Computers 7

Unit 1 (Sequencing)

| Estimated Unit Time Frames | Big Ideas | Essential Questions | Concepts (Know) | Competencies (Do) | Lessons/ Suggested Resources | Vocabulary | Standards/ Eligible Content |
|----------------------------------|--|--|--|--|---|---|--|
| 9 Days | Sequence is the most foundational concept in programming, and everything we learn moving forward will build on this concept. Computers can only carry out tasks that are in the correct sequence. Computers are MACHINES and they have to do things the way they | Think about how we would get the bird to the pig using arrows. How do we use these blocks instead? | Students will develop sequential algorithms to move a bird from one side of a maze to the pig on the other side. To do this, they will stack code blocks together in a linear sequence, making them move straight, turn left, or turn right. | SWBAT Identify and locate bugs in a program. SWBAT Translate movements into a series of commands. | Express Course Code.org: Lesson 1 Programming with Angry Birds | Algorithm - A list of steps to finish a task. Bug - Part of a program that does not work correctly. Debugging - Finding and fixing problems in an algorithm or program. Sequencing - Putting commands in the correct order so computers can read the commands. | 1A-AP-09: Model the way programs store and manipulate data by using numbers or other symbols to represent information. 1A-AP-11: Decompose (break down) the steps needed to solve a problem into a precise sequence of instructions. |

| were built to do them. | | | | | | |
|---|---|---|--|--|--|---|
| Sequence is the most foundational concept in programming, and everything we learn moving forward will build on this concept. Computers can only carry out tasks that are in the correct sequence. Computers are MACHINES and they have to do things the way they were built to do them. | How do you fix something that isn't working? Do you follow a specific series of steps? | Students will encounter pre-written code that contains mistakes. They will need to step through the existing code to identify errors. | SWBAT Modify an existing program to solve errors. SWBAT Predict where a program will fail. Reflect on the debugging process in an ageappropriate way. | Express Course Code.org: Lesson 2 Debugging In Maze | Bug - Part of a program that does not work correctly. Debugging - Finding and fixing problems in an algorithm or program. | 1A-AP-09 - Model the way programs store and manipulate data by using numbers or other symbols to represent information. 1A-AP-11 - Decompose (break down) the steps needed to solve a problem into a precise sequence of instructions. |
| Sequence is the most foundational concept in programming, and everything we learn moving forward will | How can a computer navigate instructions and order? | Students will continue to develop their understanding of algorithms and debugging | SWBAT Develop problem solving and critical thinking skills by reviewing debugging practices. SWBAT Order movement | Express Course Code.org: Lesson 3 Collecting Treasure with Laurel | Algorithm - A list of steps to finish a task. Program - An algorithm that has been coded into something | 1A-AP-09 - Model the way programs store and manipulate data by using numbers or other symbols to represent information. 1A-AP-11 - Decompose (break down) the steps needed to solve a |

| build on this | | | commands as | | that can be run | problem into a precise |
|----------------------------------|----------------------|-----------------------------------|--------------------------------|--------------------------------------|-----------------|--|
| concept. | | | sequential steps in a program. | | by a machine. | sequence of instructions. |
| Computers | | | Represent an | | Programming - | mstractions. |
| can only carry | | | algorithm as a | | The art of | |
| out tasks that | | | computer | | creating a | |
| are in the | | | program. | | program. | |
| correct | | | | | 1 -0 - | |
| sequence. | | | | | | |
| Computers are | | | | | | |
| MACHINES | | | | | | |
| and they have | | | | | | |
| to do things | | | | | | |
| the way they | | | | | | |
| were built to | | | | | | |
| do them. | | 6 | CIA/DAT D. I | F 0 | | |
| Sequence is the most | How would you code a | Students will take control of the | SWBAT Break complex shapes | Express Course Code.org: Lesson 4 | None | 1A-AP-09 - Model the |
| foundational | code a computer to | Artist to complete | into simple parts. | Creating Art with Code | | way programs store |
| concept in | draw that | drawings on the | into simple parts. | Creating Art with code | | and manipulate data by using numbers or other |
| programming, | shape? | screen. | SWBAT Create a | | | symbols to represent |
| and everything | | | program to | | | information. |
| we learn | What order do | | complete an image | | | |
| moving | the instructions | | using sequential | | | 1A-AP-11 - Decompose (break down) the steps |
| forward will | need to be in? | | steps. | | | needed to solve a |
| build on this | | | | | | problem into a precise |
| concept. | | | | | | sequence of |
| | | | | | | instructions. |
| Computers | | | | | | 1A-AP-14 - Debug |
| can only carry out tasks that | | | | | | (identify and fix) errors |
| are in the | | | | | | in an algorithm or |
| correct | | | | | | program that includes |
| sequence. | | | | | | sequences and simple |
| | | | | | | loops. |
| Computers are | | | | | | |
| MACHINES | | | | | | |

