

2016 Advanced Placement Scores by Demographic

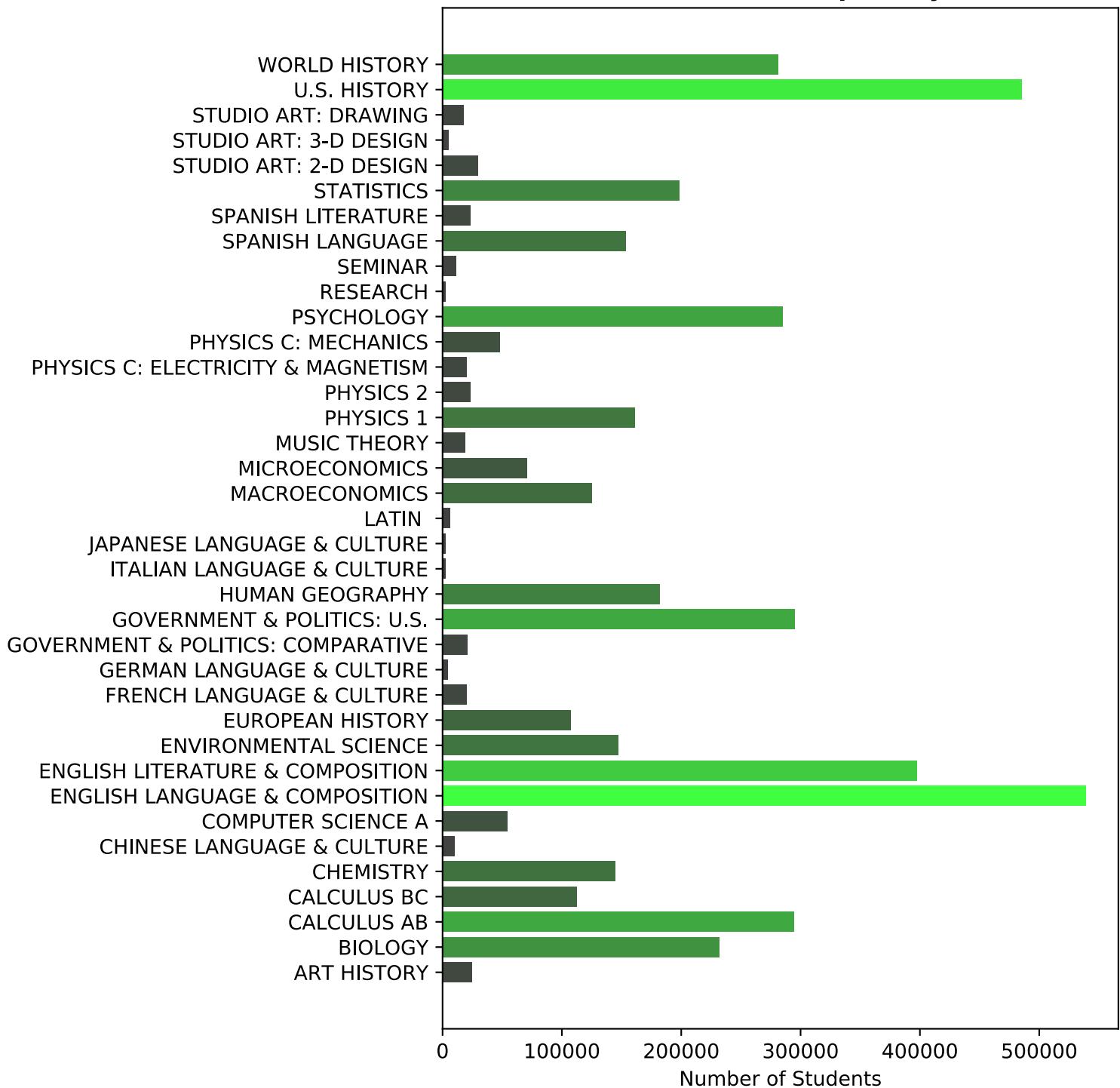
A Data Visualization Project

Christian H. Nunez

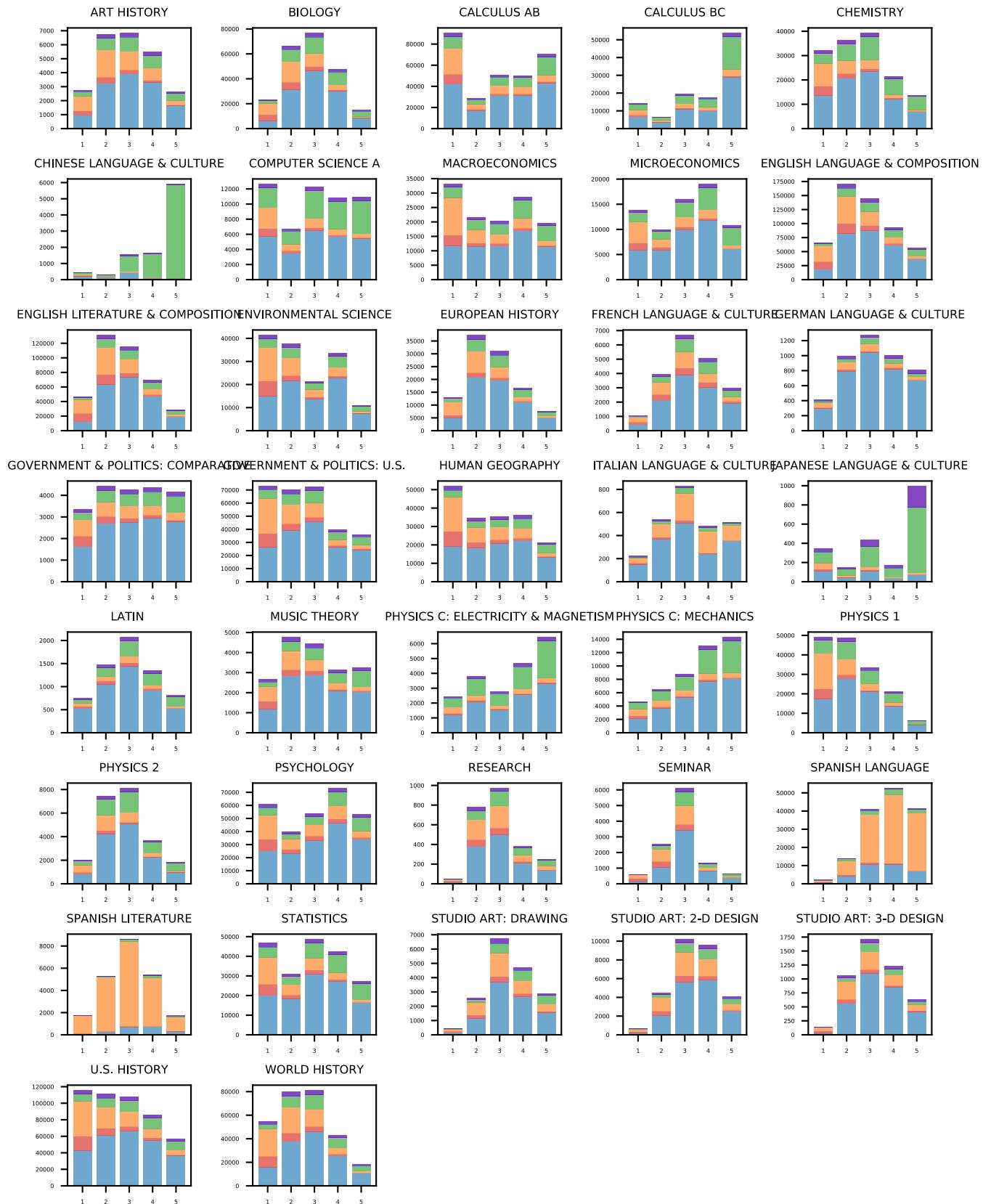
Physics 91SI

5 June 2018

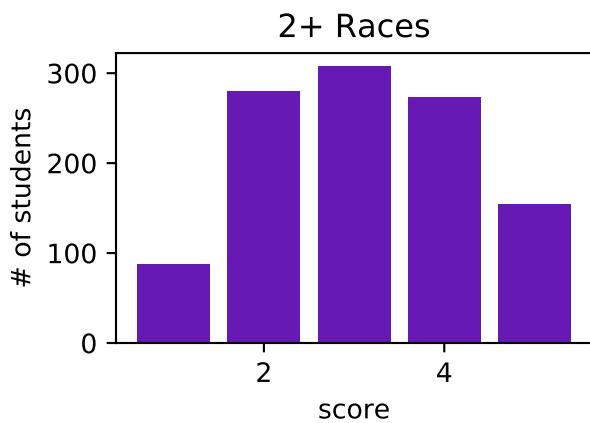
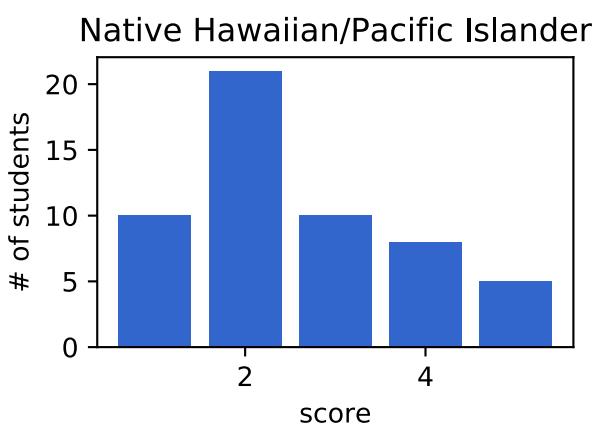
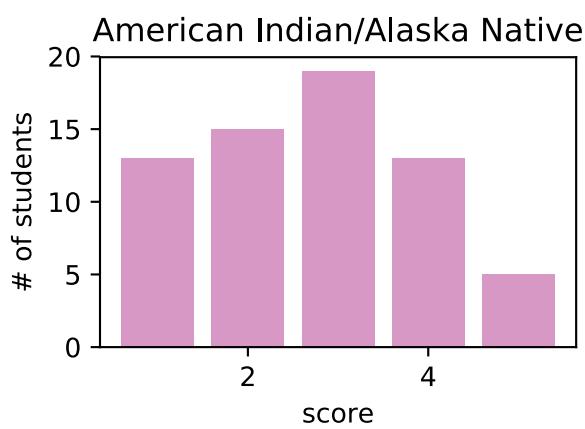
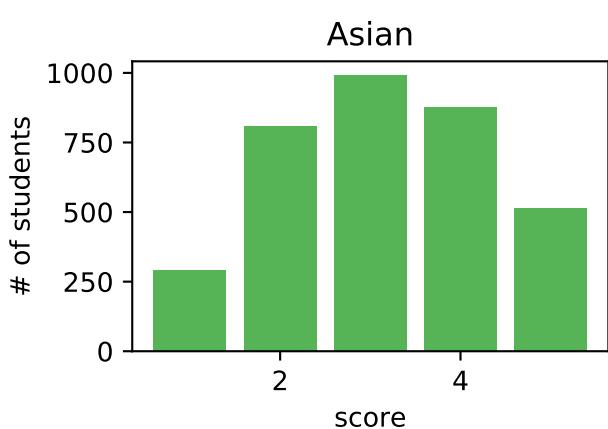
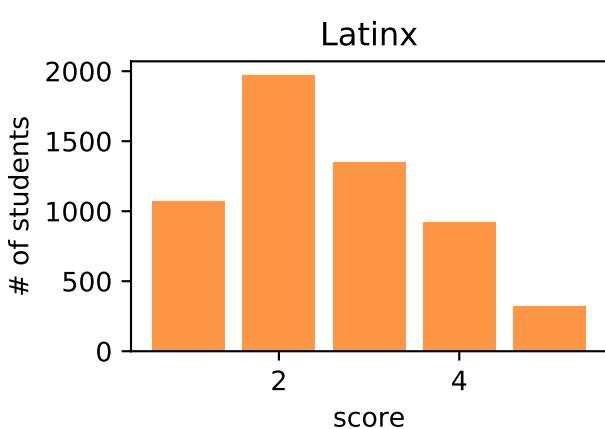
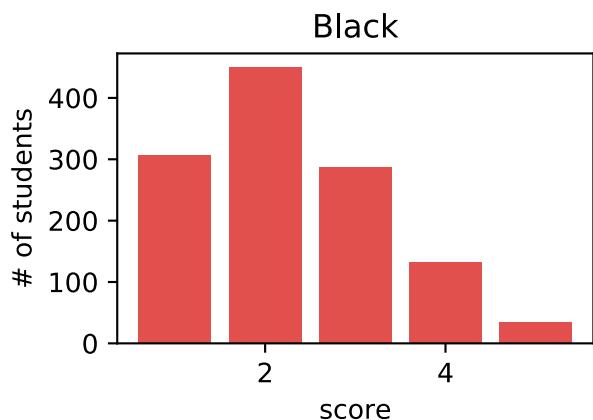
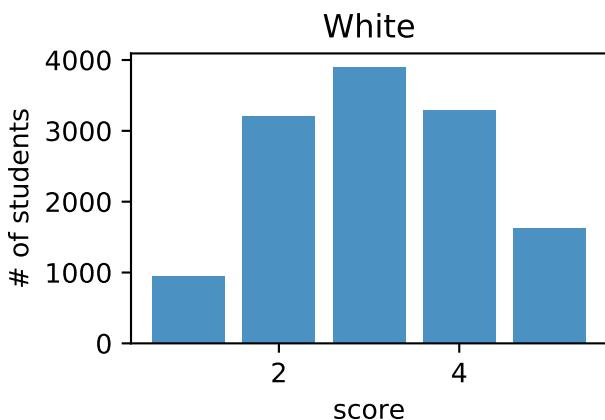
2016 AP Test Popularity



2016 AP Test Scores by Student-Identified Race

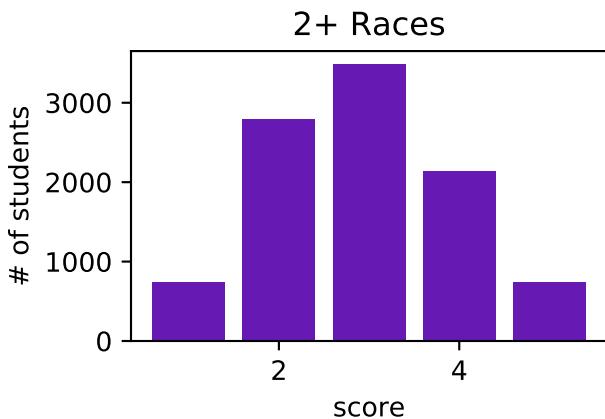
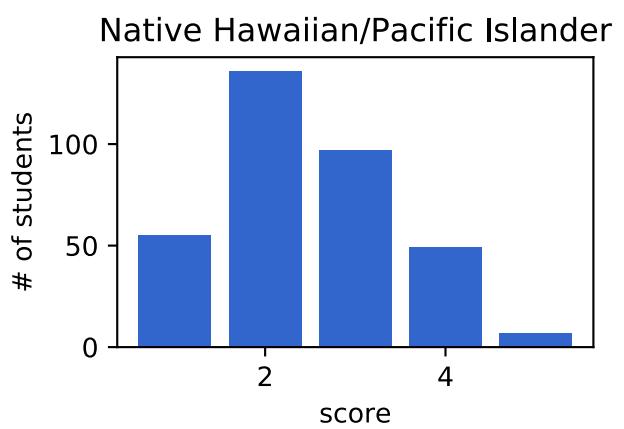
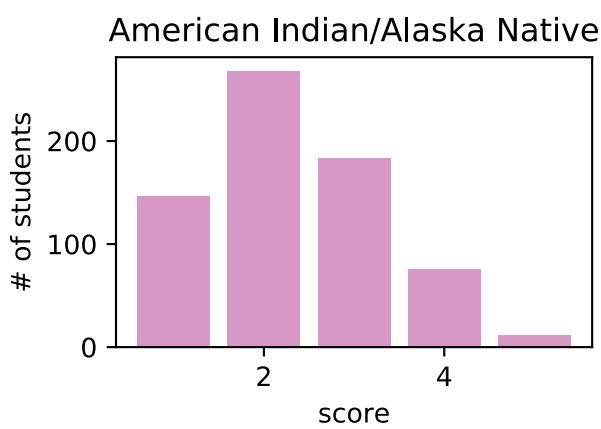
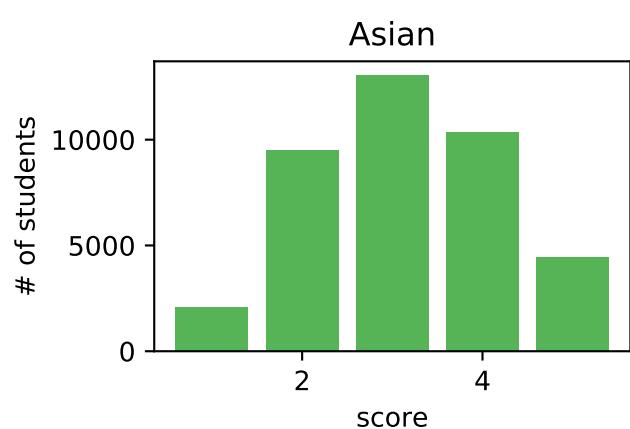
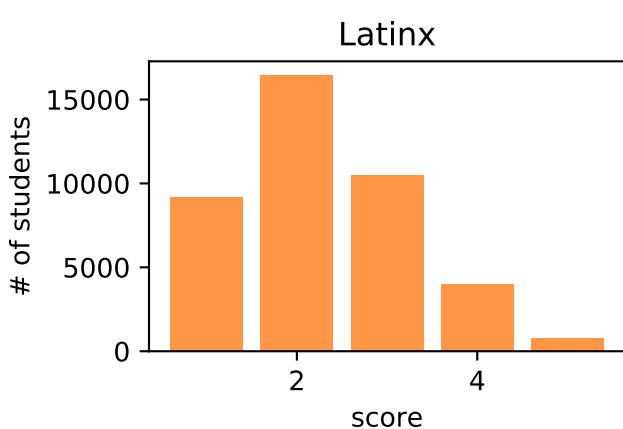
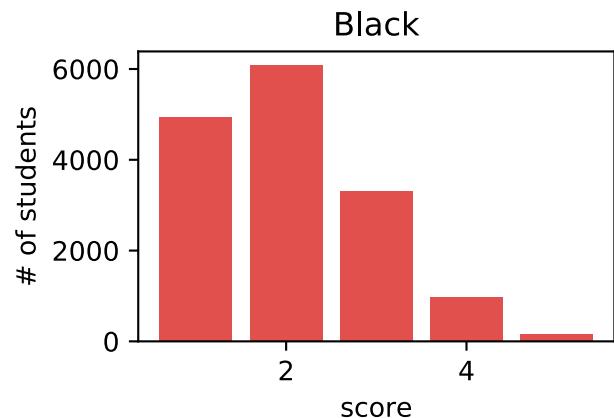
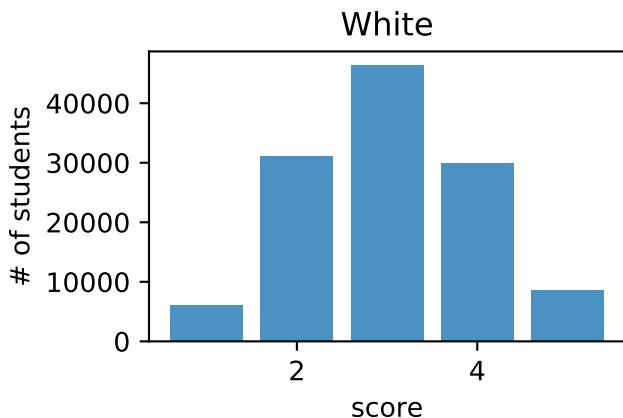


