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### **Experiments at an Electron-Ion Collider**

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Quantum Chromodynamics (QCD) is now widely acknowledged to be the correct theory to describe the strong interaction. Experimental observations have been essential in establishing the theory and continue to be essential in understanding all phases of QCD matter in the universe. Key open questions in high-energy nuclear physics concern the nature of strong color fields in nuclei and the internal spin structure of the nucleon in terms of quarks and gluons. A future polarized Electron-Ion Collider would enable precision measurements of the partonic structure of nucleons and nuclei, yielding unique insights in the momentum, spin, and spatial substructure of nucleons and nuclei. In the U.S. such an Electron-Ion Collider could be realized through upgrades of the existing RHIC or Jefferson Lab facilities. Selected physics opportunities and key experiments will be discussed.