| and they have | | | |
|---------------|--|--|--|
| to do things | | | |
| the way they | | | |
| were built to | | | |
| do them. | | | |

| | Unit 2 (Sprites) | | | | | | | | | | |
|----------------------------------|---|--|--|--|--|--|--|--|--|--|--|
| Estimated Unit Time Frames | Big Ideas | Essential Questions | Concepts (Know) | Competencies (Do) | Lessons/ Suggested Resources | Vocabulary | Standards/ Eligible Content | | | | |
| 9 Days | Sprites provide a flexible and efficient method of creating animation and visual elements in video games and other computer graphics applications. Sprites consists of a bitmap image or a series of images that are combined to create an animation and can be thought of as a separate | What blocks would we need to connect to make the tumbleweed spin? What would happen if we told the sprite to begin two behaviors at once? Will the sprite ever stop these behaviors on its own? If we want the sprite to stop a behavior when we click it, how might we do that? | Students will program a simple animated underwater scene in this skill-building lesson | SWBAT Create new sprites and assign them costumes and behaviors. SWBAT Define "sprite" as a character or object on the screen that can be moved and changed. | Express Course Code.org: Lesson 5 Swimming Fish in Sprite Lab Students will program a simple animated underwater a scene in this skill-building lesson. In this skill-building lesson, students will work through a series of programming levels on the computer, finishing with an open-ended "free play" task where they can build whatever they like. Students will write programs and learn about the two | Behavior - An action that a sprite performs continuously until it's told to stop. Sprite - A graphic on the screen with a location, size, and appearance. | 1B-AP-12 - Modify, remix or incorporate portions of an existing program into one's own work, to develop something new or add more advanced features. | | | | |

| a flexible and efficient in method of creating wanimation and visual elements in video games and other computer graphics applications. | What were the most interesting choices you were able to make with these apps? Was there ever a time you wished you could change something in the app but were not given the choice? Students will work through a series of programming levels on the computer, finishing with an openended "free play" task where they can build whatever they like. | SWBAT Create an animation using sprites and behaviors. SWBAT Create new sprites and assign them costumes and behaviors. | concepts at the heart of Sprite Lab: sprites and behaviors. Express Course Code.org: Lesson 6 Making Sprites Students will program a simple animated underwater a scene in this skill-building lesson. In this skill-building lesson, students will work through a series of programming levels on the computer, finishing with an open-ended "free play" task where they can build whatever they like. Students will write programs and learn about the two concepts at the heart of Sprite Lab: sprites and behaviors | Algorithm - A list of steps to finish a task. Behavior - An action that a sprite performs continuously until it's told to stop. Program - An algorithm that has been coded into something that can be run by a machine. Sprite - A graphic on the screen with a location, size, and appearance. | 1B-AP-10 - Create programs that include sequences, events, loops, and conditionals. 1B-AP-12 - Modify, remix or incorporate portions of an existing program into one's own work, to develop something new or add more advanced features. |
|--|---|--|---|--|--|
|--|---|--|---|--|--|