ART HISTORY



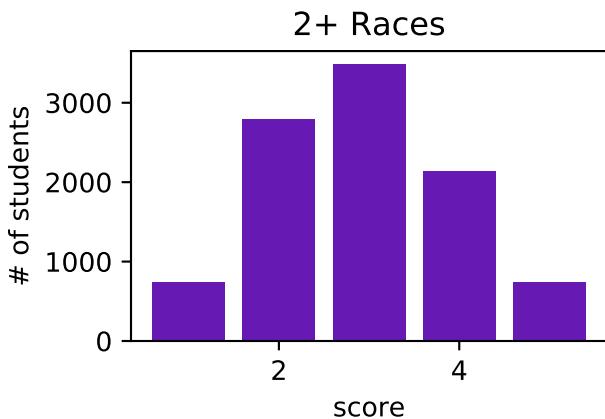
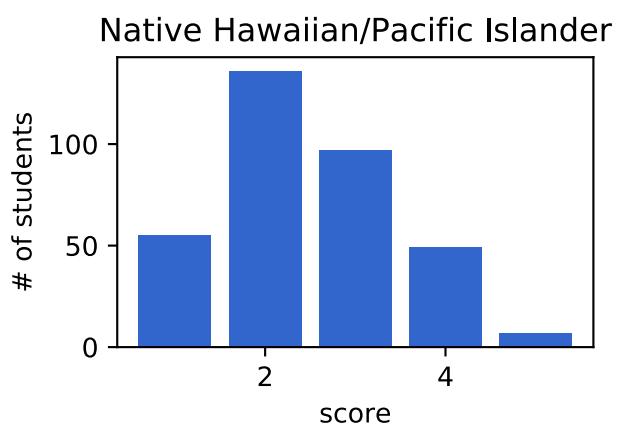
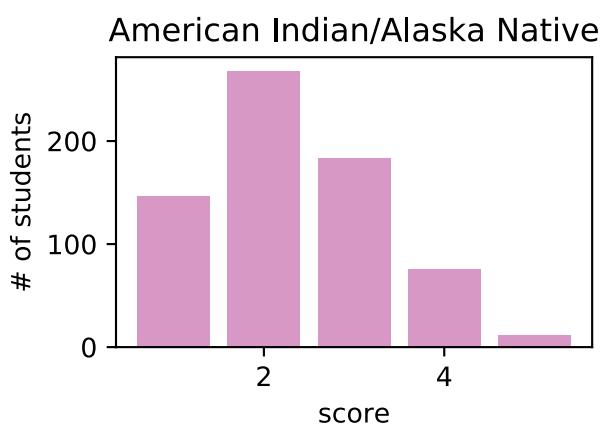
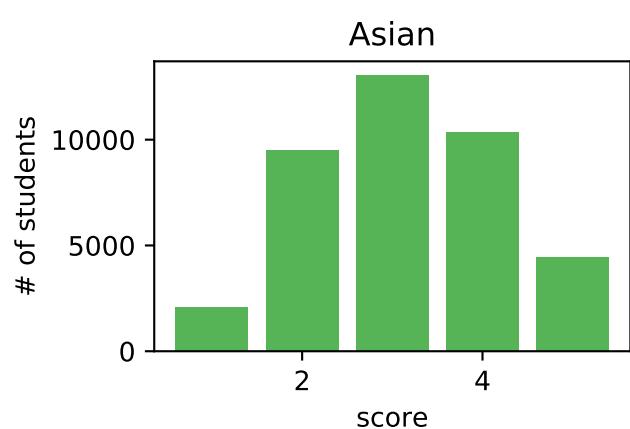
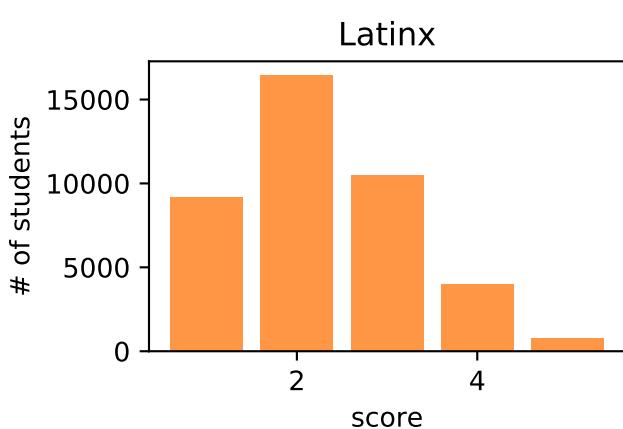
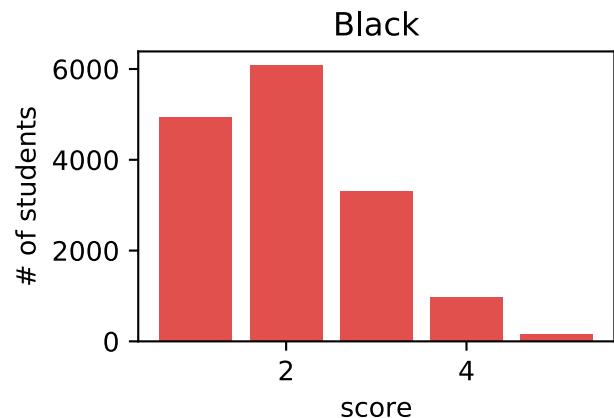
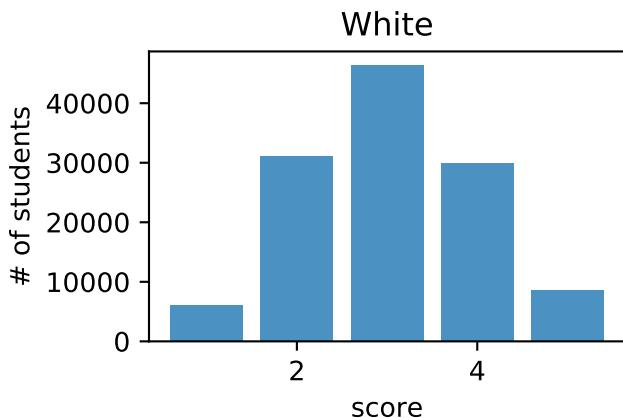
χ^2 statistic = 1572.6298714296893

BIOLOGY



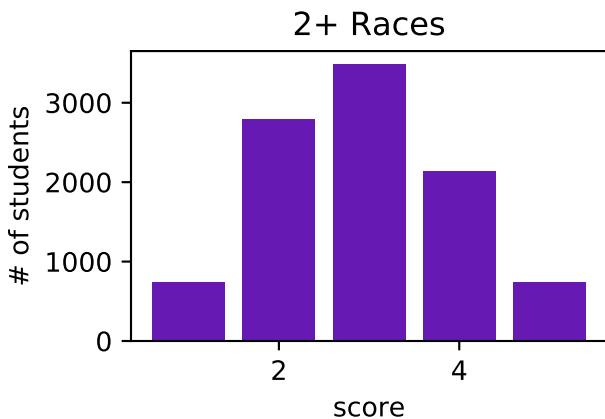
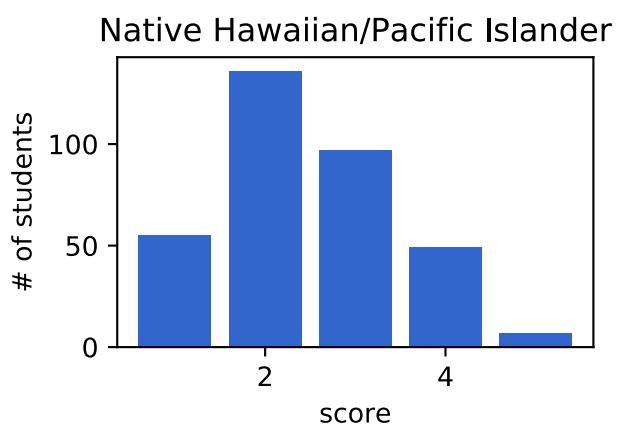
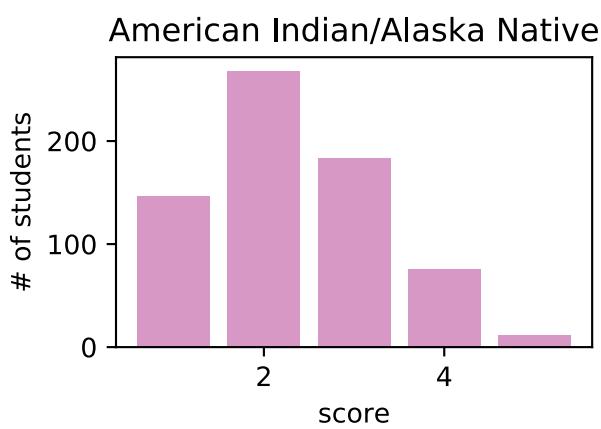
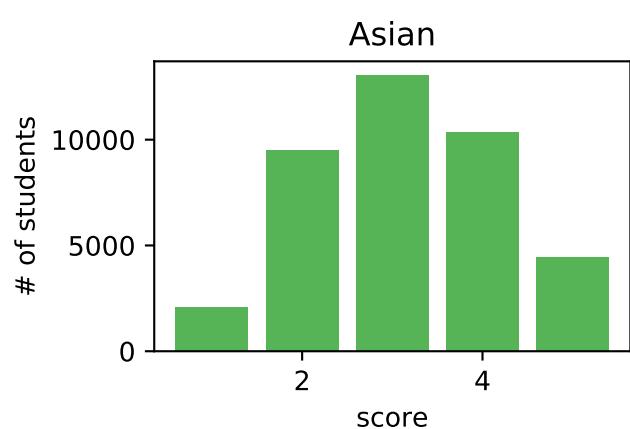
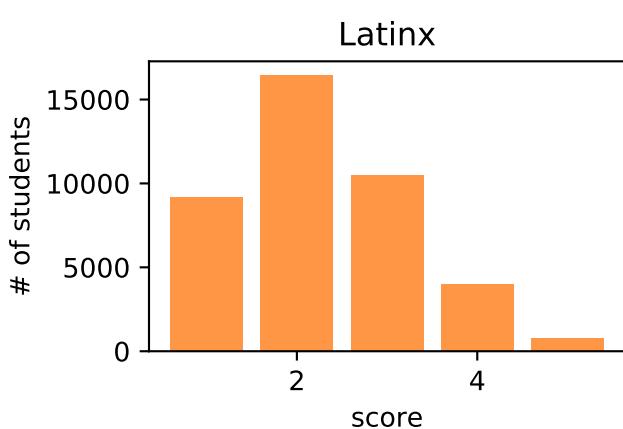
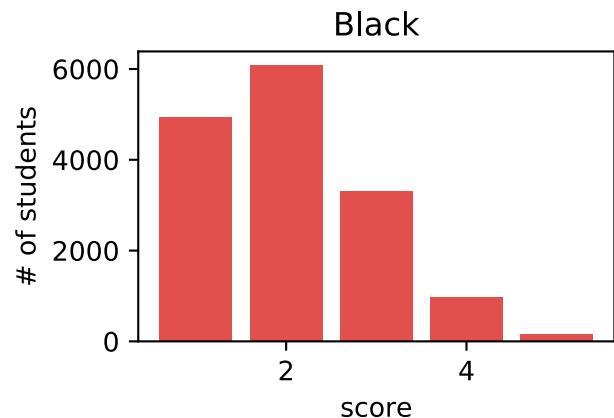
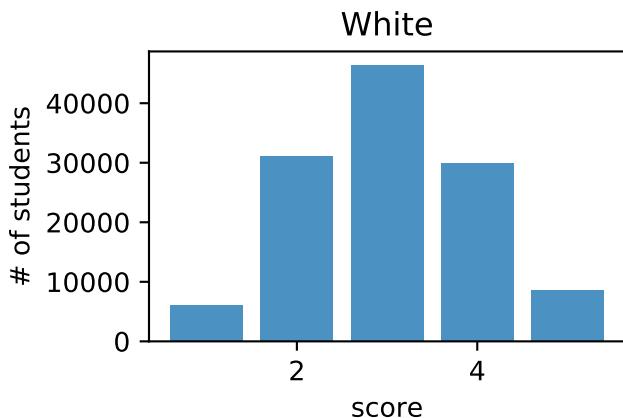
χ^2 statistic = 31852.914287287465

BIOLOGY



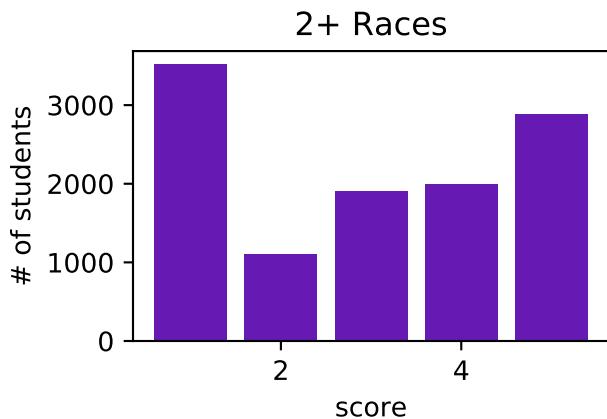
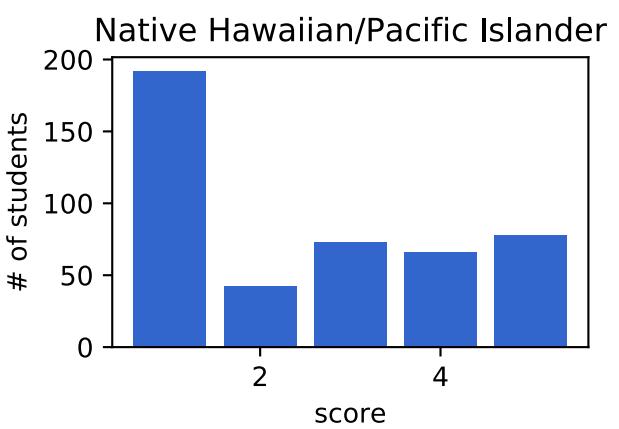
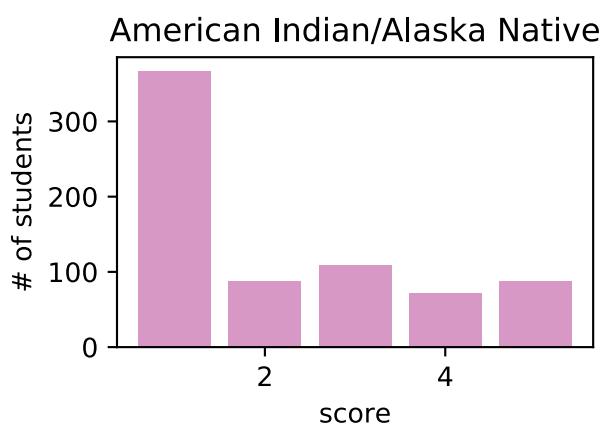
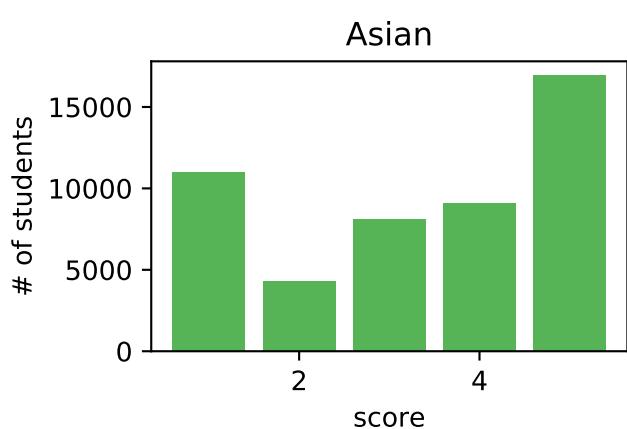
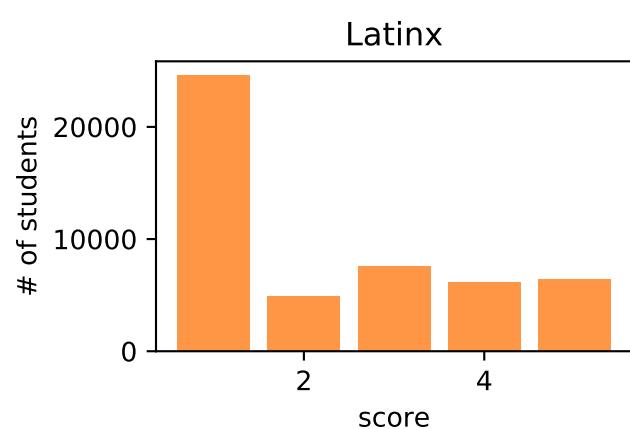
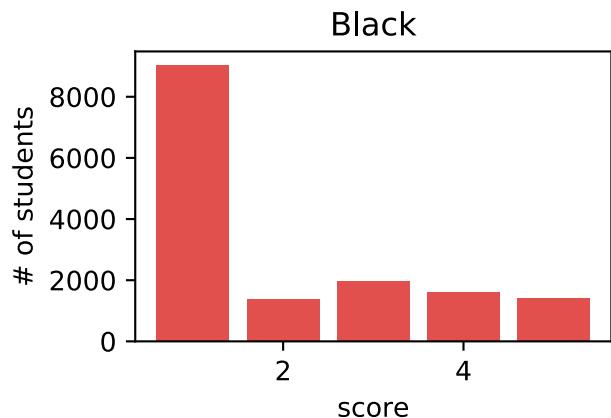
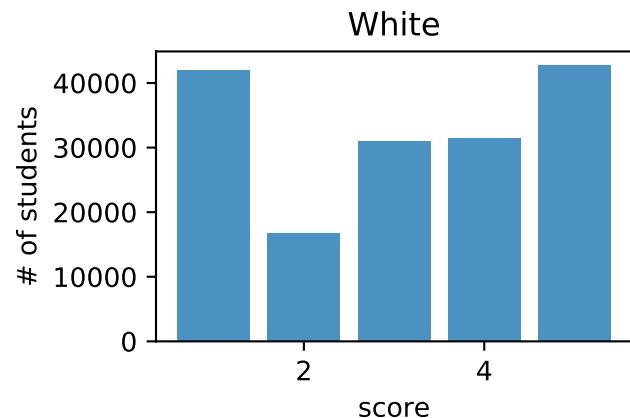
χ^2 statistic = 31852.914287287465

BIOLOGY



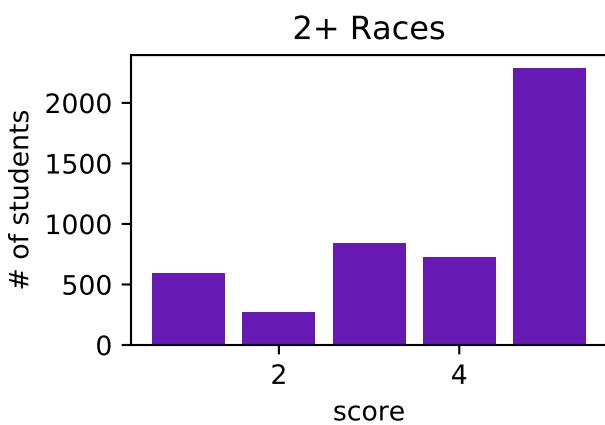
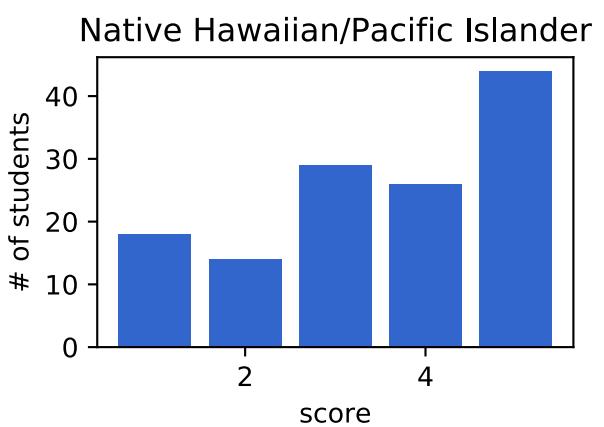
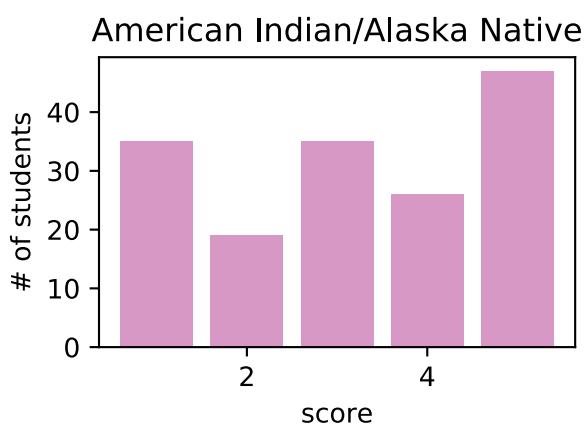
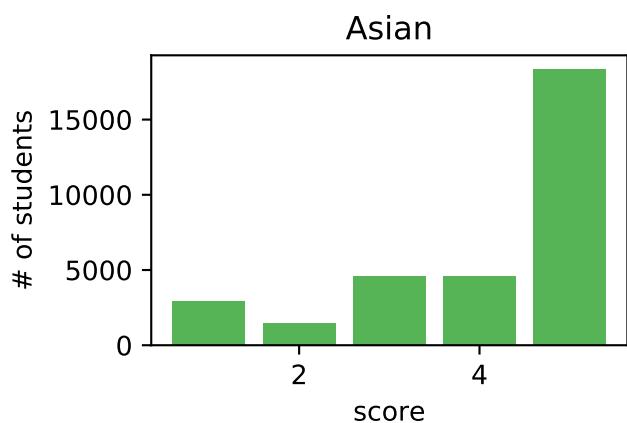
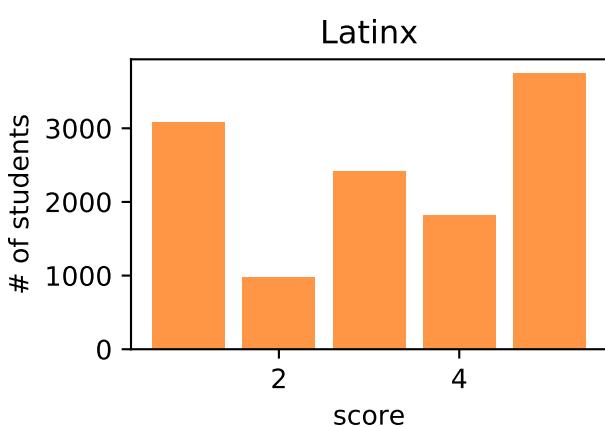
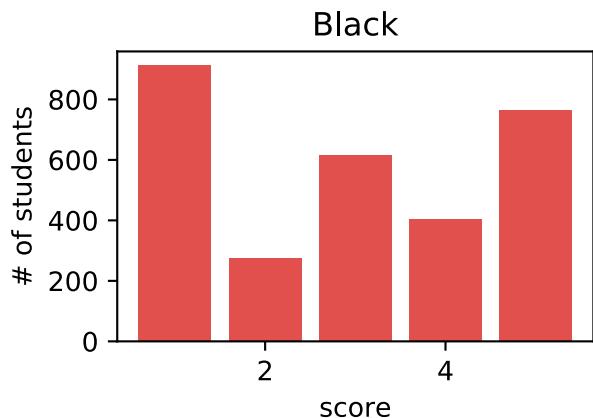
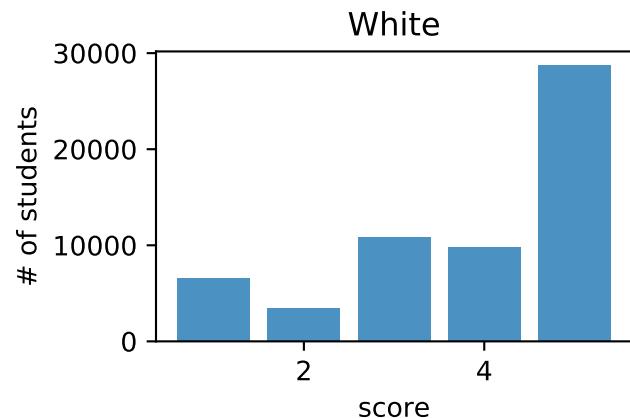
χ^2 statistic = 31852.914287287465

