Unit 4

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General 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
- Manipulatives
- Direct Modeling by the teacher
- Hand-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

- 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

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

Notes:

UNIT 4
SESSION 1

Dream Game List

Session Schedule

Pre-teaching (10 minutes)

⬇

Activity Part 1 (20 min)

⬇

Break (2 min)

⬇

Activity Part 2 (20 min)

⬇

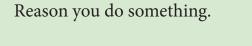Break (2 min)

⬇

Activity Part 3 (20 min)

Topics:

Discuss a few games with students including their design characteristics, mechanics, and common features.

Terms:

Terms	Description and Symbol
Brainstorm	Finding ideas with your group.
Game Mechanics	How you play a game.
Game Design	How the game is made, how it looks.
Design Characteristics (Elements)	Parts of the game that you use or see.

Purpose	Reason you do something.

Expectations:

Tell students that they are expected to come up with a dream game they would like to create including its design elements.

Session Objectives

The purpose of this session is to teach students how to identify common design elements of games.

Learning Objectives

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

1. Come up with a dream game with at least three design characteristics (character(s), scoring, game mechanics, start and ending, purpose, competition, progress, etc.)

Resources:

- ¤ Paper to write down game design elements

- ¤ Things to sketch with (pencils, pens, markers, etc.)

ACTIVITY DESCRIPTION

Activity Part I

- ¤ Divide students with a pre-K reading level or higher into small groups of 2-3 people.
- ¤ In their small groups, ask students to come up with a list of games that they enjoy playing. Students (names) may choose to generate the list on their design journal or (student names) may choose to may do a brainstorm activity with their peers and/or with USATs.

Activity Part 2

- ¤ For students (names) who prefer working in groups, facilitate a class discussion about what characteristics make up a game, and come up with a common game mechanics.
- ¤ Students (names) who prefer to work alone may have the discussion with a peer and/or with USATs, and students may respond to the discussion questions (i.e., what characteristics make up a game and come up with a list of common game mechanics) on their design journals.

Activity Part 3

- ¤ Ask students to describe their dream games with design elements (characters, competition, game mechanics, scoring, start and end, purpose, storyline, progression, etc.) for the games.
- ¤ Students who prefer to work in groups (names) may have a small group discussion,
- ¤ Students who prefer to work alone may discuss this with USATs, may write/sketch this down on their design journals.

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.

- Move students showing anxiety to a familiar environment to reduce their anxiety levels.

- 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

- For students with tendency to persevere on a topic, involve teacher aid/USATs for individualized assistance.

- Give frequent breaks for students as specified in the IEP or based on classroom data

- Offer extended time to students as indicated in the IEP or based on classroom data.

- 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 Teacher:

UNIT 4
SESSION 2

Starter Games

Session Schedule

Pre-teaching (10 minutes)

⬇

Activity Part 1 (5 min)

⬇

Break (2 min)

⬇

Activity Part 2 (10 min)

⬇

Break (2 min)

⬇

Activity Part 3 (20 min)

⬇

Break (2 min)

⬇

Reflection Prompts (5 min)

Pre-Teaching Topics & Terms

Topics:

Go over the scripts for one of the example starter projects (Maze, Pong, or Scrolling).

Terms:

Terms	Description and Symbol
Starter Game	A game that you add your ideas to.
Game-in-progress	A game that is being played now.

Expectations:

Tell students that they are expected to create a starter game project by either starting from scratch or remixing/reusing one of the example starter projects (Maze, Pong, Scrolling).

Session Objectives

The purpose of this session is to teach students how to create a starter game project.

Learning Objectives

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

1. Create a starter game project by either starting from scratch or remixing/reusing one of the example starter projects (Maze, Pong, Scrolling).