Unit 3 (Events)

| Estimated | Big Ideas | Essential | Concepts | Competencies | Lessons/ Suggested | Vocabulary | Standards/ Eligible |
|-----------|---------------------------|----------------------------|---|--|-------------------------|------------------------------------|--------------------------|
| Unit Time | big ideas | Questions | (Know) | (Do) | Resources | Vocabulary | Content |
| Frames | | Questions | (Kilow) | (50) | Resources | | Content |
| 9 Days | Event-driven | What happened | Students will work | SWBAT Create an | Express Course | Algorithm - A list | 1B-AP-08 - Compare |
| | programming | | through a series of | interactive | Code.org: Lesson 7 | of steps to finish | and refine multiple |
| | is a great | told to clap but | programming | animation using | Sprites in Action | a task. | algorithms for the same |
| | approach for | you were | levels on the | events. | | | task and determine |
| | building | already | ended "free play" task where they can build whatever they like | SWBAT Develop programs that respond to timed events. lesson, stude work through of programm on the computing finishing with SWBAT Develop lesson, stude work through of programm on the computing with open-ended from the computing states of the com | | Event - An action | which is the most |
| | complex | marching in | | | lesson, students will | a series something to happen. eer, | appropriate. |
| | systems. | place? What | | | _ | | 1B-AP-10 - Create |
| | Frank duires | happens if you are told to | | | of programming levels | | |
| | Event-driven | | | | finishing with an | | programs that include |
| | programming is a powerful | begin two different | | | | | sequences, events, |
| | paradigm that | behaviors at | | | play" task where they | | loops, and conditionals. |
| | promotes | once? | | respond to user | can build whatever | | 1B-AP-12 - Modify, |
| | loose coupling | onee: | | input. | they like. | | remix or incorporate |
| | and efficient | | | mpat. | they like. | | portions of an existing |
| | communicatio | | | | Students will write | | program into one's own |
| | n between | | | | programs that | | work, to develop |
| | components in | | | | respond to timed | | something new or add |
| | software | | | | events and user input. | | more advanced |
| | systems. | | | | · | | |
| | | | | | Students will create an | | features. |
| | By using | | | | interactive Virtual Pet | | |
| | event-driven | | | | that looks and | | |
| | interfaces, | | | | behaves how they | | |
| | developers | | | | wish in this mini- | | |
| | can design | | | | project lesson. | | |
| | flexible and | | | | | | |
| | modular | | | | Students will use | | |
| | systems that | | | | Sprite Lab's | | |
| | respond to | | | | "Costumes" tool to | | |
| | events and | | | | customize their pet's | | |

| | 1 |
|---|---|
| trigger appearance. They v | will |
| appropriate then use events, | |
| actions behaviors, and other | |
| concepts they have | |
| learned to bring the | eir |
| project to life. | |
| Event-driven Do you Students will use SWBAT Create an Express Course | Behavior - An 1B-AP-10 - Create |
| programming remember Sprite Lab's interactive virtual Code.org: Lesson 8 | action that a programs that include |
| is a great what an event "Costumes" tool to pet using events, Virtual Pet with Spr | rite sprite performs sequences, events, |
| approach for is? customize their behaviors, Lab | continuously loops, and conditionals. |
| building pet's appearance. variables, and | until it's told to 1B-AP-11 - Decompose |
| complex Do you custom art. | stop. (break down) problems |
| systems. remember Program solutions | Event - An action into smaller, |
| what behavior to problems that | that causes manageable |
| Event-driven is? arise when | something to subproblems to |
| programming designing a virtual | happen. facilitate the program |
| is a powerful Can you pet, like feeding it | development process. |
| paradigm that remember or monitoring its | 1B-AP-12 - Modify, |
| promotes some of the happiness. | remix or incorporate |
| loose coupling behaviors you | portions of an existing |
| and efficient have used ? | program into one's own |
| communicatio What do they | work, to develop |
| n between do? | something new or add |
| components in | more advanced |
| software | features. |
| systems. | 1B-AP-13 - Use an |
| | iterative process to plar |
| By using State of the state of | the development of a |
| event-driven | program by including |
| interfaces, | others' perspectives |
| developers | and considering user |
| can design | preferences. |
| flexible and | · |
| modular | |
| systems that | |
| respond to | |
| events and | |
| trigger | |

