

# Digital Design: Microbit unit checklist

Year group		Class number		Name	
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**Please return this progress sheet to the teacher at the end of every lesson.**

Useful information	Google classroom sign up code - Year 7 - wm3yqeg Google classroom sign up code - Year 8 - eee6k6b Google classroom sign up code - Year 9 - t4koi9r
	My website <a href="https://pbaumgarten.com">https://pbaumgarten.com</a> Youtube channel <a href="https://youtube.com/pbaumgarten">https://youtube.com/pbaumgarten</a>

## Tasks

Topic 2: Conditional execution	Date completed
Watch the video explaining how conditional operations work <ul style="list-style-type: none"> <li>Go to my channel and find the video "Microbit lesson 2 conditionals (updated)" or go to link <a href="https://youtu.be/yZgJY1rMV4A">https://youtu.be/yZgJY1rMV4A</a></li> </ul>	
Write the programs demonstrated in the video	
Write your own program as a quiz game with yes/no questions similar to the marvel/dc quiz example.	
Upload your quiz game python file to Google classroom	
Complete task reflection by adding a comment to your Google classroom submission, answering the following questions: <ul style="list-style-type: none"> <li>What is the biggest thing you have learnt about programming so far?</li> <li>What is the biggest struggle you have had about programming so far?</li> <li>What is a question you have about programming?</li> </ul>	
Topic 3: Variables & numbers	
Watch the video explaining how variables & numbers work <ul style="list-style-type: none"> <li>Go to my channel and find the video "Microbit lesson 4 compound conditionals (updated)" or go to link <a href="https://youtu.be/Qk8vsXe7Uj4">https://youtu.be/Qk8vsXe7Uj4</a></li> </ul>	
Write the programs demonstrated in the video	
Experiment with your own changes to the final number counting program in the video. Use both buttons and all three pins.	
Upload your number counting python file to Google classroom	
Complete task reflection by adding a comment to your Google classroom submission, answering the following questions: <ul style="list-style-type: none"> <li>What is the biggest thing you have learnt about programming so far?</li> <li>What is the biggest struggle you have had about programming so far?</li> <li>What is a question you have about programming?</li> </ul>	

Topic 4: Conditional operations	
Watch the video explaining how conditional operations work <ul style="list-style-type: none"> <li>Go to my channel and find the video "Microbit lesson 4 compound conditionals (updated)" or go to link <a href="https://youtu.be/-AKLDBEj8oU">https://youtu.be/-AKLDBEj8oU</a></li> </ul>	
Program the floating ball game	
Make your own small changes to the floating ball game	
Upload your floating ball game python file to Google classroom	
Complete task reflection by adding a comment to your Google classroom submission, answering the following questions: <ul style="list-style-type: none"> <li>What changes did you make to the floating ball game?</li> <li>What is the biggest thing you have learnt about programming so far?</li> <li>What is the biggest struggle you have had about programming so far?</li> <li>What is a question you have about programming?</li> </ul>	
Topic 5: Lists with music	
Watch the video explaining lists with music <ul style="list-style-type: none"> <li>Go to my channel and find "Microbit lesson: Lists and music", or use the link <a href="https://youtu.be/A7VEjGua82I">https://youtu.be/A7VEjGua82I</a></li> </ul>	
Write the program demonstrated in the video that totals a list of numbers, but using your own numbers.	
Program the happy birthday song by watching the video	
Search online for your own song to create <ul style="list-style-type: none"> <li>Students who are musicians are welcome to use their own source</li> <li>Other students, I suggest you use <a href="https://easy-letter-notes.com/category/letter-notes/">https://easy-letter-notes.com/category/letter-notes/</a></li> </ul>	
Program your own song	
Upload your own song python file to Google classroom	
Complete task reflection by adding a comment to your Google classroom submission, answering the following questions: <ul style="list-style-type: none"> <li>What valuable thing did you learn from this topic?</li> <li>What is the biggest struggle you had with this topic?</li> <li>What is a question you have about this topic?</li> </ul>	
Topic 6: Neopixels	
Watch the video explaining neopixels <ul style="list-style-type: none"> <li>Go to my channel and find "Microbit lesson: Neopixels and functions", or use the link <a href="https://youtu.be/c1RAGa0KYNo">https://youtu.be/c1RAGa0KYNo</a></li> </ul>	
Write the program demonstrated in the video that creates blue and red LED chasers.	
Dream up your own light pattern and attempt to program it.	
Upload your own neopixel light show python file to Google classroom	
Complete task reflection by adding a comment to your Google classroom submission, answering the following questions: <ul style="list-style-type: none"> <li>What valuable thing did you learn from this topic?</li> <li>What is the biggest struggle you had with this topic?</li> <li>What is a question you have about this topic?</li> </ul>	

Topic 7: Bluetooth radio	
Watch the video explaining neopixels <ul style="list-style-type: none"> <li>Go to my channel and find "Microbit lesson: Bluetooth networking", or use the link <a href="https://youtu.be/w_YkS4abi9U">https://youtu.be/w_YkS4abi9U</a></li> </ul>	
Write the program demonstrated in the video that creates the happy/sad mood communicator.	
Test your program with a buddy in the class.	
Between you and your partner, design your own messages system. For instance you could use button_a to choose from a range of possible messages, and then button_b to send.	
Working with your partner, program and test your own messages system.	
Upload your own messages system python file to Google classroom	
Complete task reflection by adding a comment to your Google classroom submission, answering the following questions: <ul style="list-style-type: none"> <li>What valuable thing did you learn from this topic?</li> <li>What is the biggest struggle you had with this topic?</li> <li>What is a question you have about this topic?</li> </ul>	

## Next: Design your own Microbit project

Congratulations on reaching this point! You can now design your own Microbit project. See me for your next progress sheet.