CALCULUS AB



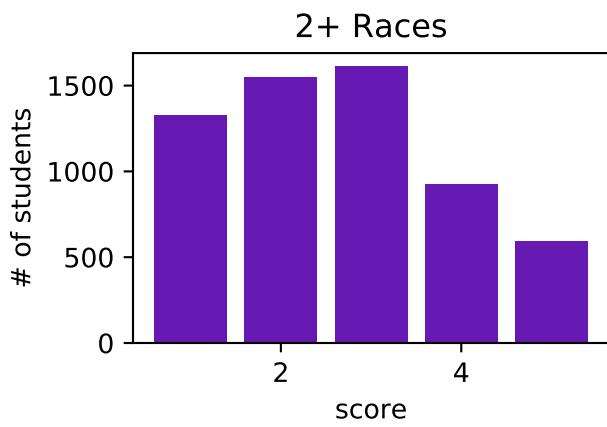
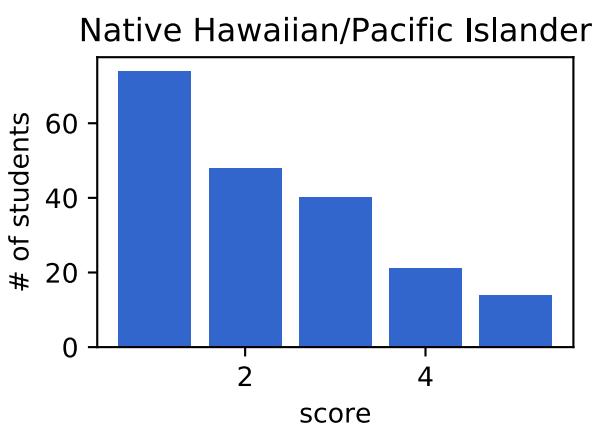
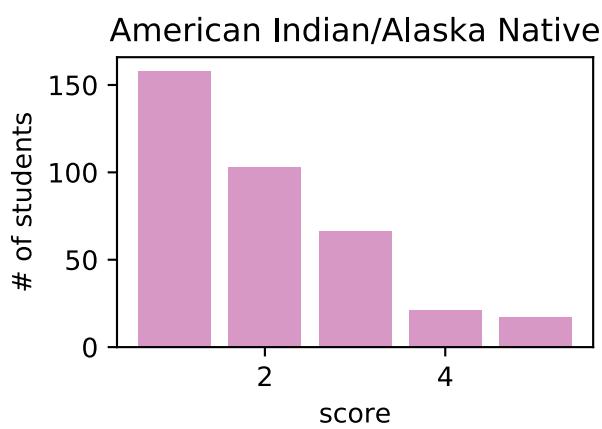
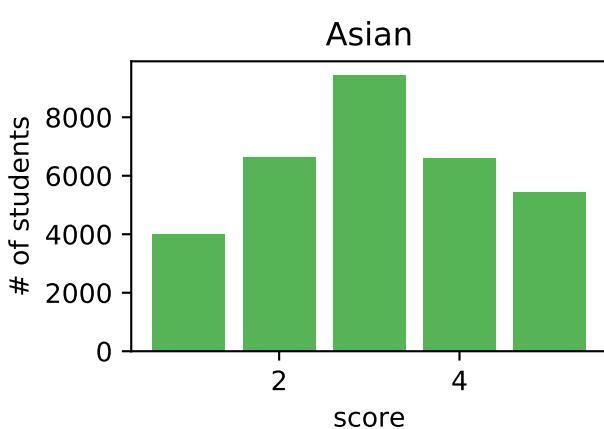
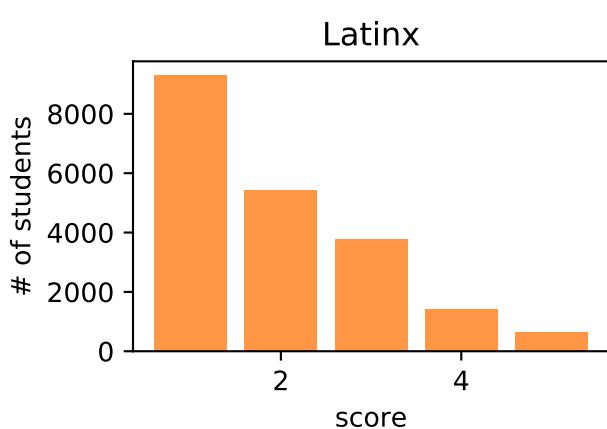
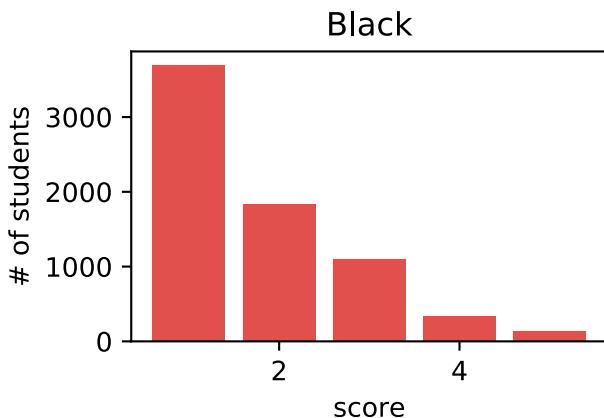
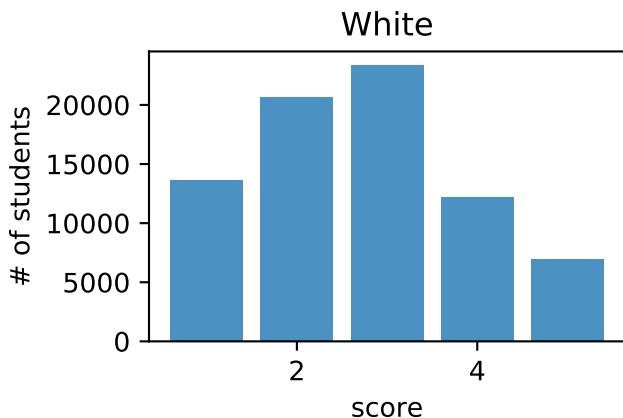
χ^2 statistic = 20658.438021060323

CALCULUS BC



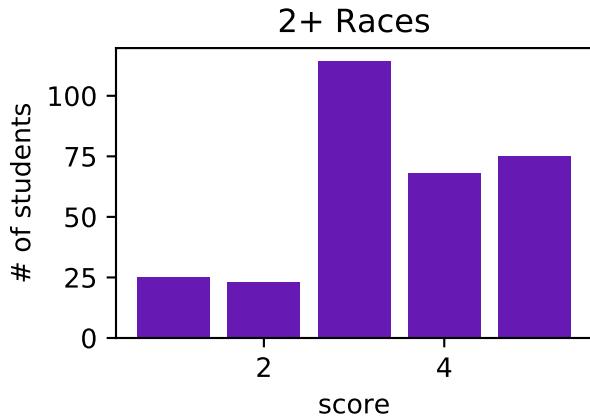
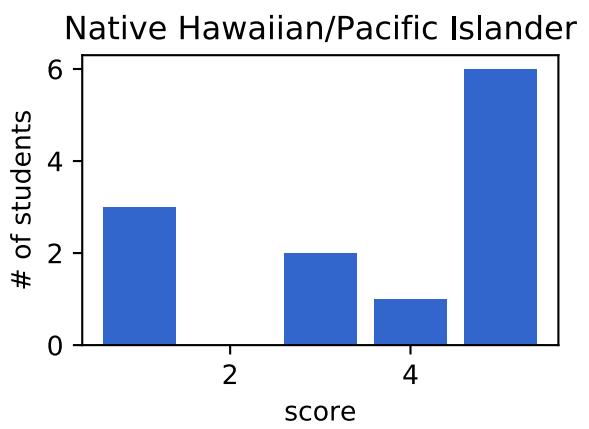
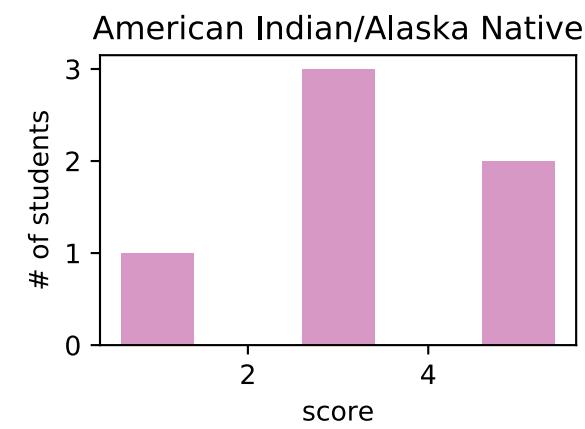
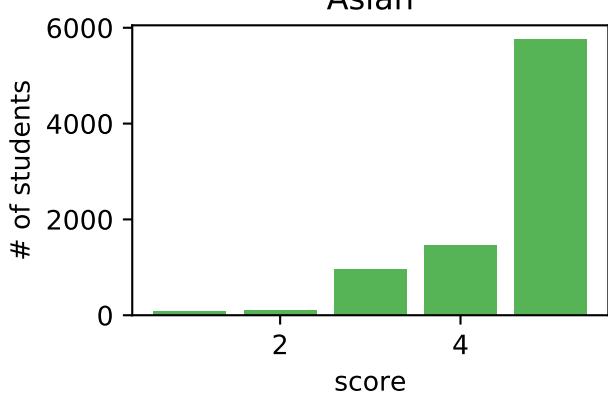
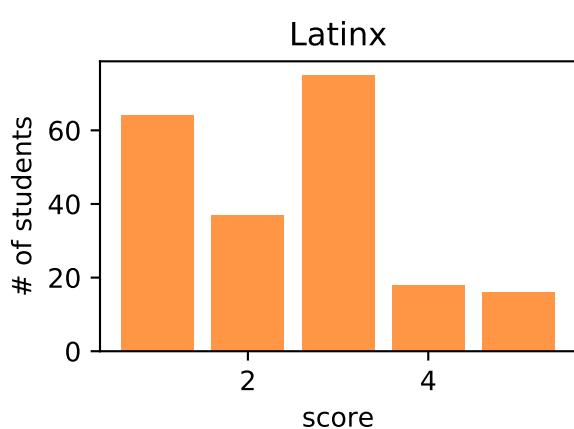
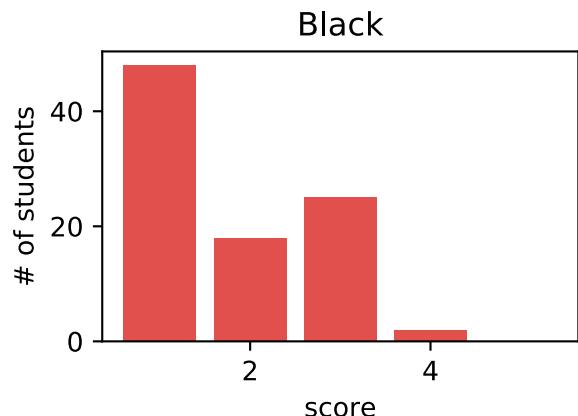
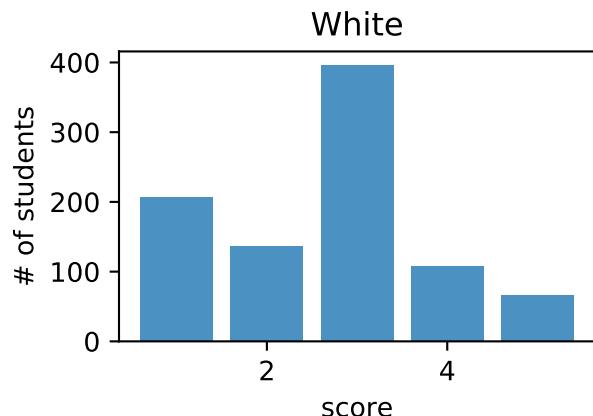
χ^2 statistic = 5020.424515568894

CHEMISTRY



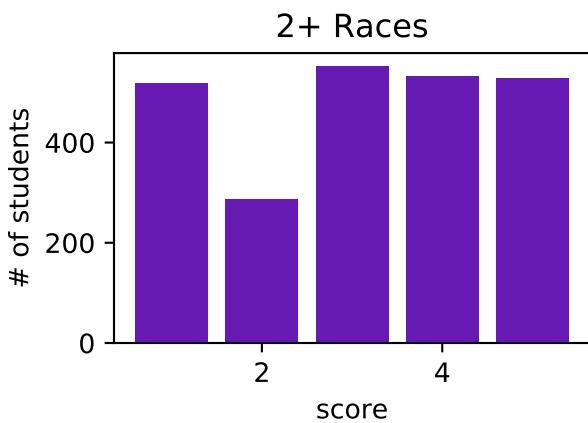
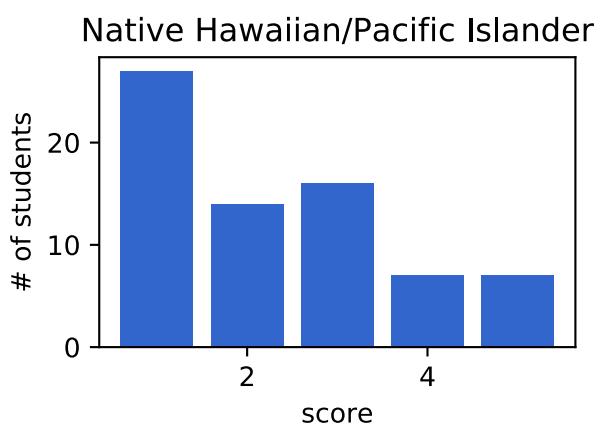
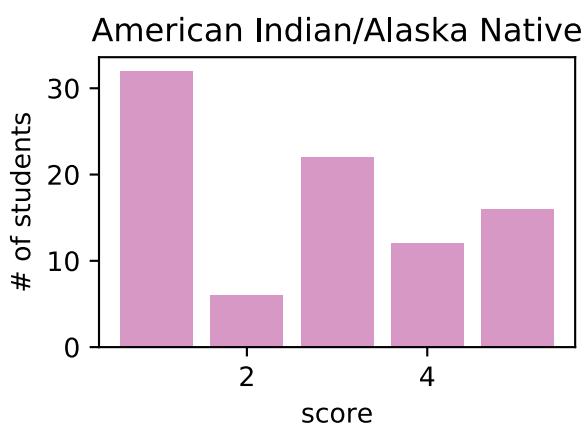
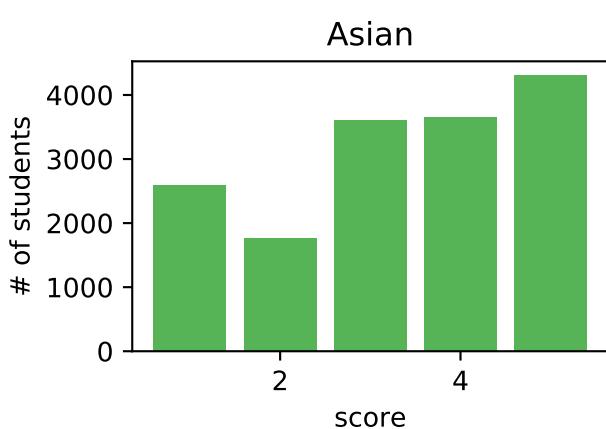
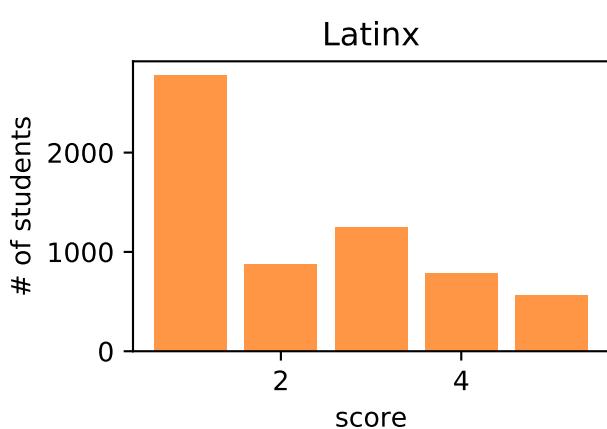
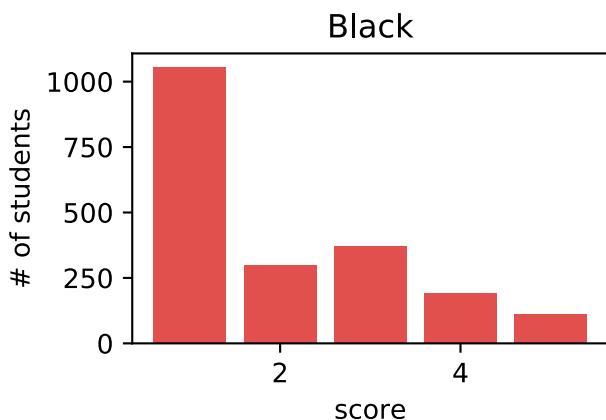
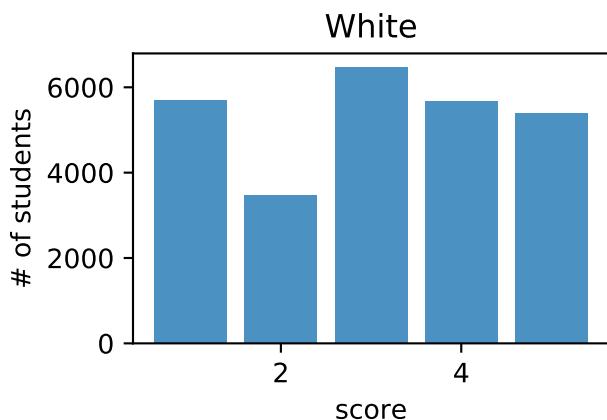
χ^2 statistic = 16705.00798891283