| appropriate | | | | | |
|----------------|-------------------|------------------|------------------------|--------------------|--------------------------|
| actions | | | | | |
| Event-driven | Students will | SWBAT creates | Express Course | Event - An action | 1B-AP-09 - Create |
| programming | program an | dance animations | Code.org: Lesson 9 | that causes | programs that use |
| is a great | interactive dance | with code | Dance Party | something to | variables to store and |
| approach for | party. | Develop programs | | happen. | modify data. |
| building | | that respond to | In this skill-building | Program - An | 1B-AP-10 - Create |
| complex | | timed events | lesson, students will | algorithm that | programs that include |
| systems. | | Develop programs | program an | has been coded | sequences, events, |
| | | that respond to | interactive dance | into something | loops, and conditionals. |
| Event-driven | | user input. | party. | that can be run | |
| programming | | | | by a machine. | |
| is a powerful | | | | code - to write | |
| paradigm that | | | | code, or to write | |
| promotes | | | | instructions for a | |
| loose coupling | | | | computer. | |
| and efficient | | | | | |
| communicatio | | | | | |
| n between | | | | | |
| components in | | | | | |
| software | | | | | |
| systems. | | | | | |
| By using | | | | | |
| event-driven | | | | | |
| interfaces, | | | | | |
| developers | | | | | |
| can design | | | | | |
| flexible and | | | | | |
| modular | | | | | |
| systems that | | | | | |
| respond to | | | | | |
| events and | | | | | |
| trigger | | | | | |
| appropriate | | | | | |
| actions | | | | | |

Unit 4 (Loops)

| Estimated Unit Time Frames | Big Ideas | Essential Questions | Concepts (Know) | Competencies (Do) | Lessons/ Suggested Resources | Vocabulary | Standards/ Eligible Content |
|----------------------------------|--|--|--|--|---|---|---|
| 9 Days | Using loops is an important skill in programming because manually repeating commands is tedious and inefficient. | How did loops make your program easier to write? Think of something that repeats over and over again. What might the program for that look like? | Students will be learning about loops and how to implement them in Blockly code. | SWBAT Breaks down a long sequence of instructions into the largest repeatable sequence. Employ a combination of sequential and looped commands to reach the end of a maze. Identify the benefits of using a loop structure instead of manual repetition. | Express Course Code.org: Lesson 10 Loops with Rey and BB-8. Students will be learning about loops and how to implement them in Blockly code. With the Code.org puzzles, students will learn to add instructions to existing loops, gather repeated code into loops, and recognize patterns that need to be looped. It should be noted that students will face puzzles with many different solutions. This will open up discussions on the various ways to solve puzzles with advantages and | Loop - The action of doing something over and over again. Repeat - To do something again. | 1A-AP-09 - Model the way programs store and manipulate data by using numbers or other symbols to represent information. 1A-AP-10 - Develop programs with sequences and simple loops, to express ideas or address a problem. 1A-AP-11 - Decompose (break down) the steps needed to solve a problem in a precise sequence of instructions. 1A-AP-14 - Debug (identify and fix) errors in an algorithm or program that includes sequences and simple loops. |

