



Learning the Basics of Quantum

- QIS Resources Database: <https://q12education.org/learning-materials>
 - Digital resources to learn about quantum information science
 - QIS Key Concepts for Future Learners: <https://files.webservices.illinois.edu/9156/keyconceptsforfutureqislearners5-20.pdf>
 - Lists 9 key concepts for quantum information science
 - Quantum Atlas- Superposition: <https://quantumatlas.umd.edu/entry/superposition/>
 - Introduction with simulations on what superposition is and how it works
 - Univ. of Waterloo: What is QM?: <https://uwaterloo.ca/institute-for-quantum-computing/quantum-mechanics>
 - Overviews key concepts of Quantum Mechanics
 - QPlayLearn: <https://qplaylearn.com/>
 - Quantum educational games and learning resources
 - Quantum Physics simulations: <https://www.st-andrews.ac.uk/physics/quvis/>
 - Upper level quantum physics simulations
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Learning Quantum Computing

- Qbraid: <https://uwaterloo.ca/institute-for-quantum-computing/quantum-mechanics>
 - Guided lessons in coding for quantum computers
 - Google Quantum AI: <https://quantumai.google/cirq>
 - Introduces Cirq which is an open source framework for programming quantum computers
 - Qiskit Algorithm Videos: <https://www.youtube.com/playlist?list=PLOFEBzvs-VvrhKYASly1BXo1AdPyoCsor>
 - Video tutorials for preparing quantum computers and writing algorithms
 - Qiskit Textbook: <https://qiskit.org/textbook/preface.html>
 - Online textbook for learning about programming quantum computers using Qiskit
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Quantum Games

- Quantum Moves: <https://www.scienceathome.org/games/quantum-moves-2/>
- Quantum Game: <https://quantumgame.io/>
- Quantum Chess: <https://quantumchess.net/>
- qCraft: <https://sites.google.com/a/elinemedia.com/qcraft/wiki/qcraft>