSs

## Notes to the Teacher

- Move students who seem agitated, uncooperative, being destructive, and/or showing repetitive, idiosyncratic speech patterns, and/or inappropriate behavior to an individual workstation, a calming, or quiet area.
- maxiety to a familiar environment to reduce their anxiety levels
- pa Facilitate ways to calm students down.
- pair students who do not initiate interaction but will accept initiations from others with students who prefer studying in groups.
- use common and familiar words in your verbal instructions for students having difficulty communicating.
- For students with tendency to persevere on a topic, involve teacher aid/USATs for individualized assistance.
- **m** Collect duration data on the students who require frequent breaks.
- **¤** Collect duration data for students who need extended time to complete the tasks.
- paragraph For students with tendency to persevere on a topic, involve teacher aid/USATs for individualized assistance (Student names here).
- use common and familiar words in your verbal instructions for students having difficulty communicating providing symbols or other visuals as needed.

## Notes by the Teachers




## Session Schedule

Pre-teaching (10 minutes)



Activity Part I (5 min)



Break (2 min - As needed)



Activity Part 2 (15 min)



Break (2 min - As needed)



Activity Part 3 (15 min)

## **Pre-Teaching Topics &** Terms

## **Topics:**

Show students how to access the projects in the Unit 2 Debug It! studio, show them what the problems with the projects are, and demonstrate how to solve the problems in one of the projects.

#### Terms:

Terms	Description and Symbol		
Debug	Is finding a problem and fixing it.  ?@?		
Fix	Is to repair a problem.		
Investigate (explore)	Is to examine something to understand it.		
Buggy (many errors)	Is having a lot of problems.		

Tinker (Try and Fix)	Is to try and fix something.
Code (create a program)	Is language that you can use to talk with a computer.
Problematic (difficult)	Is making a task hard to do.
Solution (answer)	Is solving a problem.
Challenge (web activity)	Is testing what you can do.
Testing (To try more than once)	Is trying more than once to find a solution to a problem

### **Expectations:**

Explain students that in this session, they will be expected to identify problems with the projects in Unit 2 Debug It! Studio, investigate sources of the problems, and solve the problems in at least one of the projects.

## Session Objectives

The purpose of this session is to teach students how to identify problems in Scratch projects, investigate the sources of these problems, and offer solutions to debug them.



## Learning Objectives

By the end of this session, students will be able to:

- 1. Identify problems in Scratch projects.
- 2. Investigate the sources of these problems.
- 3. Offer solutions to debug them.

## ACTIVITY DESCRIPTION



#### **Activity Part I**

- mathraxia Have the Unit 2 Debug It! handout available to guide students with pre-K or above reading level.
- Show students who struggle following the handout how to open the Debug It! projects, and debug the problems in one of the projects. Encourage them to click on the "Look Inside" button to investigate the buggy program, tinker with problematic code, and test possible solutions.
- Have students who engage with videos watch the Unit 2 Debug It! studio projects1-5 videos.
- May Have students who engage with videos watch the Unit 2 Debug It! Debug Project 4 video.

#### **Activity Part 2**

Repeat: Step-by-step demonstrate or have USATs demonstrate how to debug one of the projects, pairing instruction with the handout, for the student with little or no formal communication model each step.

### **Activity Part 3**

- m Give students time to test and debug each Debug It! challenge.
- Ask USATs repeat the demonstration and prompt responses for students who are struggling with or without communication problems.

### **Activity Part 4**

- Ask students who have been successful to reflect back on their testing and debugging experiences by responding to the reflection prompts in their design journal in written or drawing format and ask who have difficulty sharing to discuss with a peer or USATs.
- para For students who cannot engage in discussions or choose not to do so, ask if they like/don't like the project

#### Resources:

- ¤ Unit 2 Debug It! handout
- m Unit 2 Debug It! studio at http://scratch.mit.edu/studios/475539
- unit 2 Debug It! studio project 1 at https://youtu.be/vpdgWKJW-G4
- unit 2 Debug It! studio project 2 at https://youtu.be/REFG1mHDYoc
- m Unit 2 Debug It! studio project 3 at https://youtu.be/v0t5WX\_HWv4
- unit 2 Debug It! studio project 4 at https://youtu.be/9rmDymrWU2w
- Munit 2 Debug It! Debug Project 4 at https://youtu.be/Dcpi9eqtLAk
- unit 2 Debug It! studio project 5 at https://youtu.be/o0k5QLBXnVU