CHINESE LANGUAGE & CULTURE



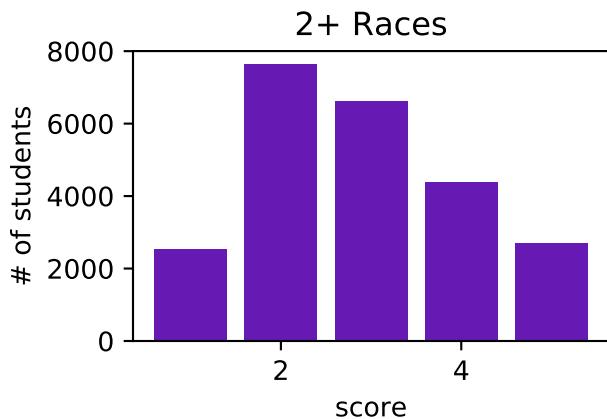
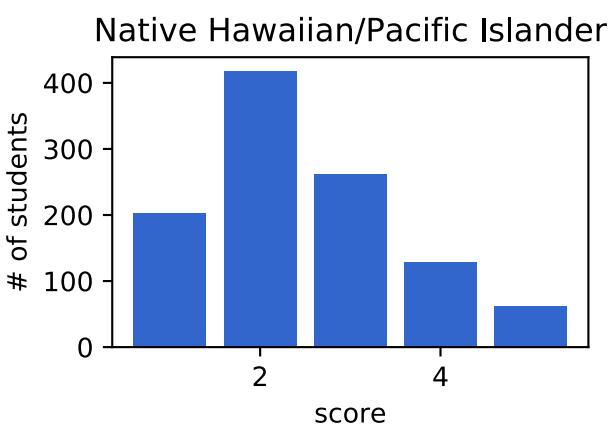
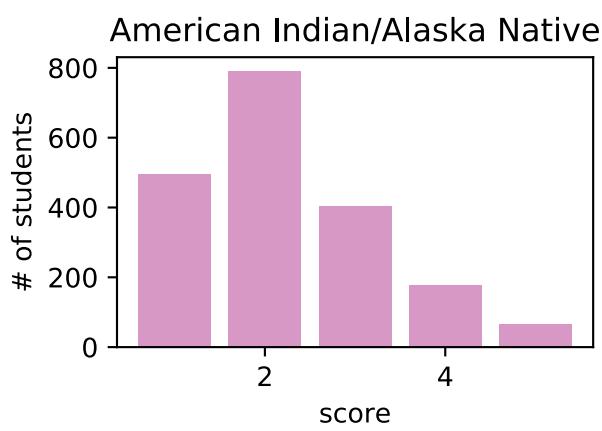
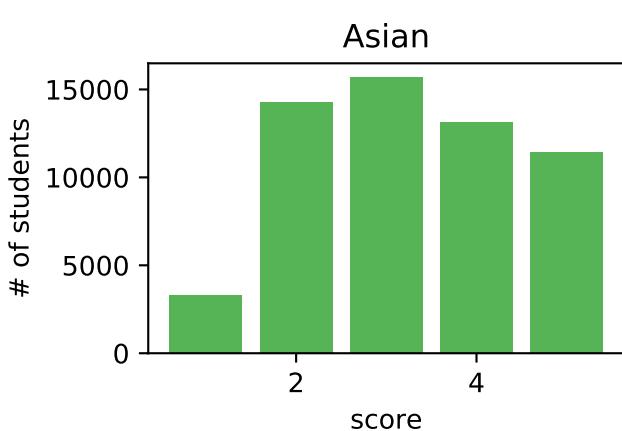
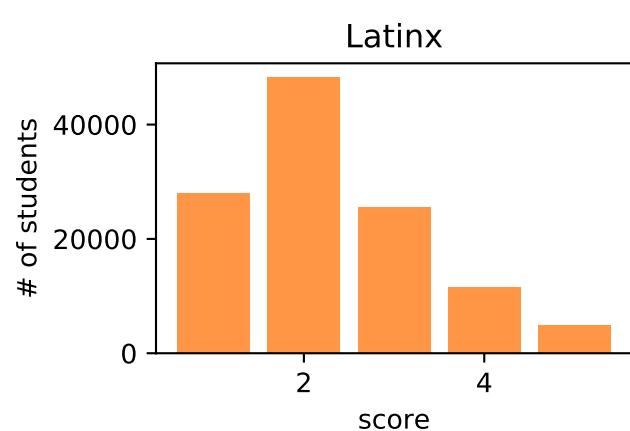
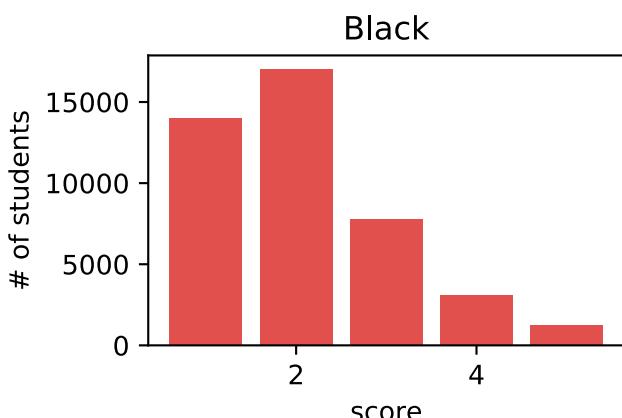
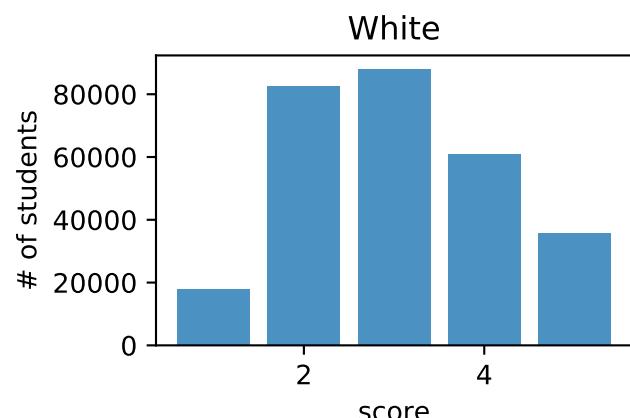
χ^2 statistic = 3947.6243712427604

COMPUTER SCIENCE A



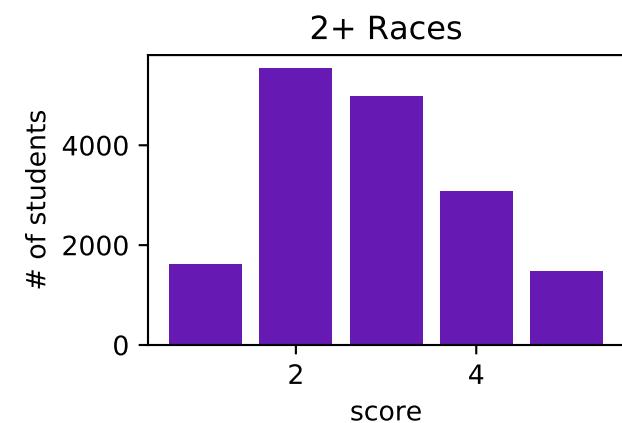
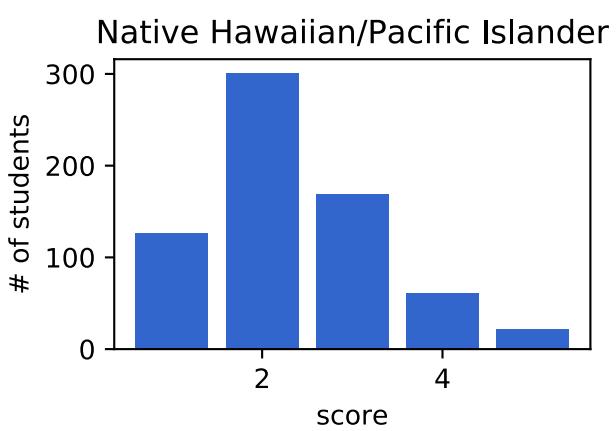
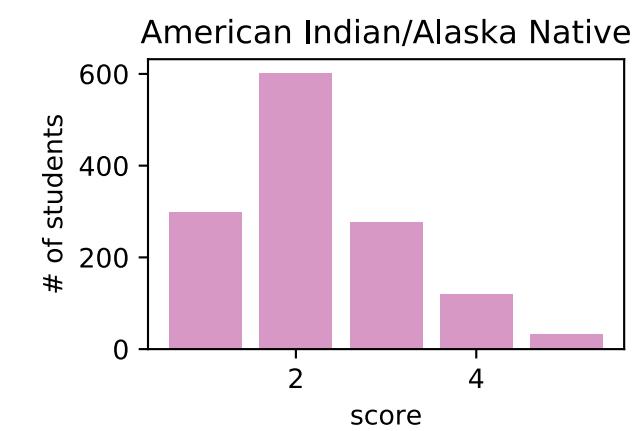
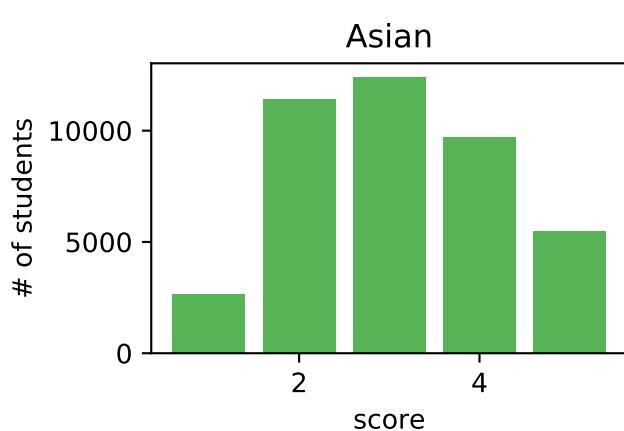
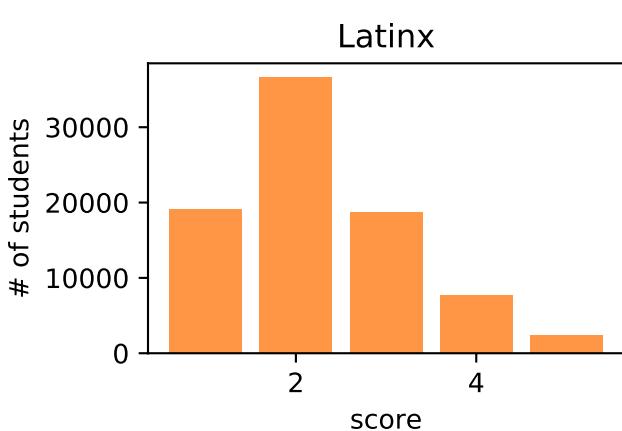
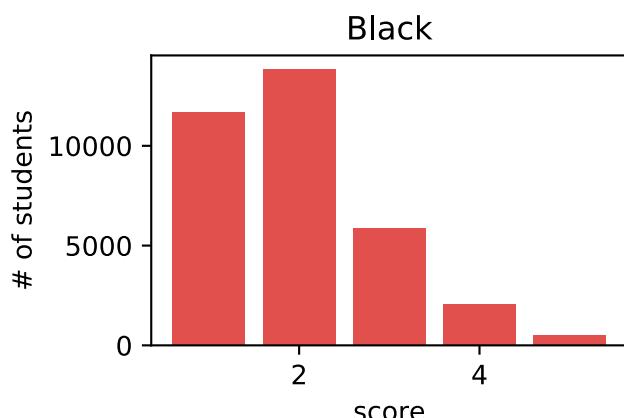
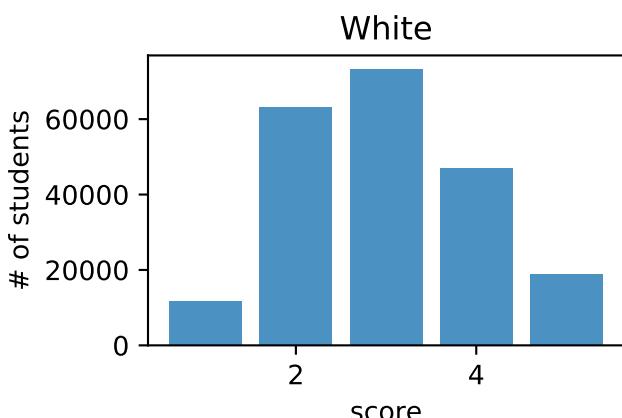
χ^2 statistic = 3744.903379030492

ENGLISH LANGUAGE & COMPOSITION



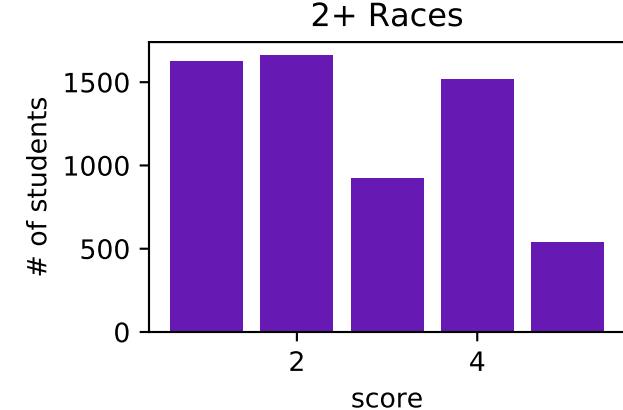
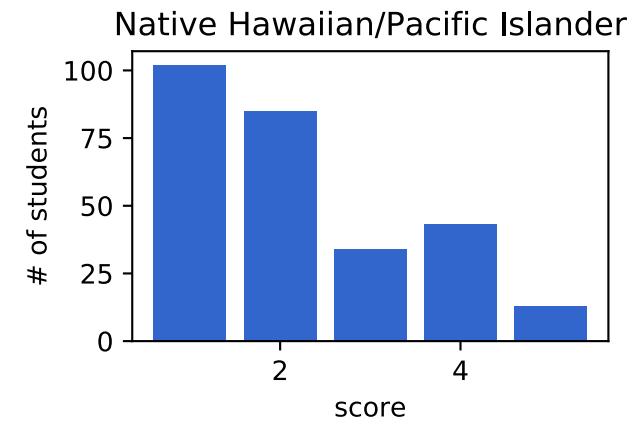
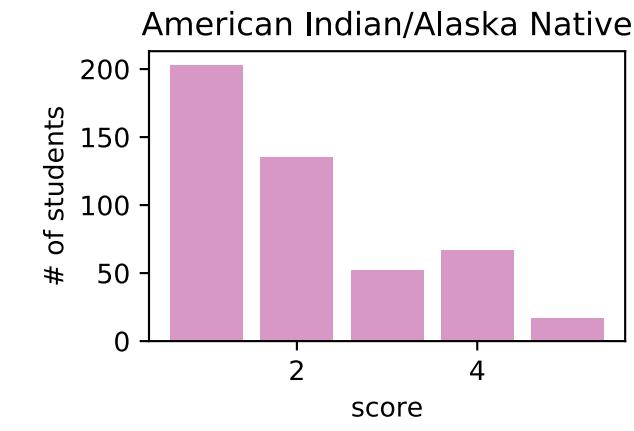
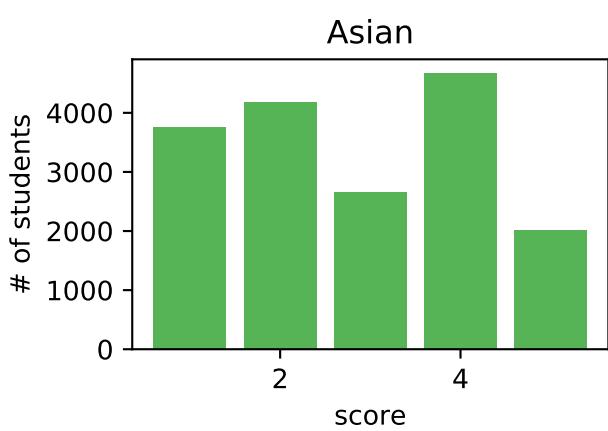
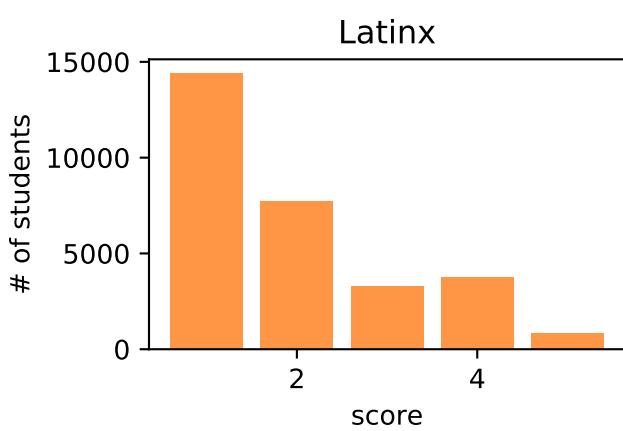
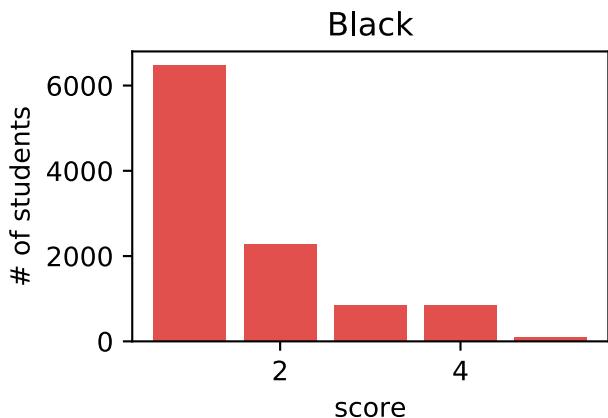
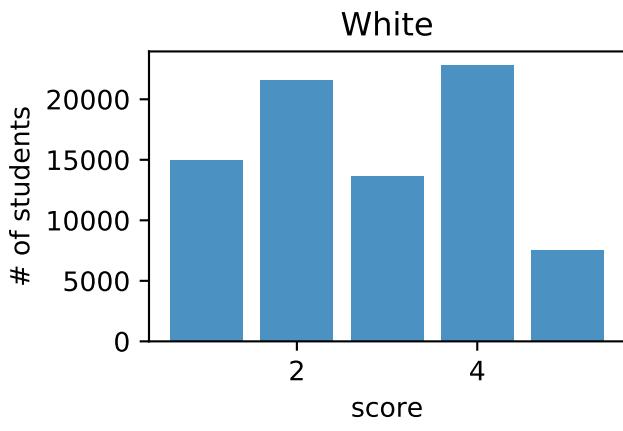
χ^2 statistic = 68849.16222965093

ENGLISH LITERATURE & COMPOSITION



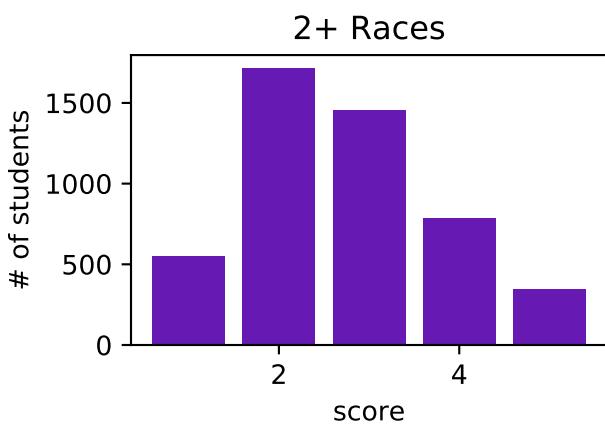
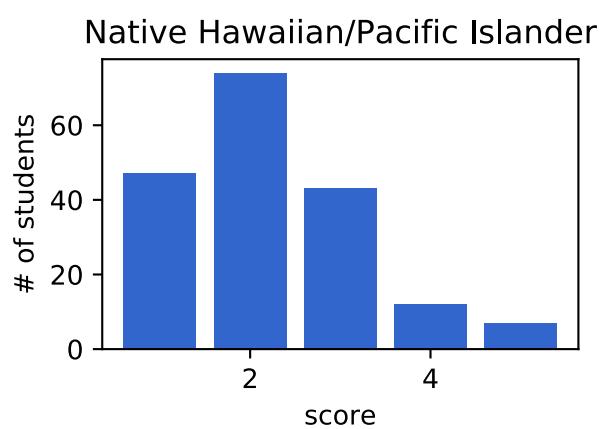
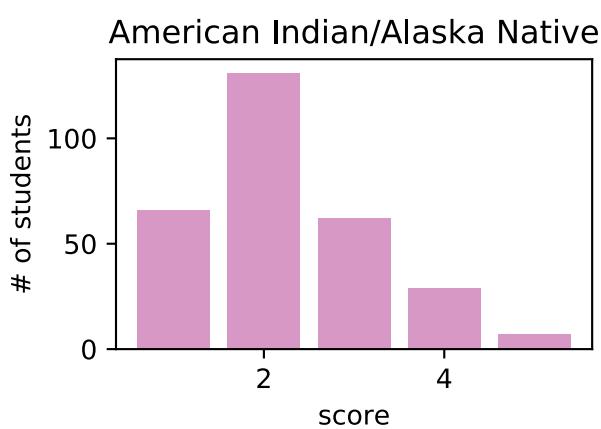
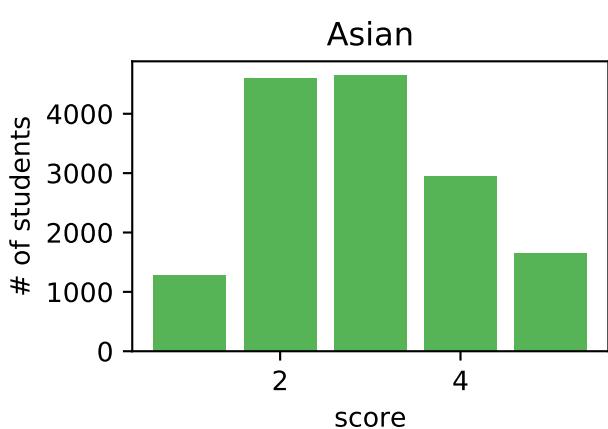
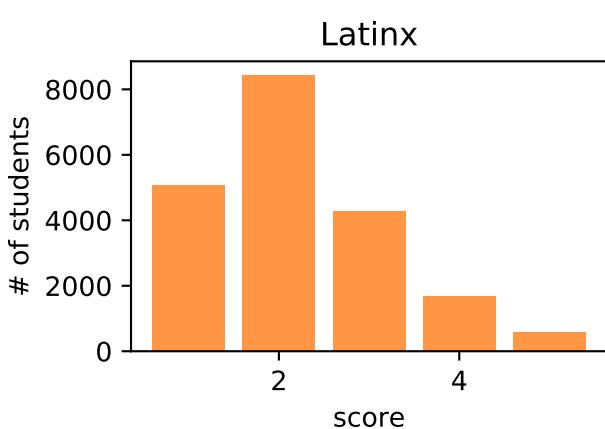
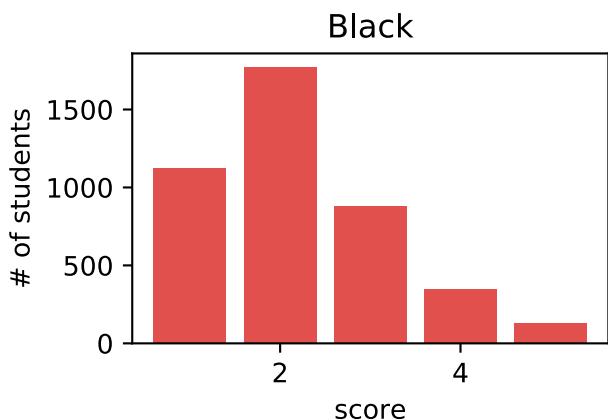
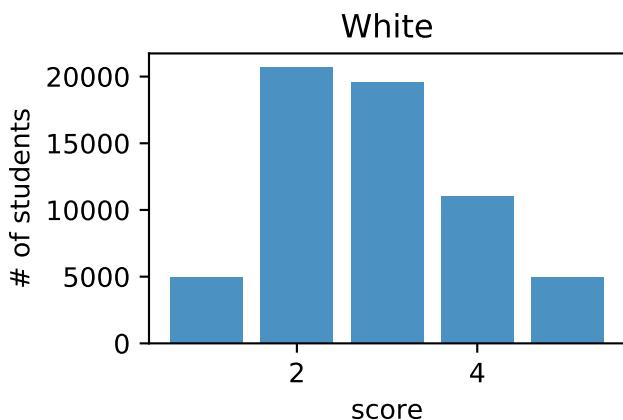
χ^2 statistic = 55961.48027014612