Resources:

¤ Maze handout

¤ Maze handout instructional video

¤ Maze example starter project at https://scratch.mit.edu/projects/11414041/

¤ Pong handout

¤ Pong handout instructional video

¤ Pong example starter project at https://scratch.mit.edu/projects/10128515/

¤ Scrolling handout

¤ Scrolling handout instructional video

¤ Scrolling example starter project at https://scratch.mit.edu/projects/22162012/

¤ Games Studio at https://scratch.mit.edu/studios/487504/

ACTIVITY DESCRIPTION

Activity Part 1

¤ Play the Maze, Pong, and Scrolling example starter projects
¤ Have the Maze, Pong, and Scrolling handouts available to guide students with a pre-K reading level and higher (names)
¤ USATs should work 1:1 with students who have little or no formal communication systems, using a step-by-step and systematic prompting, pairing the handout with each step.
¤ Have the Maze, Pong, and Scrolling handout instructional videos available for students who engage with the videos (names)

Activity Part 2

¤ Choose one game project (Maze, Pong, or Scrolling) and go over the script of the game for students with a pre-K to grade 2 reading level.
¤ Students with a grade 3 or higher reading level may choose to examine the script of one of these games with a peer or a USATs or may work on their own to explore one the games.
¤ Students may choose to swatch the Maze, Pong, and/or Scrolling handout instructional video that reviews the script of the game or may follow the print guide
¤ USATs should work 1:1 with students who have little or no formal communication systems, using a step-by-step and systematic prompting, pairing the handout with each step.

Activity Part 3

¤ Give students time to start building their games or let them remix one of the starter projects (Maze, Pong, or Scrolling)
¤ USATs should work 1:1 with students who have little or no formal communication systems, using a step-by-step and systematic prompting, pairing the handout with each step.
¤ Document each student's preference and level of support

Activity Part 4

¤ Encourage students who prefer to work in groups to get feedback on their games-in-progress from peers
¤ Students who prefer to work alone to get feedback from USATs using the reflection prompts. Students who prefer to work alone may reflect on their games-in-progress on their design journals in written and/or symbol format.
¤ Ask students with little or no formal communication system if they like/don't like activity 3.
¤ Ask student to upload their final game projects to the Games studio or a class studio.
¤ Ask the USATs to upload the projects of students who cannot or will not do so.
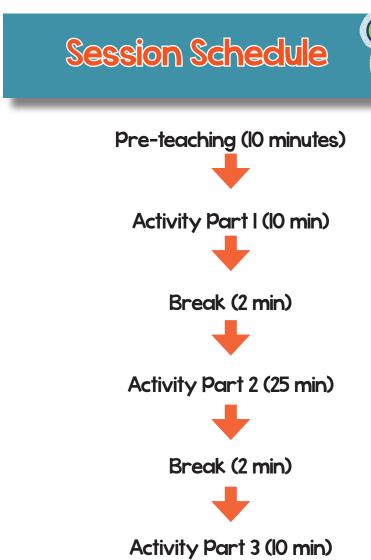¤ Document each student's preference and level of support.

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.
¤ Move students showing anxiety to a familiar environment to reduce their anxiety levels
¤ 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
¤ For students with tendency to persevere on a topic, involve teacher aid/USATs for individualized assistance.
¤ Give frequent breaks for students as specified in the IEP or based on classroom data
¤ Offer extended time to students as indicated in the IEP or based on classroom data.
¤ 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 Teacher:

UNIT 4
SESSION 3

Score

Session Schedule

Pre-teaching (10 minutes)

↓

Activity Part 1 (10 min)

↓

Break (2 min)

↓

Activity Part 2 (25 min)

↓

Break (2 min)

↓

Activity Part 3 (10 min)

Pre-Teaching Topics & Terms

Topics:

Show students how to create variables and use them to keep score for a game.

Terms:

Terms	Description and Symbol
Variable	Information you add to blocks on scratch.
Score	How you do when you play a game.
Scoreboard	Shows you score when you played a game.

Expectations:

Tell students that they are expected to create a variable and use that variable in a scoreboard for a game.

Session Objectives

The purpose of this session is to teach student how to create a variable and use it in a game project to keep score.

Learning Objectives

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

1. Create a variable and use the variable to keep score in a game project

ACTIVITY DESCRIPTION

Activity Part 1

¤ Do a think-aloud as you explore the fish Chomp starter project for students with a pre—K reading level and higher.

¤ Ask USATs do a think-aloud as they explore the fish Chomp starter project for students who are struggling.

¤ For students with little or no formal communication system, ask the USATs to demonstrate 1:1 the exploration of the fish Chomp starter project having the student model each step and using systematic prompting.

¤ Ask students who prefer to work alone explore the fish Chomp starter project either a peer or the USAT.