## Notes to the Teacher

- Move students who seem agitated, uncooperative, being destructive, and/or showing repetitive, idiosyncratic speech patterns, and/or inappropriate behavior to an individual workstation, a calming, or quiet area.
- maxiety Move students showing anxiety to a familiar environment to reduce their anxiety levels.
- para Facilitate ways to calm students down.
- Pair students who do not initiate interaction but will accept initiations from others with students who prefer studying in groups.
- use common and familiar words in your verbal instructions for students having difficulty communicating.
- Do not enforce a time limit for students who are having difficulty comprehending instructions and/or completing tasks
- para For students with tendency to persevere on a topic, involve teacher aid/USATs for individualized assistance.
- **¤** Give frequent breaks for students, based on data collected.
- m Offer extended time to students as indicated in the IEP.
- Provide positive, meaningful, and immediate feedback to students who show inappropriate behavior and/or unresponsive to reflection prompts.
- print verbal, visual directions before transitions and changes and post them in visible areas in the classroom.

## Notes by the Teachers


## Unit 2 SESSJOYI 6

## Music Viceo



Pre-teaching (10 minutes)



Activity Part I (5 min)



Break (2 min or as needed)



Activity Part 2 (15 min)



Break (2 min)



Activity Part 3 (15 min)

## Pre-Teaching Topics & Terms

## Topics:

Show students a few sample "Music Video" projects from the "Music Video" studio. Model students how to create a simple Music Video project.

#### Terms:

Terms	Description and Symbol	
Music Video	Is a video made for a song or music.	
Animation	A sprite that changes its costume over time.	
Combine	Is to mix things into a one.	

## **Expectations:**

Explain students that they are expected to complete a "Music Video" project that combines at least one sprite with a sound, which plays when an event attached to the sprite occurs.

## Session Objectives

The purpose of this session is to teach students how to create a "Music Video" project in Scratch that combines sprites with sound



## Learning Objectives

By the end of this session, students will be able to:

1. Create a simple Music Video project that combines at least one sprite with a sound

## ACTIVITY DESCRIPTION



#### **Activity Part I**

- Introduce students to the idea of the creating a Scratch project that combines music with animation.
- walk through some of the projects from the "Music Video" studio for students with pre-k reading level or higher.
- Ask these students to watch the "Music Video Studio" instructional video for a sample project.
- Ask USATs to show a few sample projects from the "Music Video Studio" to struggling students.
- a Ask USATs to demonstrate in a step-by-step process using the systematic prompting to encourage struggling students and students with little or no formal communication system to imitate each step.

#### **Activity Part 2**

- m Model creating a sample project for struggling student and students with little or no formal communication system.
- Ask students who were successful above to watch the "Music Video" instructional video for a sample project to follow along.
- Ask USATs to demonstrate in a step-by-step process using the systematic prompting to encourage struggling students and students with little or no formal communication system to imitate each step on a 1:1 basis.

## **Activity Part 3**

- Have students sign in to their Scratch accounts and open a new project or sign in students who cannot do so on their own.
- mathrage "Music Video" handout available to provide guidance to students with a pre-karreading level or higher.
- **\mathbb{g}** Give students time to create a "Music Video" project that combines sprites with sound
- Ask USATs to demonstrate in a step-by-step process using the systematic prompting to encourage struggling students who do not respond to prompting alone, and students with little or no formal communication system to imitate each step on a 1:1 basis.

### **Activity Part 4**

- Ask students who have been successful to reflect back on their testing and debugging experiences by responding to the reflection prompts in their design journal in written or drawing format and ask who have difficulty sharing to discuss with one peer or USATs.
- p Discussions include AAC, showing the drawings.
- For students who cannot engage in discussions or choose not to do so, ask if they like/don't like the project.

#### **Resources**:

- **p** Projector
- m Music Video Studio at http://scratch.mit.edu/studios/475517
- Music Video instructional video at https://youtu.be/X3di\_LN-7aE
- Music Video Studio instructional video at https://youtu.be/L5HneEzQ1wQ
- Music Video handout

## Notes to the Teacher

- Move students who seem agitated, uncooperative, being destructive, and/or showing repetitive, idiosyncratic speech patterns, and/or inappropriate behavior to an individual workstation, a calming, or quiet area.
- mage Move students showing anxiety to a familiar environment to reduce their anxiety levels
- page Facilitate ways to calm students down.
- pair students who does not intitiate interaction but will accept initiations from others with students who prefer studying in groups.
- use common and familiar words in your verbal instructions for students having difficulty communicating.
- Do not enforce a time limit for students who are having difficulty comprehending instructions and/or completing tasks.

## Notes by the Teacher:


44 Accessible Scratch Curriculum: Unit 2 / Session 6

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