| | | | | disadvantages to each approach. | | |
|--|--|--|--|---|--|---|
| Using loops is an important skill in programming because manually repeating commands is tedious and inefficient. | What was the coolest shape or figure you programmed today? Draw it out! What is another shape or figure you would like to program? Can you come up with the code to create it? | Students will build on top of their own work and create amazing artifacts. | SWBAT differentiates between commands that need to be repeated in loops and commands that should be used on their own. Identify the benefits of using a loop structure instead of manual repetition. | Express Course Code.org: Lesson 11 Mini-Project Sticker Art Students will be learning about loops and how to implement them in Blockly code. With the Code.org puzzles, students will learn to add instructions to existing loops, gather repeated code into loops, and recognize patterns that need to be looped. It should be noted that students will face puzzles with many different solutions. This will open up discussions on the various ways to solve puzzles with advantages and disadvantages to each approach. | Loop - The action of doing something over and over again. Repeat - To do something again. | 1A-AP-09 - Model the way programs store and manipulate data by using numbers or other symbols to represent information. 1A-AP-10 - Develop programs with sequences and simple loops, to express ideas or address a problem. 1A-AP-11 - Decompose (break down) the steps needed to solve a problem into a precise sequence of instructions. 1A-AP-14 - Debug (identify and fix) errors in an algorithm or program that includes sequences and simple loops. |
| Using loops is an important skill in | What is a nested loop? | Students will learn to recognize patterns within | SWBAT Break complex tasks into | Express Course Code.org: Lesson 12 Nested Loops in Maze | Command - An instruction for the computer. | 1B-AP-11 - Decompose (break down) problems into smaller, |

| | programming | Can you draw a | repeated patterns | smaller repeatable | | Many commands | manageable |
|--|----------------|------------------|---------------------|---------------------|--------------------------|--------------------|---------------------------|
| | because | puzzle that | to develop these | sections. | Students will be | put together | subproblems to |
| | manually | would use a | nested loops. | Identify the | learning about loops | make up | facilitate the program |
| | repeating | nested loop? | | benefits of using a | and how to | algorithms and | development process. |
| | commands is | Try coding the | | loop structure | implement them in | computer | 1B-AP-12 - Modify, |
| | tedious and | solution to your | | instead of manual | Blockly code. | programs. | remix or incorporate |
| | inefficient. | own puzzle. | | repetition. | , | Loop - The action | portions of an existing |
| | | 0 p | | Recognize large | With the Code.org | of doing | program into one's own |
| | | | | repeated patterns | puzzles, students will | something over | work, to develop |
| | | | | as made from | learn to add | and over again. | something new or add |
| | | | | smaller repeated | instructions to existing | Repeat - To do | more advanced |
| | | | | patterns. | loops, gather repeated | something again. | features. |
| | | | | patterns | code into loops, and | Joinetining again. | 1B-AP-15 - Test and |
| | | | | | recognize patterns | | debug (identify and fix |
| | | | | | that need to be | | errors) a program or |
| | | | | | looped. | | algorithm to ensure it |
| | | | | | looped. | | runs as intended. |
| | | | | | It should be noted | | rans as interiaca. |
| | | | | | that students will face | | |
| | | | | | puzzles with many | | |
| | | | | | different solutions. | | |
| | | | | | different solutions. | | |
| | | | | | This will open up | | |
| | | | | | discussions on the | | |
| | | | | | various ways to solve | | |
| | | | | | puzzles with | | |
| | | | | | advantages and | | |
| | | | | | disadvantages to each | | |
| | | | | | approach. | | |
| | Using loops is | When do you | Students will make | SWBAT Break apart | Express Course | Loop - The action | 1B-AP-11 - Decompose |
| | an important | use a loop? | their own decisions | code into the | Code.org: Lesson 13 | of doing | (break down) problems |
| | skill in | When do you | when it comes to | largest repeatable | Snowflakes with Elsa | something over | into smaller, |
| | programming | use a nested | creating designs | sequences using | and Ana | and over again. | manageable |
| | because | loop? | for repetition. | both loops and | | Repeat - To do | subproblems to |
| | manually | How would the | | nested loops. | Students will be | something again. | facilitate the program |
| | repeating | code for your | | Describe when a | learning about loops | | development process. |
| | commands is | snowflake look | | loop, nested loop, | and how to | | 1B-AP-13 - Use an |
| | | different if you | | | | | iterative process to plan |