¤ Have the Score handout available to guide students. For struggling students demonstrate following the steps. For those with little communication have the USAT work 1:1 using the strategies described above.

¤ Have the Fish Chomp starter project instructional video available for students who engage with videos.

Activity Part 2

¤ Help students open the Fish Chomp starter project.

¤ Do a modeling for students with a pre-K an higher reading level how to add a scoreboard to the game by using variables.

¤ Ask USATs to repeat the modeling for struggling students.

¤ Ask students prefer to work in groups to work with their peers to explore the variables and add a scoreboard to the game.

¤ Ask students who prefer to work alone to explore the variables and add the scoreboard to the game have the USAT prompt the students as needed.

¤ Ask students who engage with videos to watch the Fish Chomp starter project and the Score handout instructional videos

Activity Part 3

¤ Ask students who prefer to work in groups to share their Fish Chomp remixes with the scoreboards added. Invite students to present their projects to the class and ask them to use the reflection prompts in their presentations.

¤ Ask students with some characteristics to discuss the design process with a peer or USAT utilizing the reflection prompts in their discussion.

¤ Ask students with a pre-K reading level and higher to think back on their design process by responding to the reflection prompts in their design journals. Ask students to add their projects into Fish Chomp remix studio or a class studio.

¤ For struggling students, ask the USAT to demonstrate the steps pairing the handout with each step.

¤ For students with little or no formal communication system, have the USAT ask like/don't like (symbols) and record it in their design journals.

Resources:

¤ Score handout

¤ Score examples studio at https://scratch.mit.edu/studios/218313/

¤ Fish Chomp starter project at http://scratch.mit.edu/projects/10859244

¤ Fish Chomp remix studio at http://scratch.mit.edu/studios/475615

- 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.

- Move students showing anxiety to a familiar environment to reduce their anxiety levels

- 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.

- For students with tendency to persevere on a topic, involve teacher aid/USATs for individualized assistance.

- Give frequent breaks for students as classroom data or the IEP indicates.

- Offer extended time to students as classroom data or the IEP indicates.

- 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.

- Offer extended time to students as indicated in the IEP or based on classroom data.

- 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.

UNIT 4
SESSION 4

Starter Games

Session Schedule

Pre-teaching (10 minutes)

⬇

Activity Part 1 (5 min)

⬇

Break (2 min)

⬇

Activity Part 2 (15 min)

⬇

Break (2 min)

⬇

Activity Part 3 (20 min)

⬇

Break (2 min)

⬇

Activity Part 4 (5 min)

Pre-Teaching Topics & Terms

Topics:

Show students a few projects from the Extensions studio, and show them briefly how to add an extension to one of the game projects developed before (maze, pong, or scrolling).

Terms:

Terms	Description and Symbol
Extend	What you do to you make your project more difficult.
Extension	What you use on scratch to make your project more difficult.

Expectations:

Tell students that they are expected to.

Session Objectives

The purpose of this session is to familiarize students to the concepts of conditionals, operators, and data.

Learning Objectives

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

1. Add at least one extension to one of the previously developed/remixed game projects; maze, pong, or scrolling.

Resources:

¤ Extensions studio at https://scratch.mit.edu/studios/475619/

¤ Extensions instructional video

¤ Extensions handout

¤ Extensions handout instructional video

ACTIVITY DESCRIPTION

Activity Part 1

¤ Show the example projects from the extensions studio.
¤ Have the Extensions handout available to guide students, pairing each step with the demonstration.
¤ Have the Extensions studio instructional video available for students who engage with the video.
¤ Have the Extensions handout instructional video available to guide students who are struggling.

Activity Part 2

¤ Do a think-aloud (as describe in session 3) as you show the code of programs in the Extensions studio and explore different ways games can be increased in difficulty or extended.
¤ Ask students who engage with videos to watch the Extensions studio instructional video to learn about the code of the programs in the Extensions studio
¤ Ask students who struggle to watch the Extensions handout instructional video to learn how a project can be increased in difficulty or extended
¤ Ask USATS to work 1:1 with students who struggle with the hand-out to demonstrate each step of the handout having the student model each step. This can be done in small groups or 1:1 using systematic prompting as needed.
¤ Ask USATs to explore the code of the programs in the Extensions studio for students with a pre-K reading level and higher and then give students time to do this on their own. Let students choose to work independently or in small groups.
¤ Have USATs work in small groups for struggling students.
¤ USATs should work 1:1 with students who have little or no formal communication system using a step-by-step instructional sequence and systematic prompting.