ENVIRONMENTAL SCIENCE



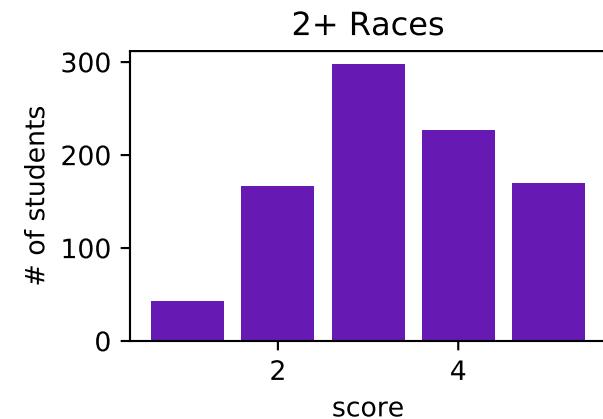
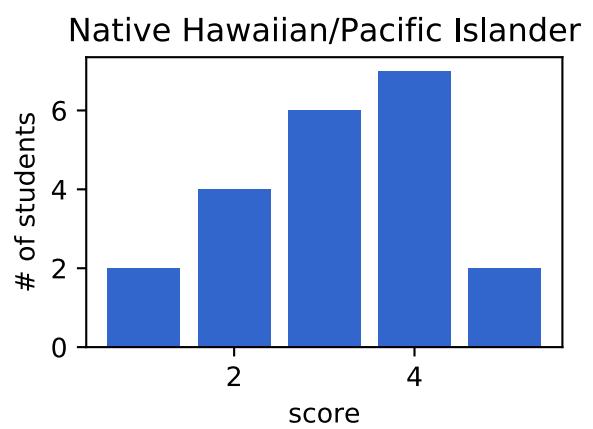
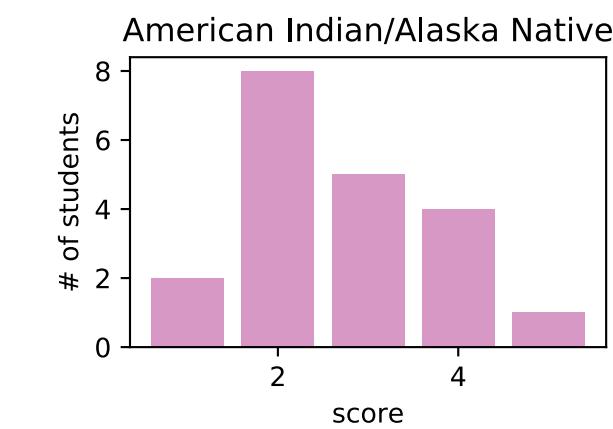
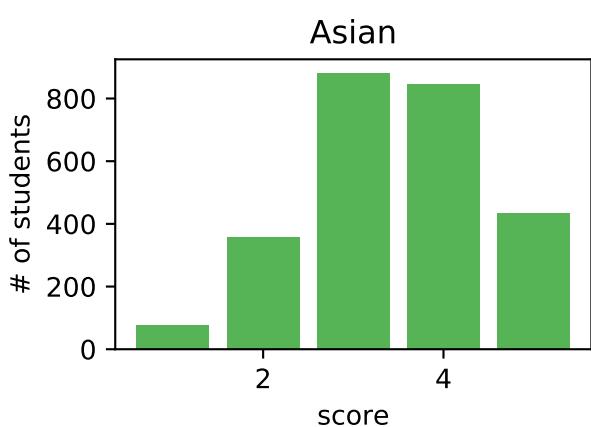
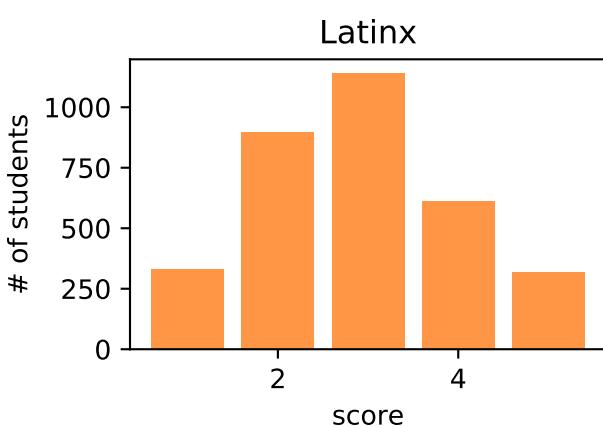
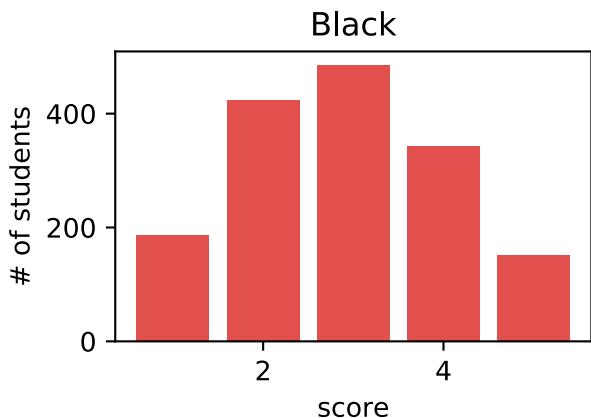
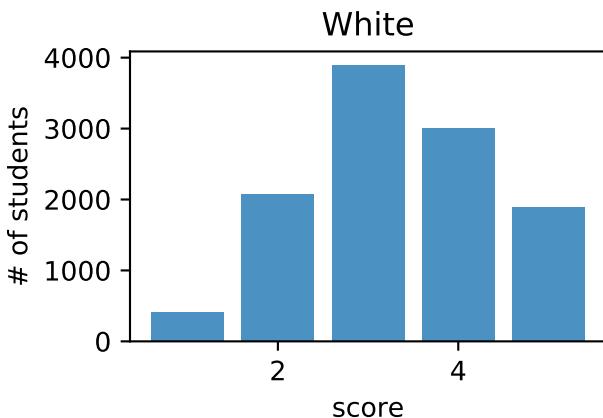
χ^2 statistic = 17868.820030633822

EUROPEAN HISTORY



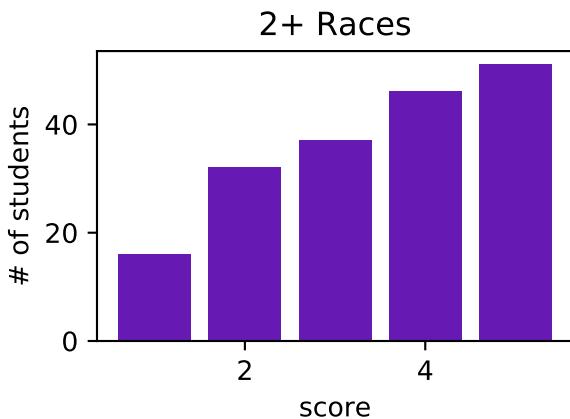
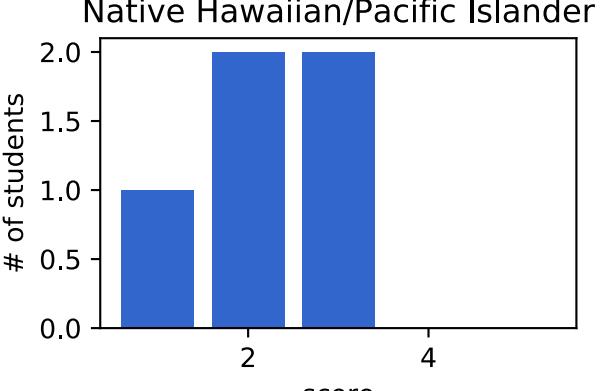
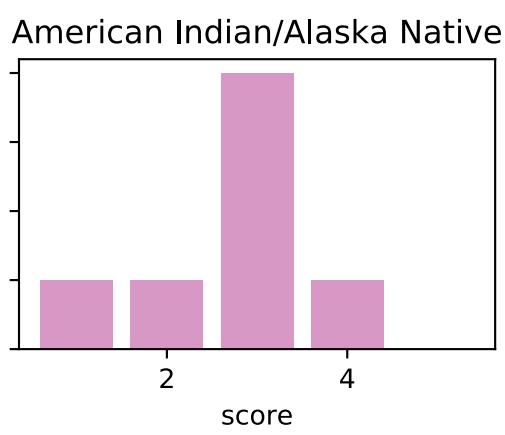
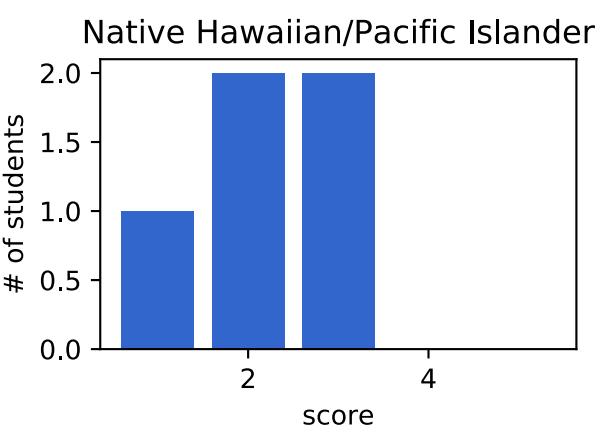
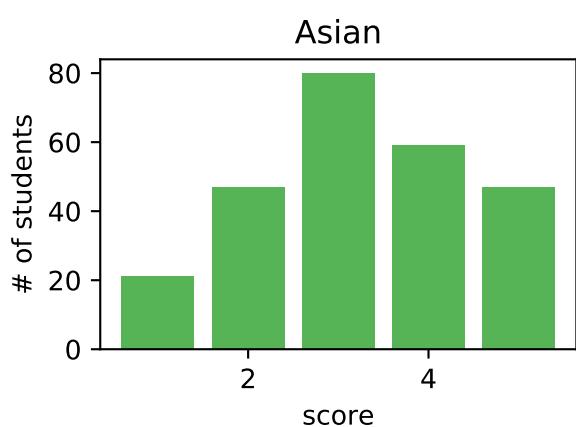
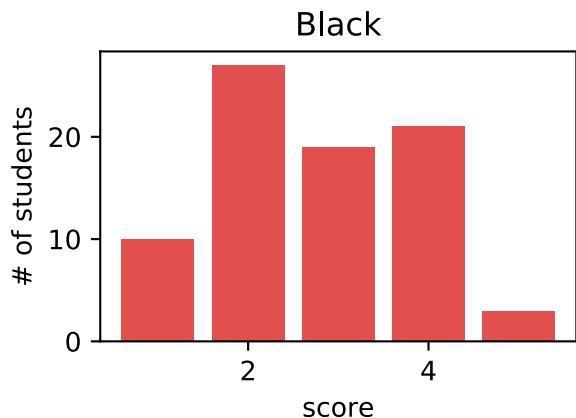
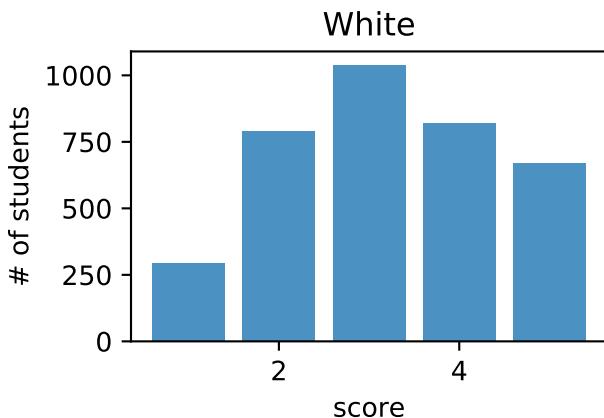
χ^2 statistic = 7851.317015313369

FRENCH LANGUAGE & CULTURE



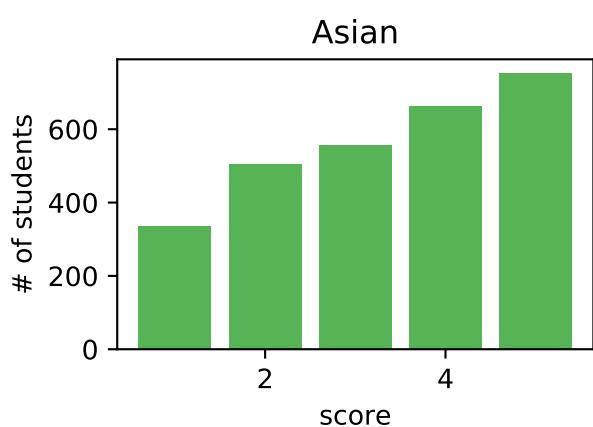
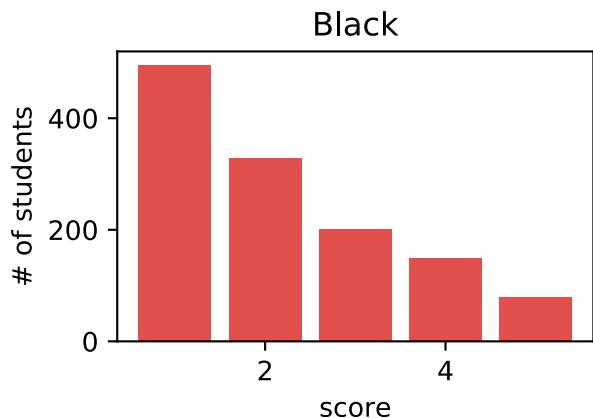
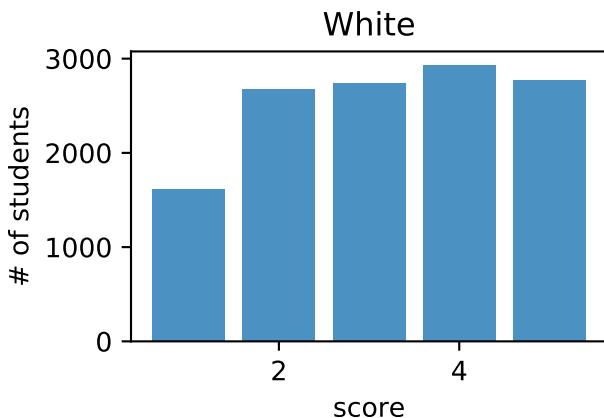
χ^2 statistic = 809.7147731714613

GERMAN LANGUAGE & CULTURE

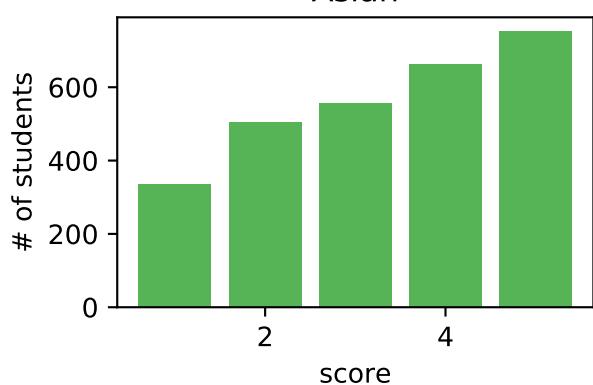


χ^2 statistic = 106.25565206157205

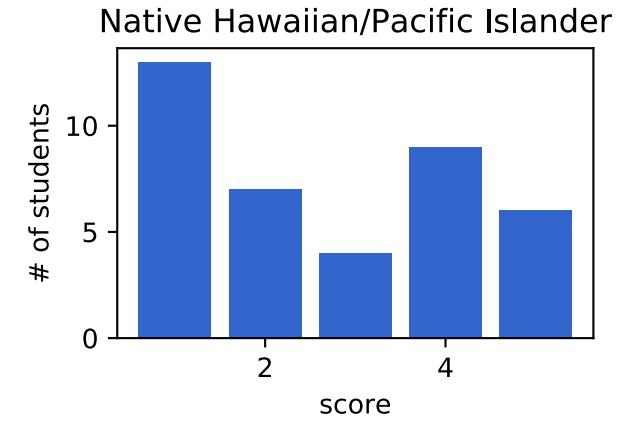
GOVERNMENT & POLITICS: COMPARATIVE



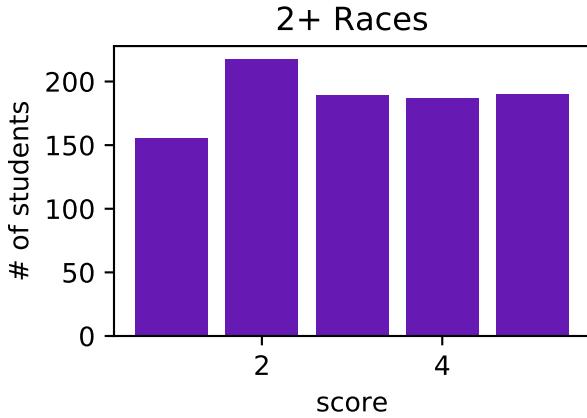
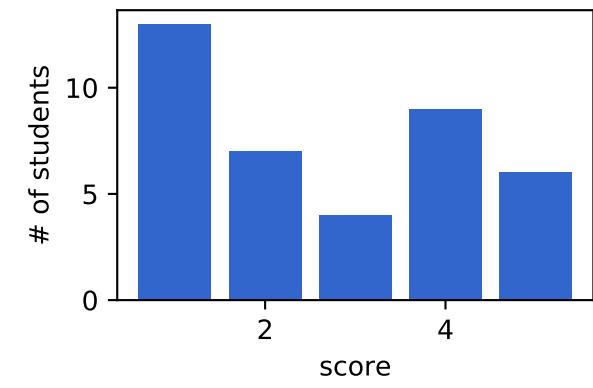
Asian



