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| Name: | **Remix 3 Project Planning Guide** |
| **Remix Step 1: Review your code from Mission 7, 8 and 9** | |
| Mission 7: Solar Tracking!  What does this program do? What programming concepts did you learn and use? |  |
| Mission 8: Prepare Lander!  What does this program do? What programming concepts did you learn and use? |  |
| Mission 9: Automatic Garden!  What does this program do? What programming concepts did you learn and use? |  |
| **Remix Step 2: Remix Project Concept** | |
| Look over the remix suggestions. Discuss with a partner. Then decide what you want to do for your remix project. Describe your remix project: |  |
| **Remix Step 3: Plan your code.** Answer the questions below to help you plan and design the remix project before you start to write code. | |
| What peripherals will you use, and what is their purpose: | |  |  | | --- | --- | | Peripheral: | Used for: | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  | |
| What variables and constants will you need? Give their name and value or assignment. | |  |  | | --- | --- | | Variable / Constant | Value or assignment | |  |  | |  |  | |  |  | |  |  | |  |  | |
| Write an algorithm for your code. What are the steps for completing the task? |  |
| What functions will you create to accomplish sub-tasks of the algorithm? |  |
| **Remix Step 4: Write your code** | |
| Start a new file. Use the sandbox  when you write the code. Write just a few lines at a time and test often. | |
| **Remix Step 5: Commenting and feedback** | |
| Documentation | * Make sure your code is readable by adding blank lines * Add comments to explain sections of code |
| **Peer feedback:** Get feedback from two (or more) people. You can be one of the peer reviewers. | |
| **Peer Review #1 Name:** |  |
| Go through the checklist. Are all requirements met? If not, list any missing criteria. |  |
| What do you like about the program – be specific! |  |
| Give at least one suggestion. Begin with “what if” or “maybe you could” |  |
| **Peer Review #2 Name:** |  |
| Go through the checklist. Are all requirements met? If not, list any missing criteria |  |
| What do you like about the program – be specific! |  |
| Give at least one suggestion. Begin with “what if” or “maybe you could” |  |
| Review the comments. Then take time to improve or add to your project. | |
| **Post-Mission Reflection** | |
| What peripherals did you use for this remix? |  |
| What new programming concepts did you use for this remix? |  |
| What advice would you give someone who is beginning to write code? |  |

**Unit 3 Remix Project Rubric Checklist:**

* An LED or the NeoPixel ring is used, with appropriate constants and function
* At least two additional peripherals are used, with appropriate constants and functions
  + Servo
  + Light sensor
  + Object sensor
  + Microswitch
  + Relay
  + Moisture sensor
* Uses at least one new programming concept (not limited to these examples)
  + Nested if statements
  + Finite state machine with variable that tracks the state
  + Button press with break
  + Timeout feature of a loop
* Includes something extra (sound, additional peripherals, screen display, etc.)
* Includes comments and whitespace for readability
* Code runs with no errors