| tedious and | only used one | or no loop is | implement them in | the development of a |
|--------------|-----------------|-------------------|--------------------------|----------------------|
| inefficient. | loop? No loops? | needed. | Blockly code. | program by including |
| | Can you draw | Recognize the | | others' perspectives |
| | out an | difference | With the Code.org | and considering user |
| | example? | between using a | puzzles, students will | preferences. |
| | | loop and a nested | learn to add | |
| | | loop. | instructions to existing | |
| | | | loops, gather repeated | |
| | | | code into loops, and | |
| | | | recognize patterns | |
| | | | that need to be | |
| | | | looped. | |
| | | | | |
| | | | It should be noted | |
| | | | that students will face | |
| | | | puzzles with many | |
| | | | different solutions. | |
| | | | | |
| | | | This will open up | |
| | | | discussions on the | |
| | | | various ways to solve | |
| | | | puzzles with | |
| | | | advantages and | |
| | | | disadvantages to each | |
| | | | approach. | |

| Unit 5 (Conditionals) | | | | | | | |
|----------------------------------|--|---|--|---|--|--|---|
| Estimated Unit Time Frames | Big Ideas | Essential Questions | Concepts (Know) | Competencies (Do) | Lessons/ Suggested Resources | Vocabulary | Standards/ Eligible Content |
| 9 Days | Conditions allow us to control what the program does and | Draw something else you could have built in this | This set of puzzles will work to solidify and build on the knowledge of loops, and | SWBAT Define circumstances when certain parts of a program should run and | Express Course Code.org: Lesson 14 Looking Ahead with Minecraft | Condition - Something a program checks to see if it is true | 1B-AP-10 - Create programs that include sequences, events, loops, and conditionals. |

| T . | , , | I | | | 1 6 " : | |
|------------------|------------------|----------------------|--------------------|--------------------------|-----------------|------------------------|
| perform | minecraft | introduce | when they | This set of puzzles will | before allowing | |
| different | world. | conditionals. | shouldn't. | work to solidify and | an action. | |
| actions based | Can you draw a | | Determine | build on the | Conditionals - | |
| on these "if, | scene where | | whether a | knowledge of loops, | Statements that | |
| then" logic | someone is | | conditional is met | and introduce | only run under | |
| statements. | using a | | based on criteria. | conditionals. | certain | |
| | conditional? | | | | conditions. | |
| What makes | | | | By pairing these two | | |
| computer | | | | concepts together, | | |
| programs | | | | students will be able | | |
| great is the | | | | to explore the | | |
| ability to | | | | potential for creating | | |
| interact with a | | | | fun and innovative | | |
| user- this is | | | | programs in a new | | |
| only possible | | | | and exciting | | |
| with | | | | environment. | | |
| conditions | | | | | | |
| that direct this | | | | | | |
| type of | | | | | | |
| interaction. | | | | | | |
| Conditions | What | Students will | SWABT Solve | Express Course | Conditionals - | 1B-AP-11 - Decompose |
| allow us to | conditionals did | practice using | puzzles using a | Code.org: Lesson 15 | Statements that | (break down) problems |
| control what | you use in your | conditionals in | combination of | If/Else with Bee | only run under | into smaller, |
| the program | code today? | their programs. | looped sequences | | certain | manageable |
| does and | What are some | The if / else blocks | and conditionals. | This set of puzzles will | conditions. | subproblems to |
| perform | other | will allow for a | Translate spoken | work to solidify and | | facilitate the program |
| different | conditionals a | more flexible | language | build on the | | development process. |
| actions based | bee might use? | program. | conditional | knowledge of loops, | | |
| on these "if, | | 0 | statements into a | and introduce | | |
| then" logic | | | program. | conditionals. | | |
| statements. | | | | | | |
| | | | | By pairing these two | | |
| What makes | | | | concepts together, | | |
| computer | | | | students will be able | | |
| programs | | | | to explore the | | |
| great is the | | | | potential for creating | | |
| ability to | | | | fun and innovative | | |
| interact with a | | | | programs in a new | | |
| michael with a | | <u> </u> | | Proprairie in a ricw | | |