American Indian/Alaska Native

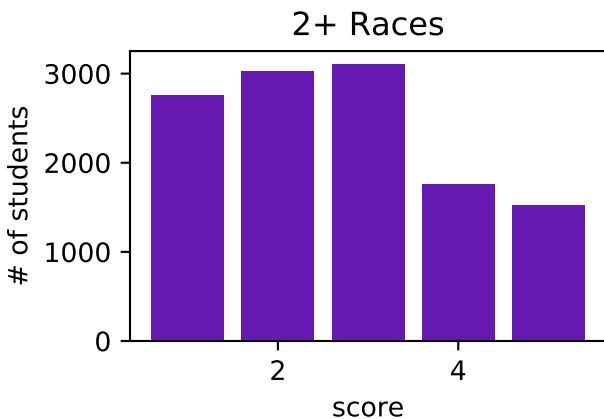
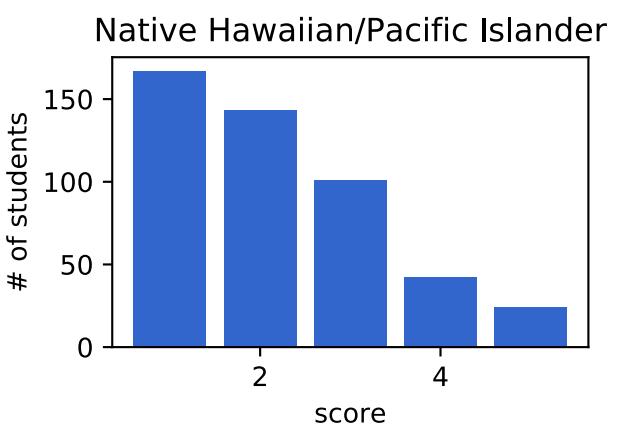
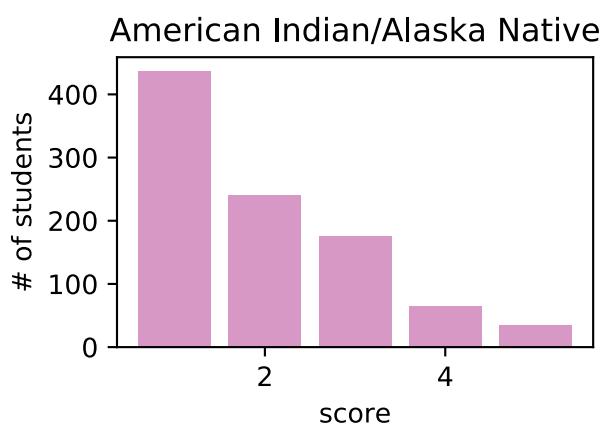
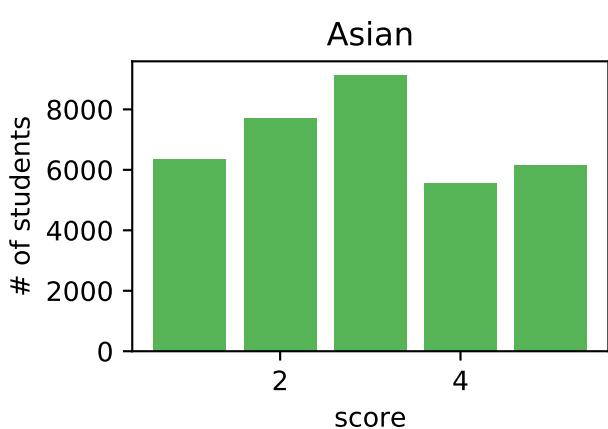
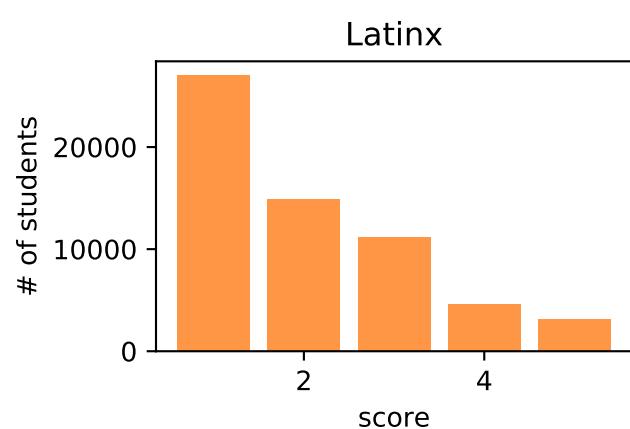
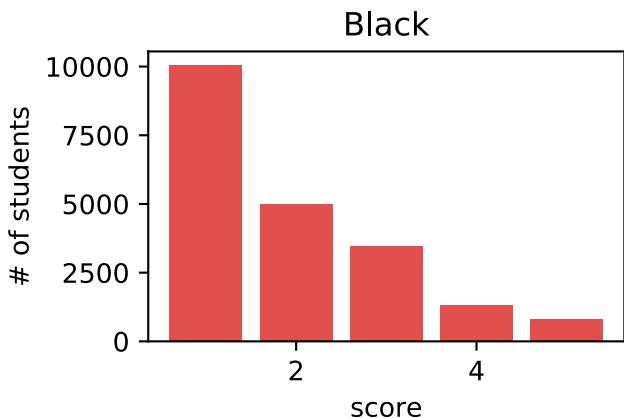
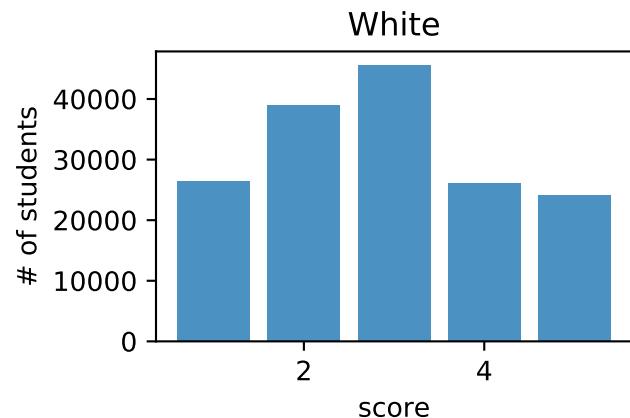


Native Hawaiian/Pacific Islander



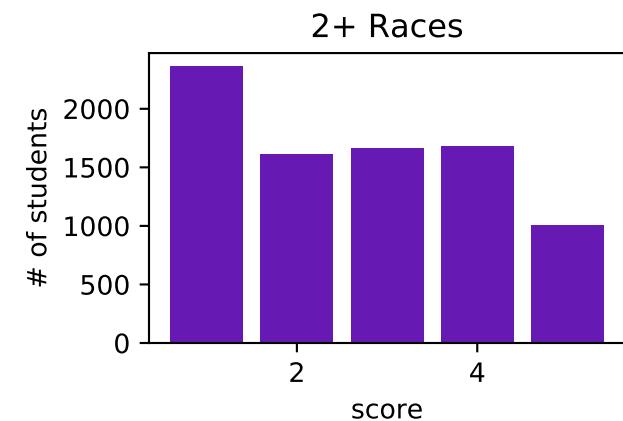
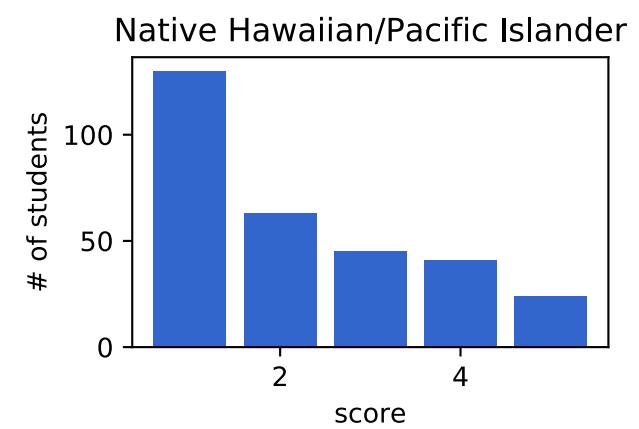
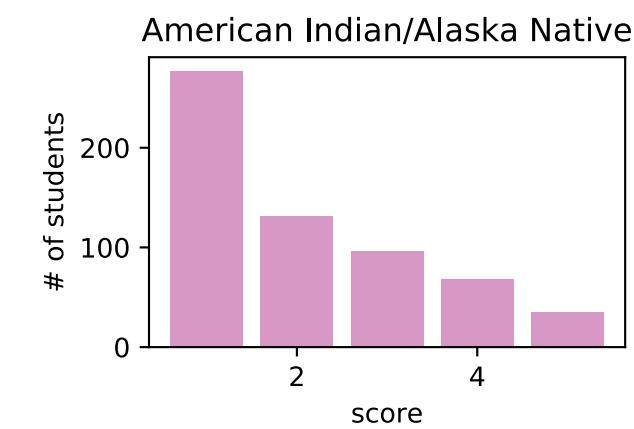
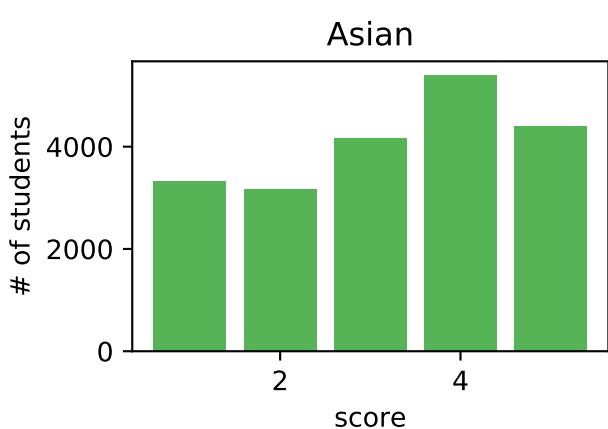
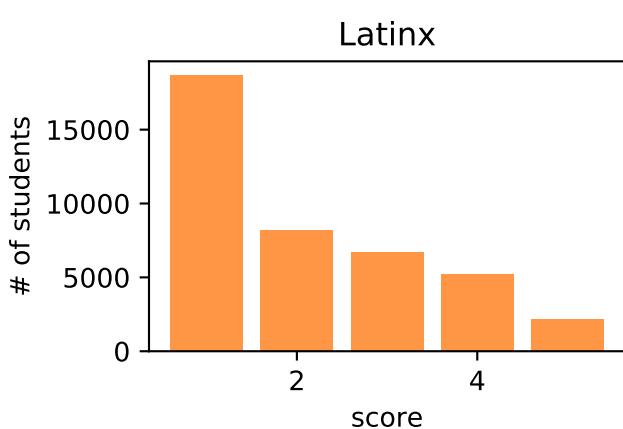
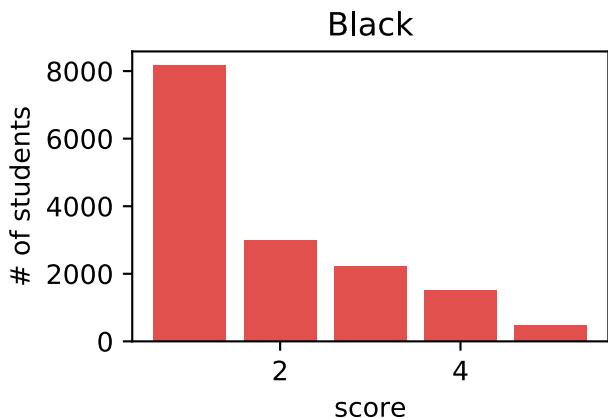
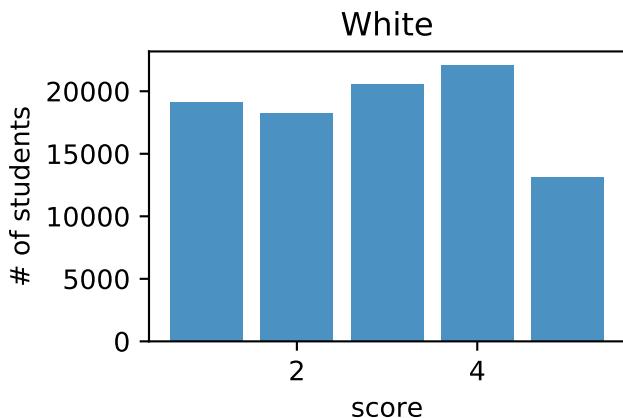
χ^2 statistic = 1230.640144009041

GOVERNMENT & POLITICS: U.S.



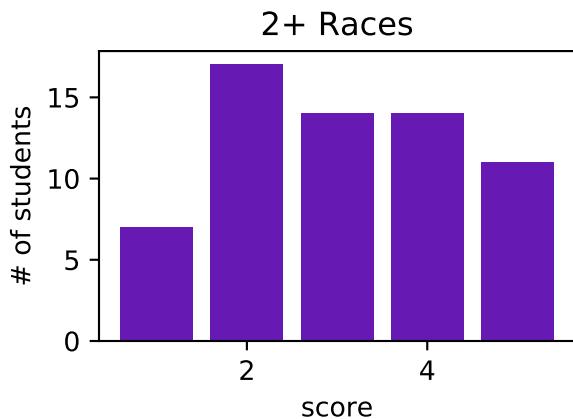
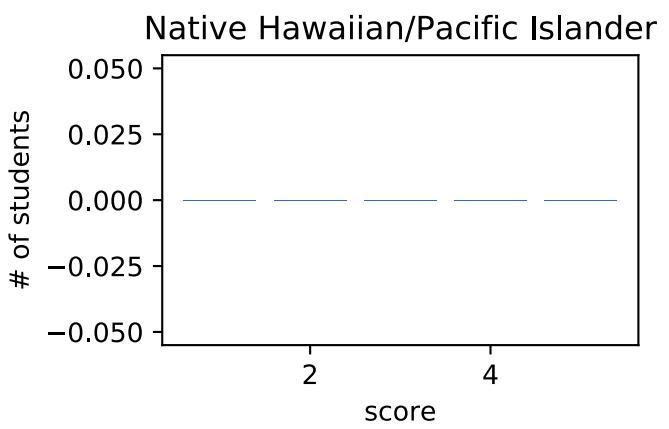
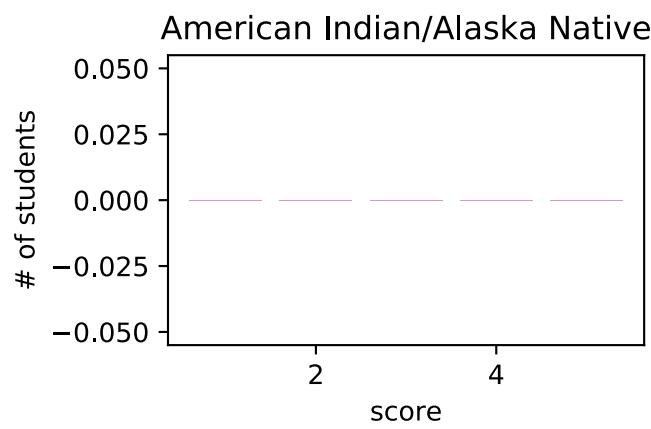
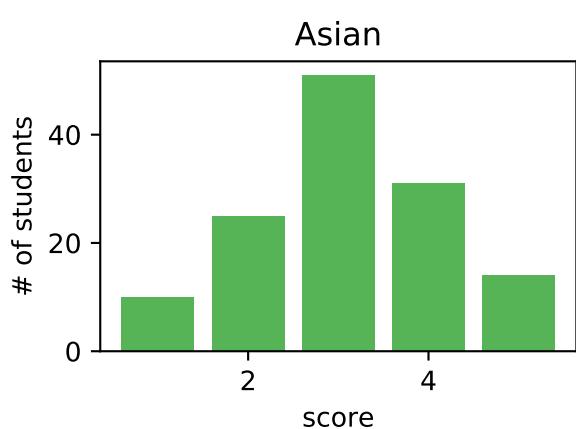
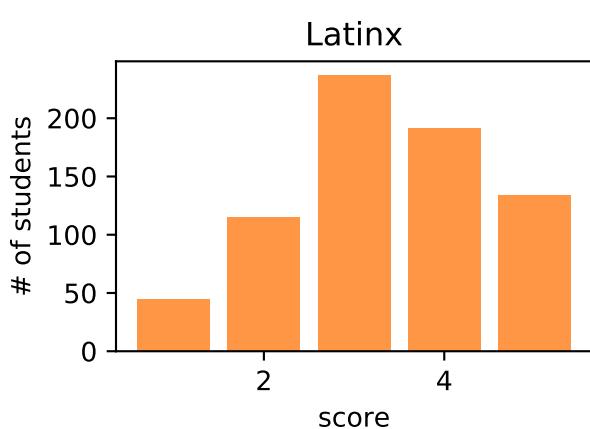
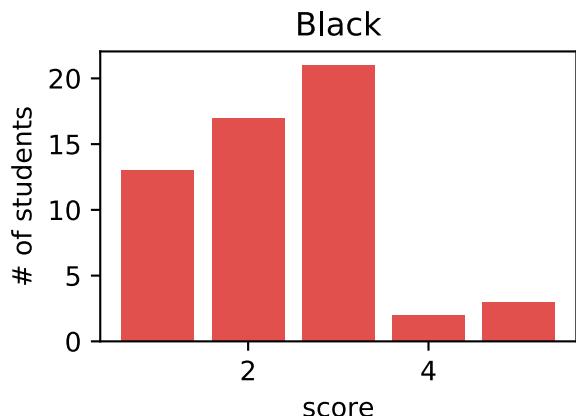
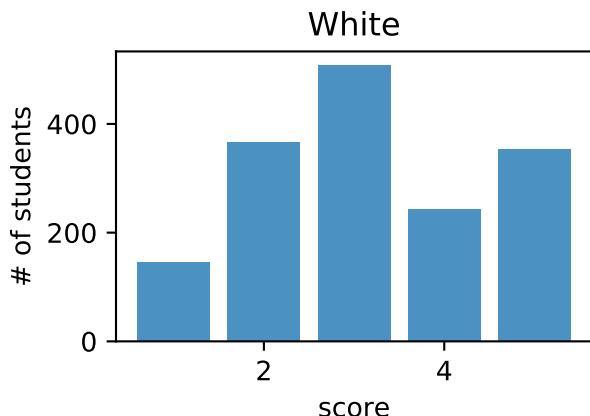
χ^2 statistic = 30704.758451443937

HUMAN GEOGRAPHY



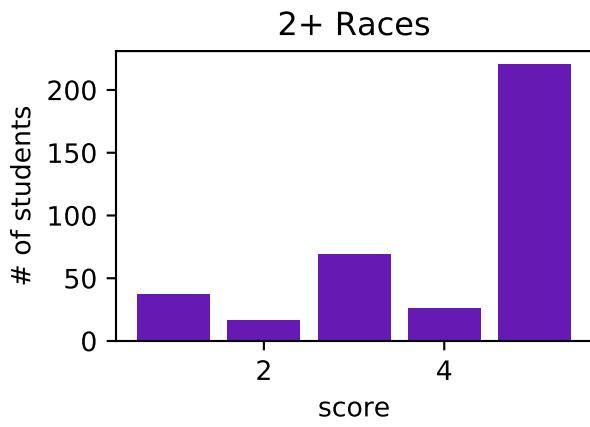
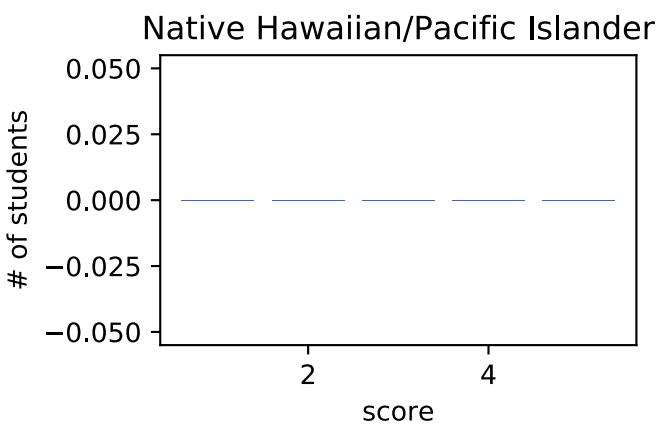
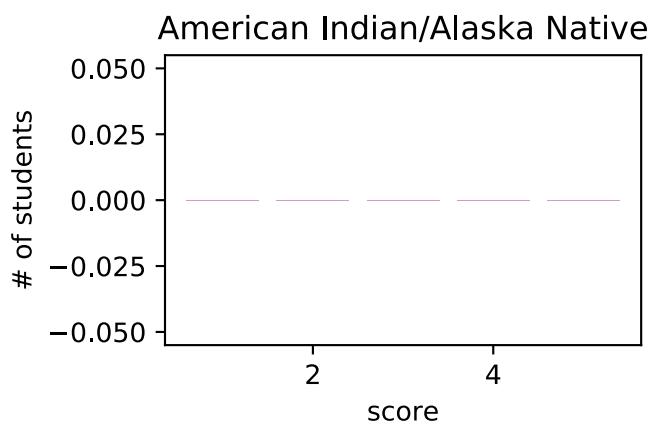
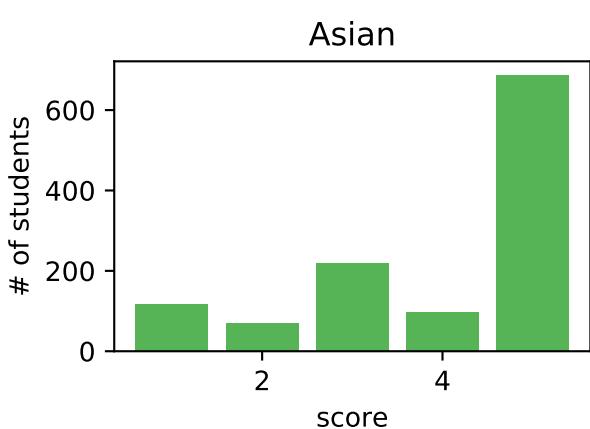
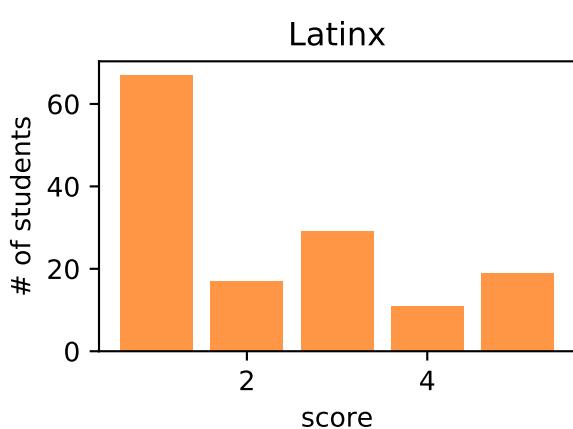
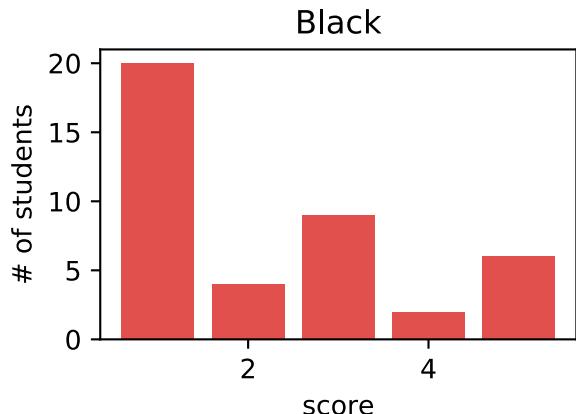
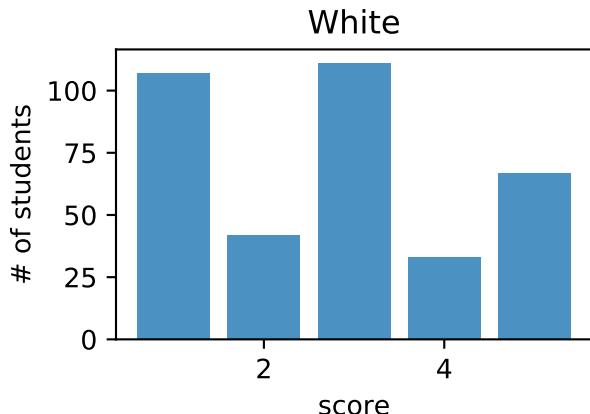
χ^2 statistic = 18820.50291342107