Activity Part 3

¤ Ask students with a pre-K reading level and higher to select one or more extensions to add to their previously started maze, pong, or scrolling games.

¤ Ask USATs to work with struggling students with to add an extension to the previously started project.

¤ Ask students who prefer to work in groups to share-pair or work in small groups to accomplish this.

¤ For students with little or no formal communication have USATs work 1:1 using step-by-step strategies and systematic prompting.

Activity Part 4

¤ Ask students who prefer to work alone to share their extended game projects with a peers or USAT

¤ Ask students who prefer to work in groups to share them with the class.

¤ Ask students to use the reflection prompts in their presentations. Ask students to think back on their design process by responding to the reflection prompts in their design journals.

¤ USATs should work with small groups or 1:1 as data indicates, using step-by-step and systematic prompting.

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.

¤ Move students showing anxiety to a familiar environment to reduce their anxiety levels.

¤ 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

¤ For students with tendency to persevere on a topic, involve teacher aid/USATs for individualized assistance.

¤ Give frequent breaks for students as classroom data or the IEP indicates.

¤ Offer extended time to students as classroom data or the IEP indicates.

¤ 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 Teacher:

UNIT 4
SESSION 5

Interactions

Session Schedule

Pre-teaching (10 minutes)

⬇

Activity Part 1 (5 min)

⬇

Break (2 min)

⬇

Activity Part 2 (25 min)

⬇

Break (2 min)

⬇

Activity Part 3 (10 min)

Pre-Teaching Topics & Terms

Topics:

Show students how to solve one of the nine Interactions programming puzzles.

Terms:

Terms	Description and Symbol
Interaction	
Sensing	
Puzzle	

Expectations:

Tell students that they are expected to create a Scratch project that solves at least one of the nine Interactions programming puzzles.

Session Objectives

The purpose of this session is to teach different approaches to making projects interactive by solving a series of nine programming puzzles.

Learning Objectives

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

1. Create a Scratch project that solves at least one of the nine Interactions programming puzzles.

Resources:

- ¤ Interactions handout
- ¤ Interactions instructional video
- ¤ Interactions studio at https://scratch.mit.edu/studios/487213/

ACTIVITY DESCRIPTION

Activity Part 1

- ¤ Challenge students to further explore Scratch by creating Scratch programs that solve some of the nine Interactions programming puzzles. These Interactions puzzles explore Sensing blocks, engaging some of the more advanced concepts in Scratch related to interactivity.
- ¤ Have the Interactions handout available to guide students during this activity
- ¤ Have Interactions instructional video available that demonstrates how to solve one of the nine Interactions programming puzzles.

Activity Part 2

- ¤ Give students time to solve one of the Interactions programming puzzles. Ask students to attempt on their own, ask USATs to work with students, and ask students to work with a peer.

Activity Part 3

- ¤ Utilizing the reflection prompts, ask students to share their solutions with the class. Ask students to share with USATs and/or their peers. Ask students with to think back on their solution process by responding to the reflection prompts in their design journals in written and/or symbol format.

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.
- Move students showing anxiety 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.
- Use common and familiar words in your verbal instructions for students having difficulty communicating.
- Tolerate students with language skills.
- Do not enforce a time limit for students who are having difficulty comprehending instructions and/or completing tasks.
- For students with tendency to persevere on a topic, involve teacher aid/USATs for individualized assistance.
- Give frequent breaks for students with characteristics.
- Offer extended time to students with cognitive characteristics.
- Provide positive, meaningful, and immadiate 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 Teacher:

UNIT 4
SESSION 6

Debug It !