| user- this is | | | | and exciting | | |
|------------------|-----------------|---------------------|---------------------|--------------------------|----------------------|--------------------------|
| only possible | | | | environment. | | |
| with | | | | | | |
| conditions | | | | | | |
| that direct this | | | | | | |
| type of | | | | | | |
| interaction. | | | | | | |
| Conditions | What is the | Students continue | SWBAT Distinguish | Express Course | Condition - | 1B-AP-11 - Decompose |
| allow us to | difference | to deepen their | between loops | Code.org: Lesson 16 | Something a | (break down) problems |
| control what | between a | knowledge of | that repeat a fixed | While Loops in Farmer | program checks | into smaller, |
| the program | while loop and | loops, they will | number of times | | to see if it is true | manageable |
| does and | a normal repeat | come across | and loops that | This set of puzzles will | before allowing | subproblems to |
| perform | loop? | problems where a | repeat as long as a | work to solidify and | an action. | facilitate the program |
| different | Give an | command needs to | condition is true. | build on the | Loop - The action | development process. |
| actions based | example of a | be repeated, but it | Use a while loop to | knowledge of loops, | of doing | |
| on these "if, | puzzle where | is unknown how | create programs | and introduce | something over | |
| then" logic | you would use | many times it | that can solve | conditionals. | and over again. | |
| statements. | a while loop, | needs to be | problems with | | Repeat - To do | |
| | but not use a | repeated. | unknown values. | By pairing these two | something again. | |
| What makes | repeat loop. | | | concepts together, | While Loop - A | |
| computer | Can you give an | | | students will be able | loop that | |
| programs | example of a | | | to explore the | continues to | |
| great is the | puzzle where | | | potential for creating | repeat while a | |
| ability to | you would use | | | fun and innovative | condition is true. | |
| interact with a | a repeat loop, | | | programs in a new | | |
| user- this is | but not a while | | | and exciting | | |
| only possible | loop. | | | environment. | | |
| with | | | | | | |
| conditions | | | | | | |
| that direct this | | | | | | |
| type of | | | | | | |
| interaction. | | | | | | |
| Conditions | Can you draw a | Students will be | SWBAT Define | Express Course | Condition - | 1B-AP-10 - Create |
| allow us to | scene where | able to explore the | circumstances | Code.org: Lesson 17 | Something a | programs that include |
| control what | someone is | potential for | when certain parts | While Loops in Farmer | program checks | sequences, events, |
| the program | using a | creating fun and | of a program | | to see if it is true | loops, and conditionals. |
| does and | conditional? | innovative | should run and | This set of puzzles will | before allowing | |
| perform | | programs in a new | | work to solidify and | an action. | |

| different | and exciting | when they | build on the | Conditionals - |
|------------------|--------------|--------------------|------------------------|-----------------|
| actions based | environment. | shouldn't. | knowledge of loops, | Statements that |
| on these "if, | | Determine | and introduce | only run under |
| then" logic | | whether a | conditionals. | certain |
| statements. | | conditional is met | | conditions. |
| | | based on criteria. | By pairing these two | |
| What makes | | | concepts together, | |
| computer | | | students will be able | |
| programs | | | to explore the | |
| great is the | | | potential for creating | |
| ability to | | | fun and innovative | |
| interact with a | | | programs in a new | |
| user- this is | | | and exciting | |
| only possible | | | environment. | |
| with | | | | |
| conditions | | | | |
| that direct this | | | | |
| type of | | | | |
| interaction. | | | | |