ITALIAN LANGUAGE & CULTURE



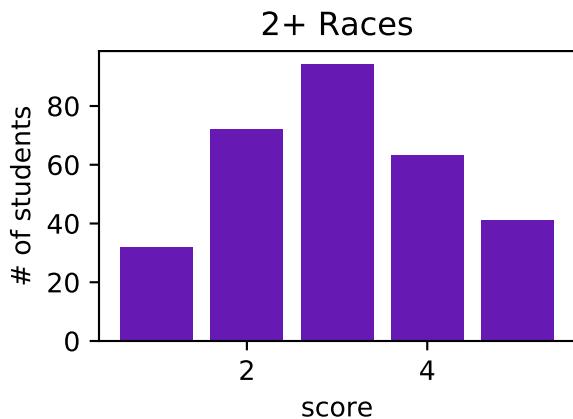
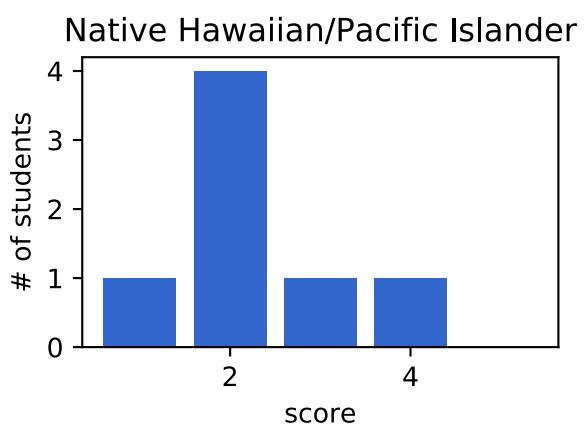
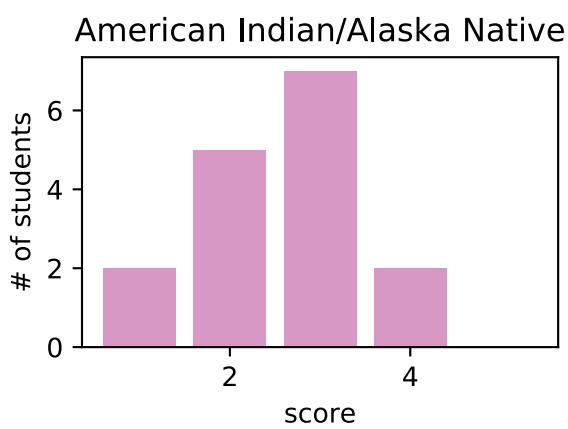
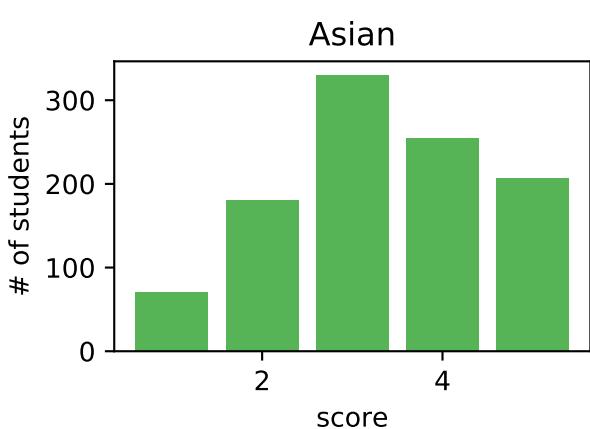
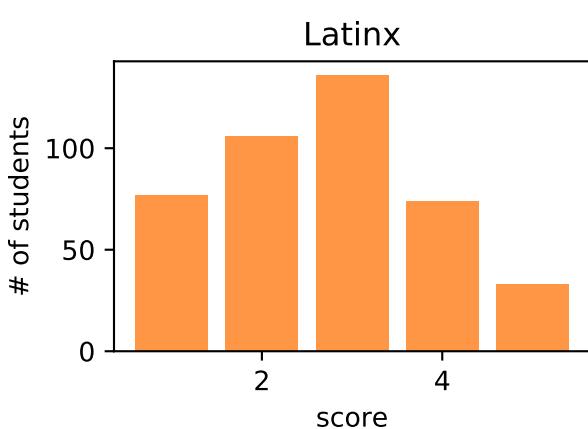
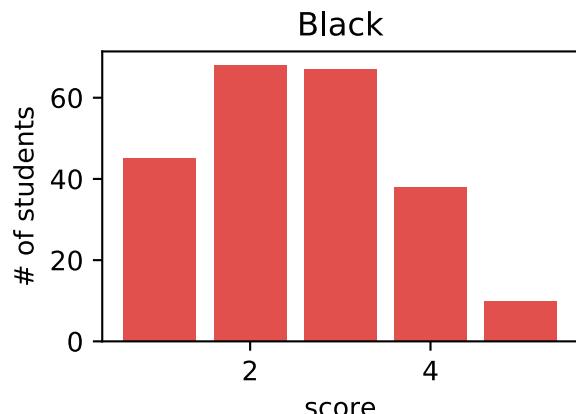
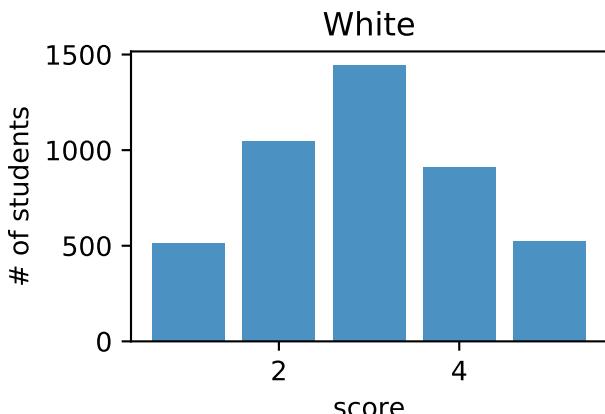
χ^2 statistic = 101.32997190010227

JAPANESE LANGUAGE & CULTURE



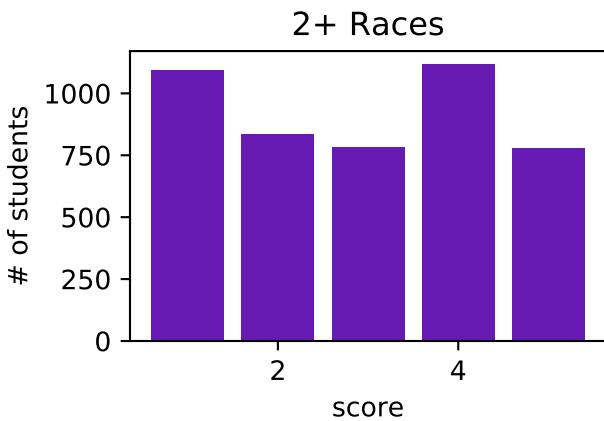
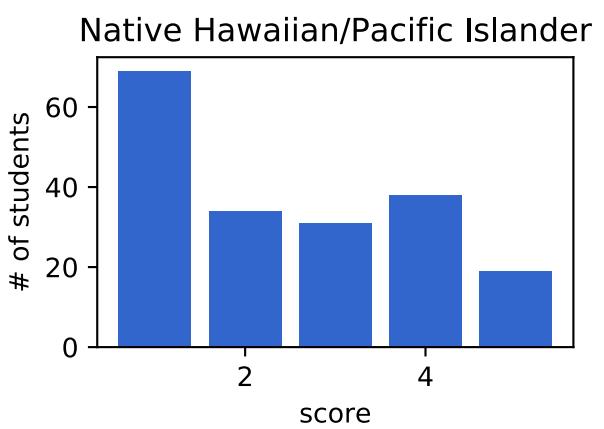
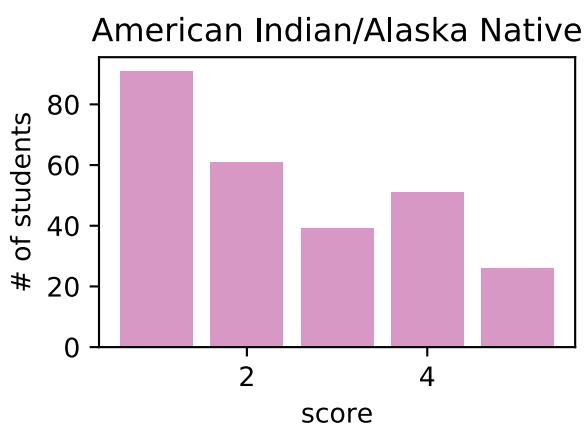
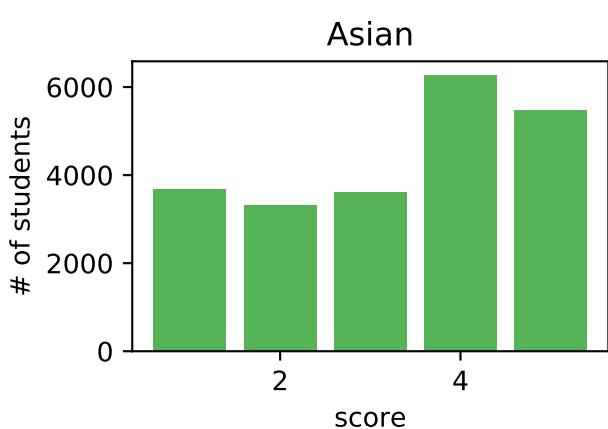
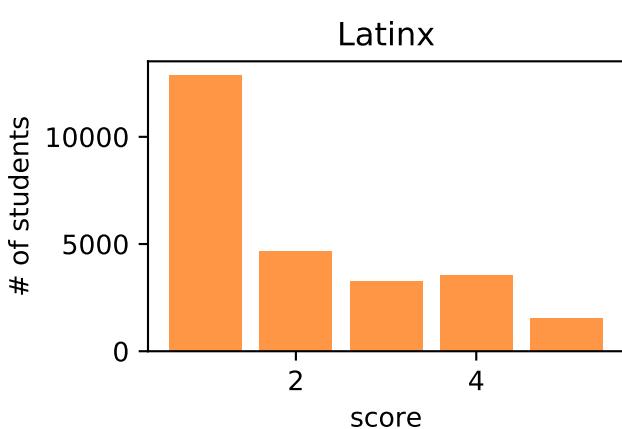
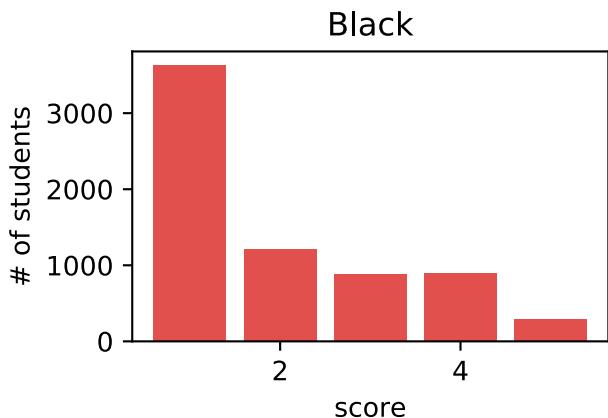
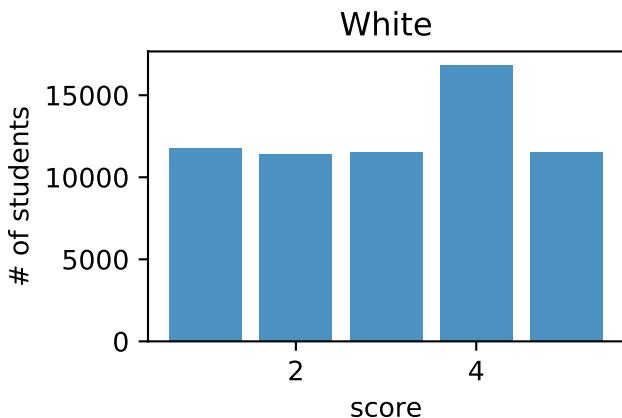
χ^2 statistic = 381.22520704794005

LATIN



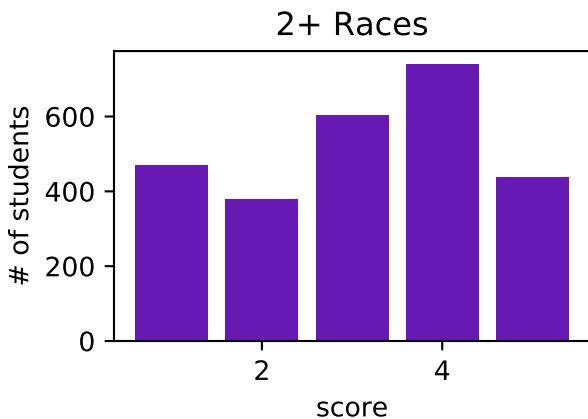
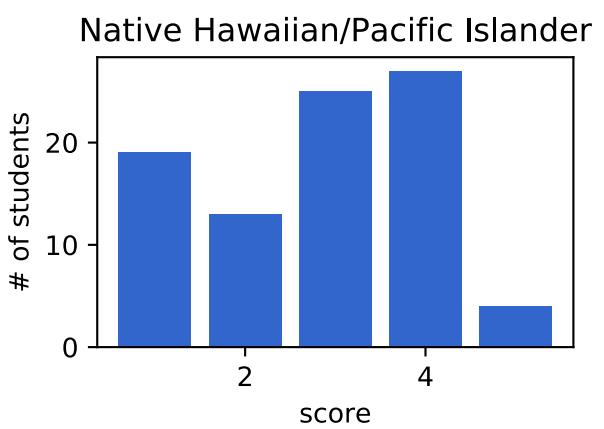
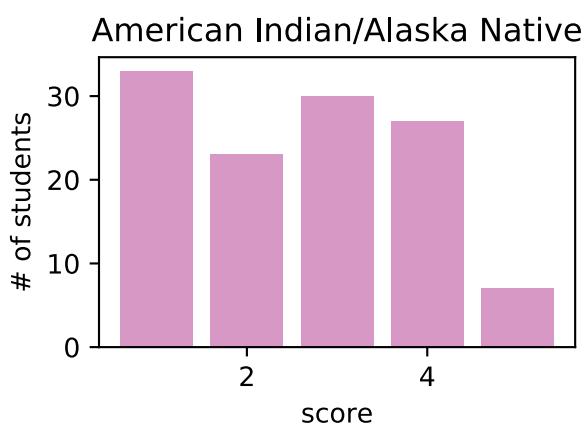
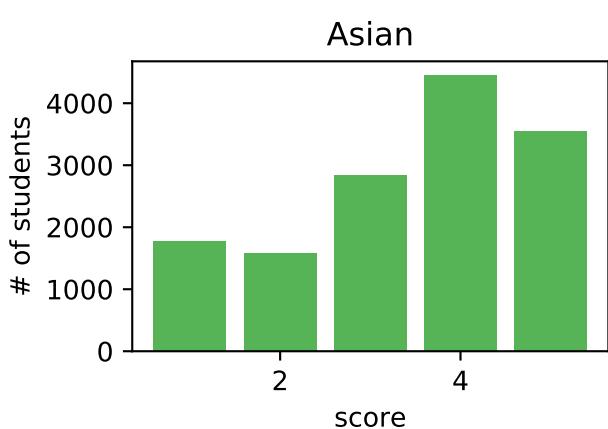
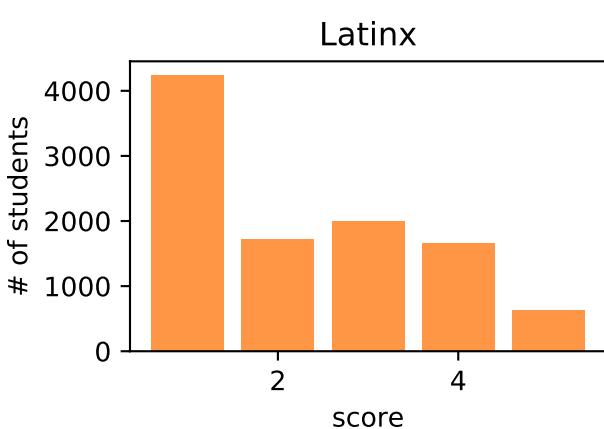
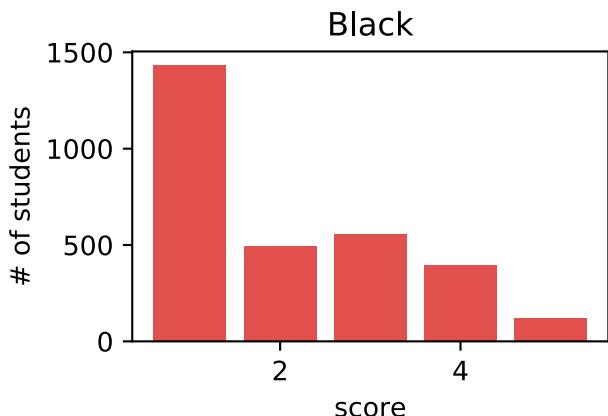
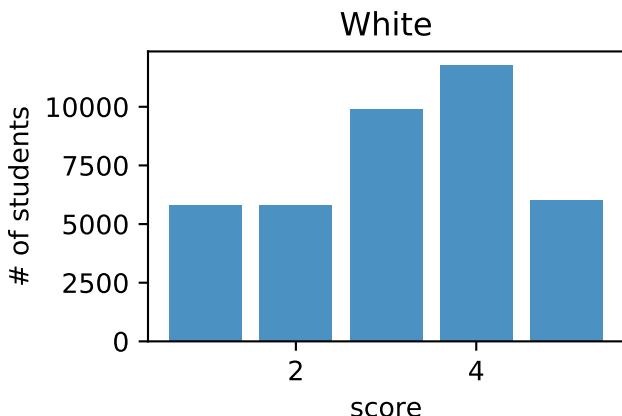
χ^2 statistic = 157.57580816751528