Session Schedule

Pre-teaching (10 minutes)

⬇

Activity Part 1 (10 minutes)

⬇

Break (2 minutes)

⬇

Activity Part 2 (10 minutes)

⬇

Break (2 minminutes

⬇

Activity Part 3 (15 minutes)

⬇

Break (2 minutes)

⬇

Activity Part 4 (10 minutes)

Pre-Teaching Topics & Terms
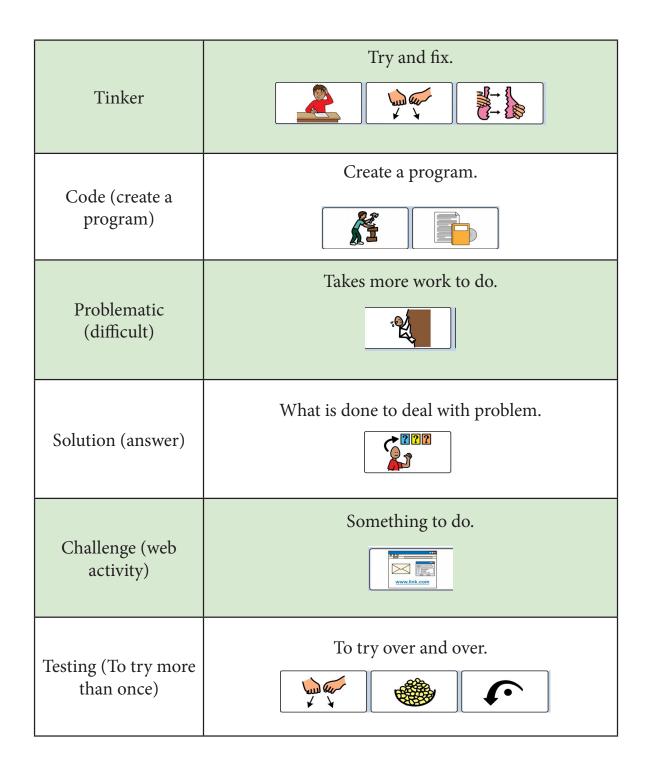
Topics:

Show students the projects on the Unit 4 Debug It! handout, and explain them the problems in the project. Show them how to solve one of these problems with one of these projects.

Terms:

Terms	Description and Symbol
Debug	Find and change problems.
Fix	Change problems to make better.
Investigate (explore)	To look at so you can understand.
Buggy (many errors)	A lot of problems.

Tinker	Try and fix.
Code (create a program)	Create a program.
Problematic (difficult)	Takes more work to do.
Solution (answer)	What is done to deal with problem.
Challenge (web activity)	Something to do.
Testing (To try more than once)	To try over and over.

Expectations:

Students are expected to identify and solve problems in at least one of the projects.

Session Objectives

This session targets to teach students how to identify, investigate, and offer a solution to a problem with a Scratch project.

Learning Objectives

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

1. Identify a problem with a Scratch project
2. Investigate a problem with a Scratch project
3. Offer a solution to a problem with a Scratch project

Resources:

¤ Critique Group handout
¤ Critique Group modeling video

ACTIVITY DESCRIPTION

Activity Part 1

- Have the Unit 4 Debug It! handout available to guide students during the activity.
- Show students how to open one of the Debug It! projects, and debug the problem in the project.
- Have students watch the Unit 4 Debug It! Handout instructional video.
- Have students watch the Unit 4 Debug It! instructional video.

Activity Part 2

- Show students how to open each project on the Unit 4 Debut It! handout, and explain them what they are expected to debug. Encourage them to click on the "Look Inside" button to investigate the buggy program, tinker with problematic code, and test possible solutions
- Ask students to watch the Unit 4 Debug It! instructional video.
- Ask students to watch the Unit 4 Debug It! Handout instructional video

Activity Part 3

- Give students time to test and debug each Debug It! challenge.
- Ask USATs to help students.

Activity Part 4

- Ask students with to reflect bask on their testing and debugging experiences by responding to the reflection prompts in their design journal in written or drawing format, and ask students to discuss with their peers or USATs.

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.
- Move students showing anxiety to a familiar environment to reduce their anxiety levels
- 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
- Tolerate students with language skills
- Do not enforce a time limit for students who are having difficulty comprehending instructions and/or completing tasks
- For students with tendency to persevere on a topic, involve teacher aid/USATs for individualized assistance.
- Give frequent breaks to students.
- Offer extended time to students.
- Provide positive, meaningful, and immidiate 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 Teacher:

BACK COVER PAGE

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