MACROECONOMICS



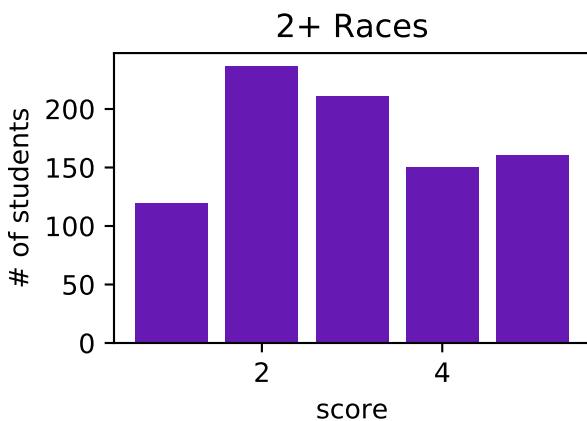
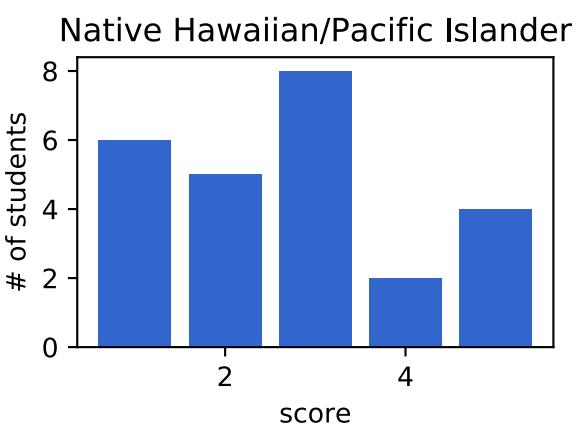
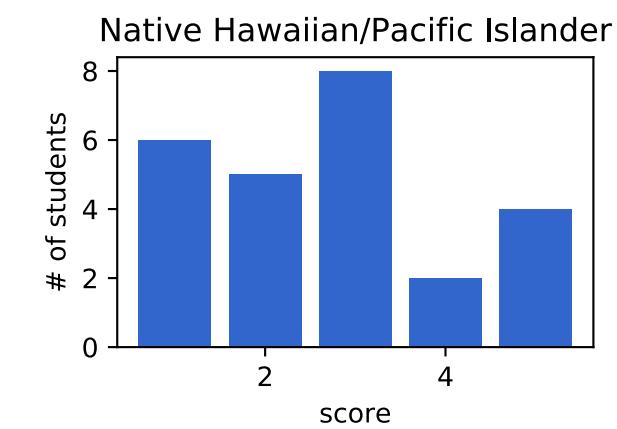
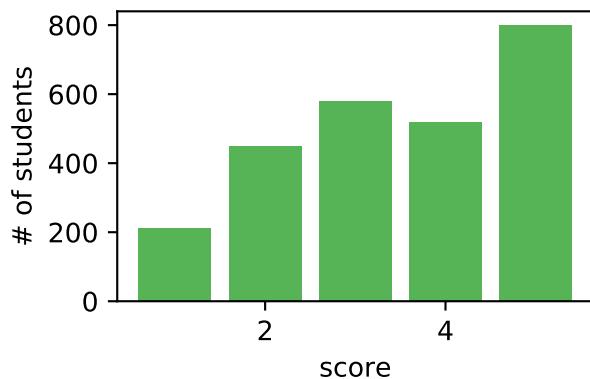
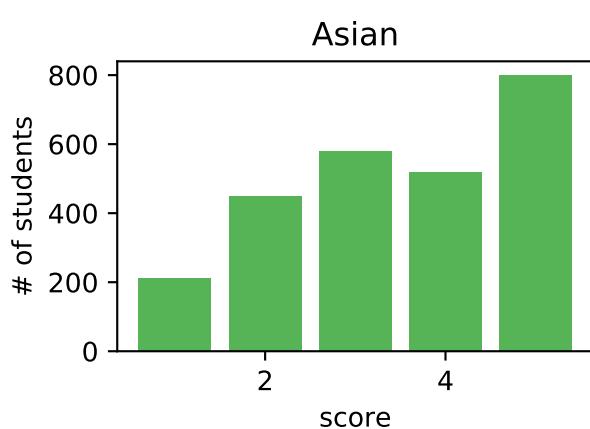
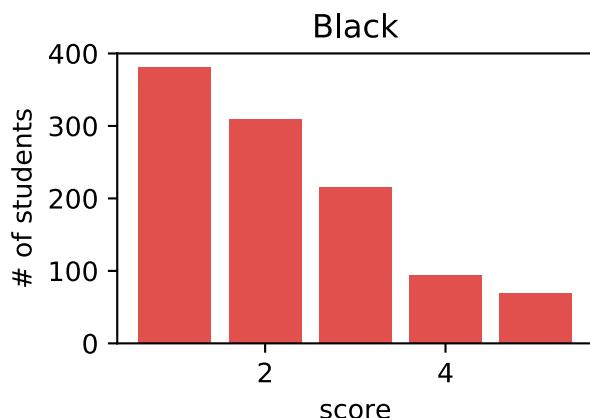
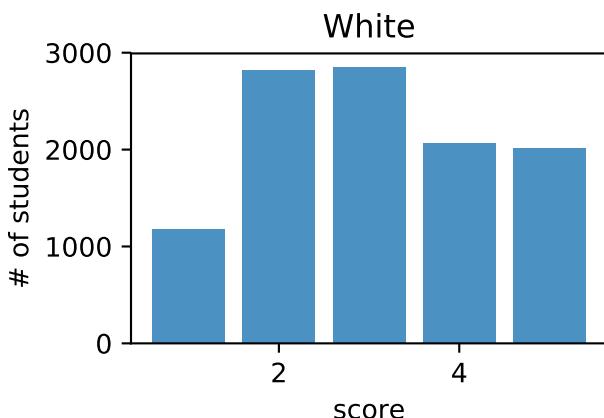
χ^2 statistic = 15098.428644481153

MICROECONOMICS



χ^2 statistic = 7373.346686605634

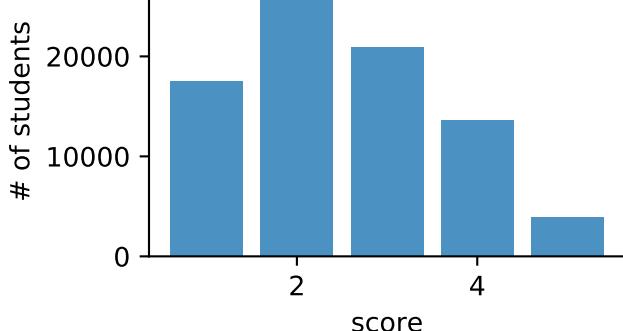
MUSIC THEORY



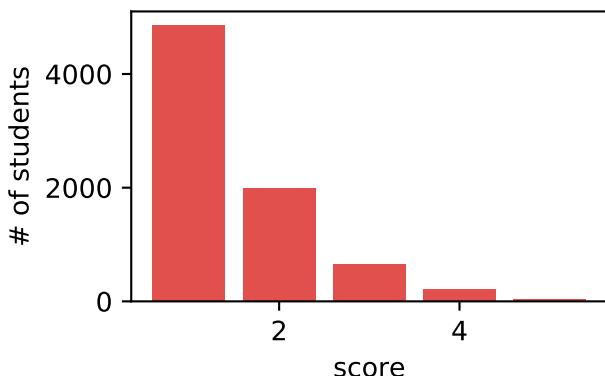
χ^2 statistic = 1624.3396991902569

PHYSICS 1

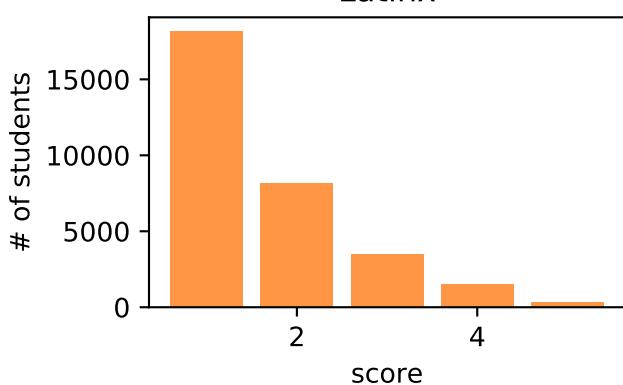
White



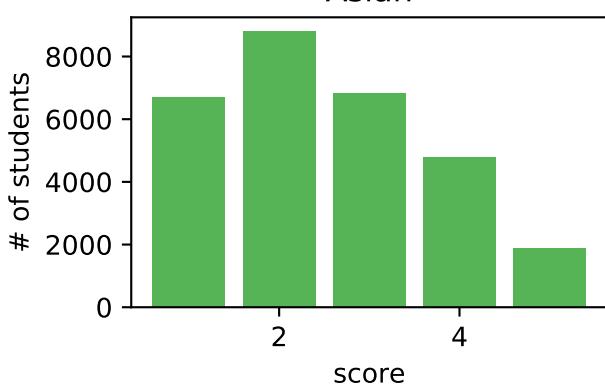
Black



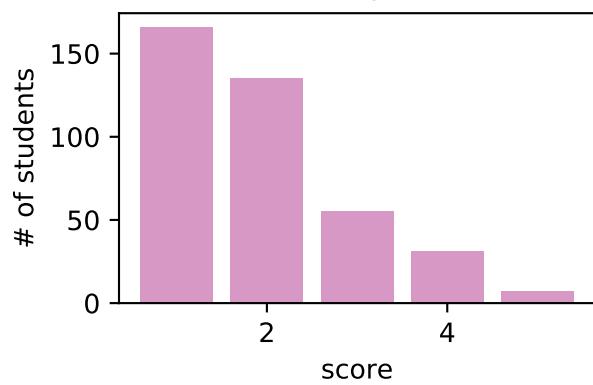
Latinx



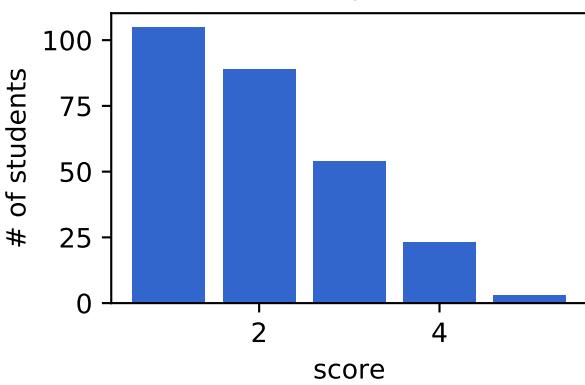
Asian



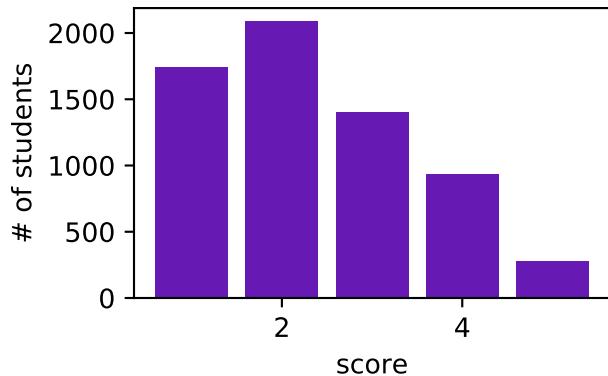
American Indian/Alaska Native



Native Hawaiian/Pacific Islander

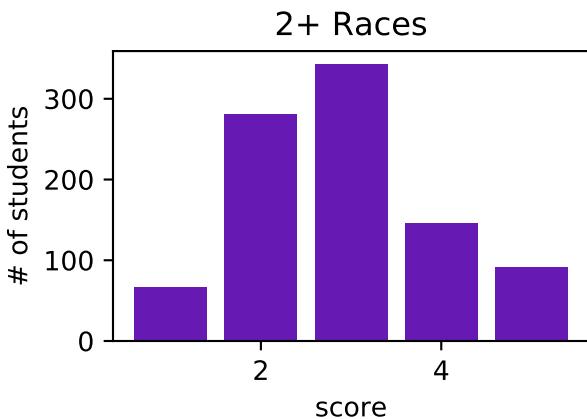
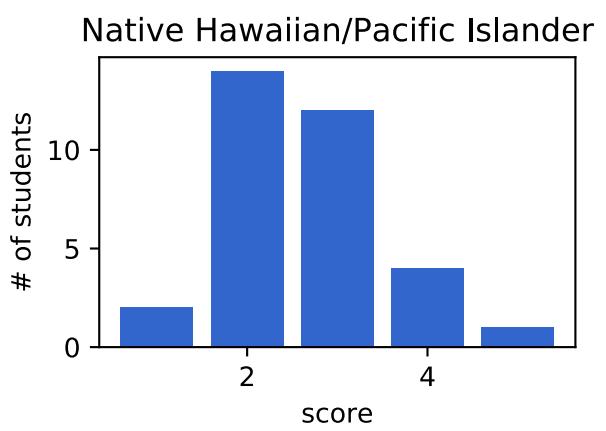
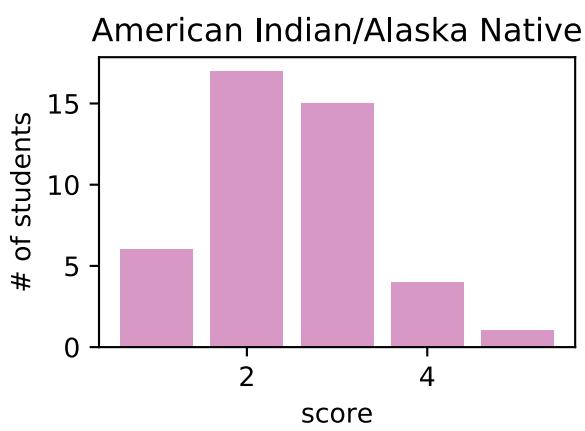
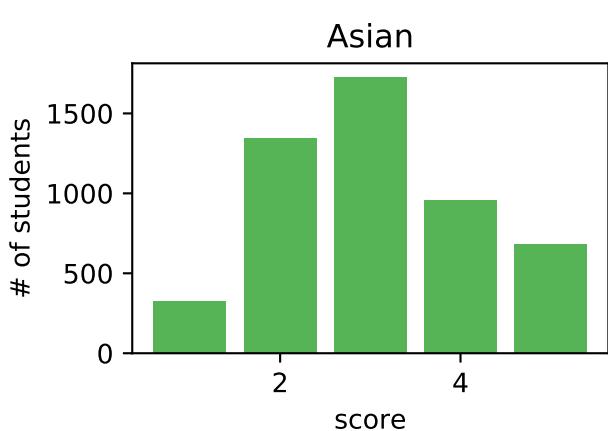
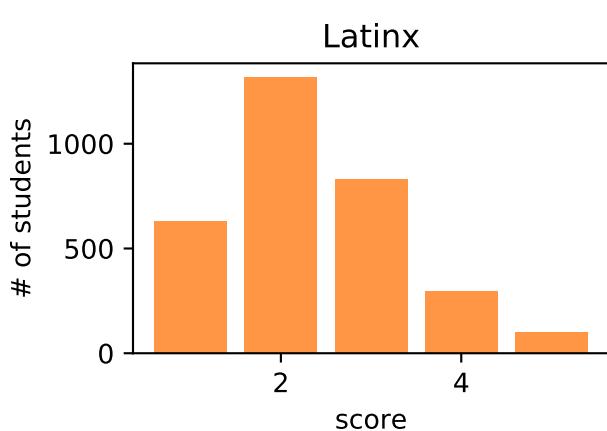
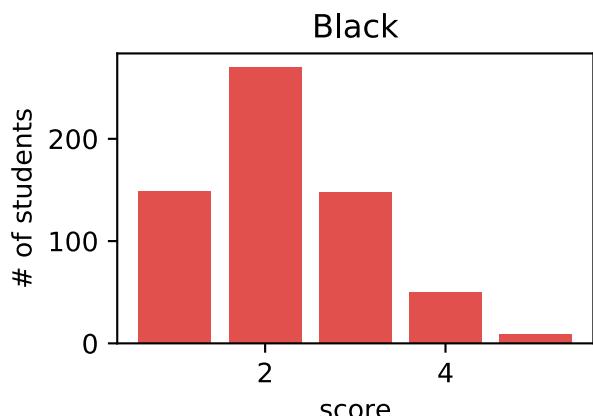
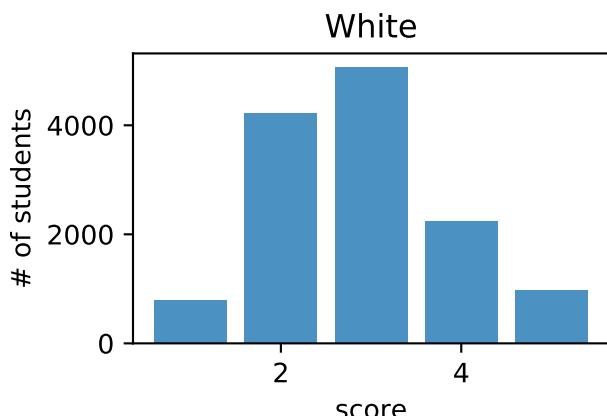


2+ Races



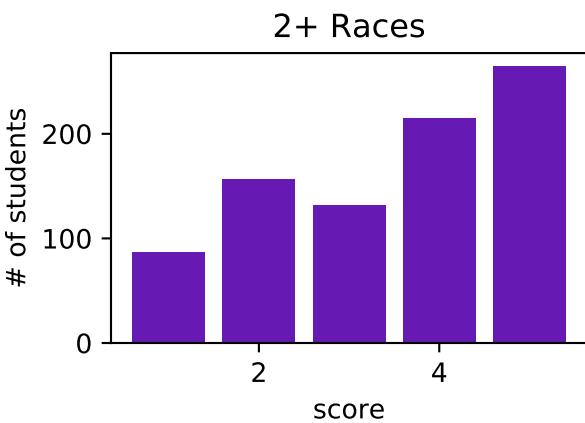
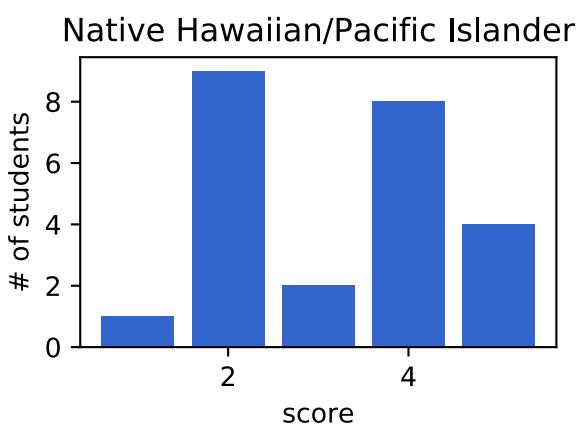
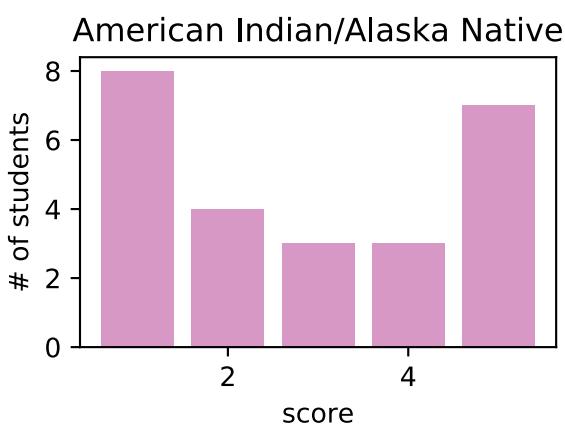
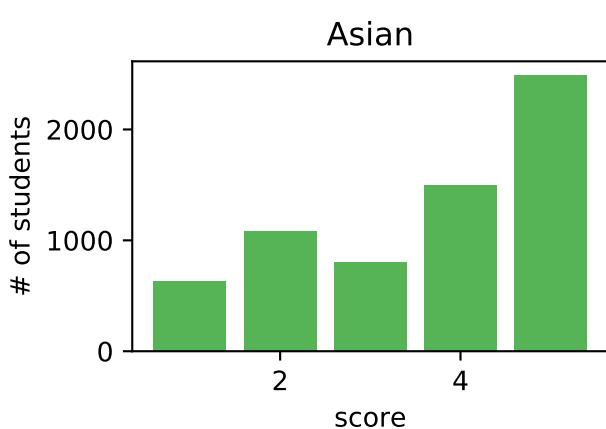
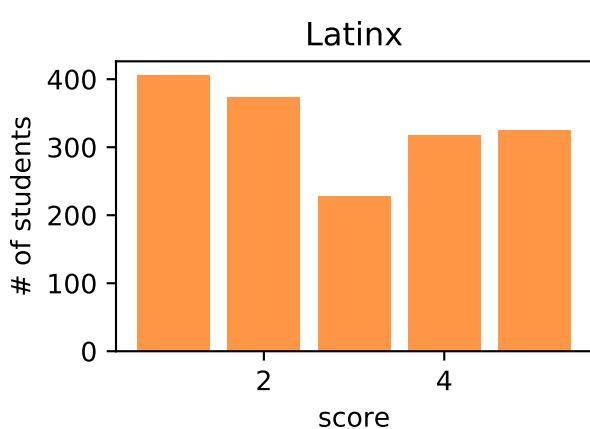
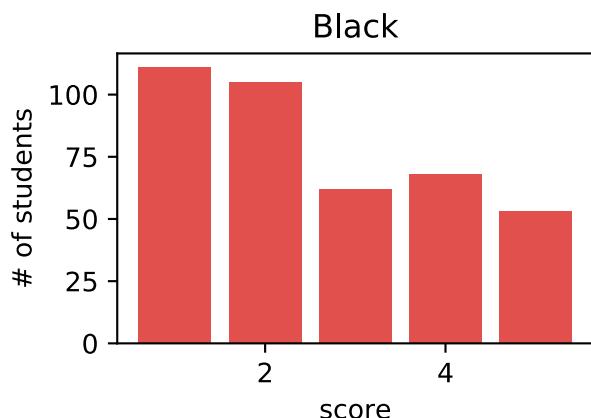
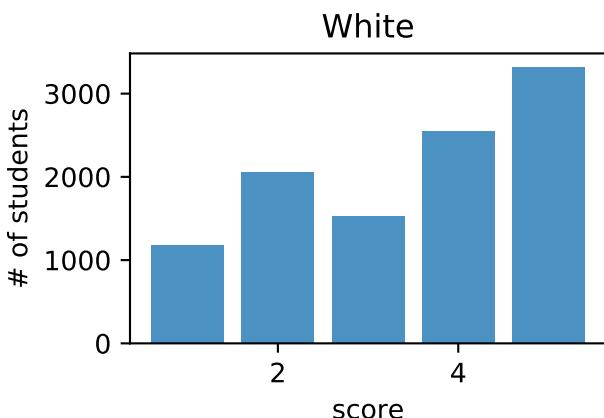
χ^2 statistic = 20997.02170547486

PHYSICS 2



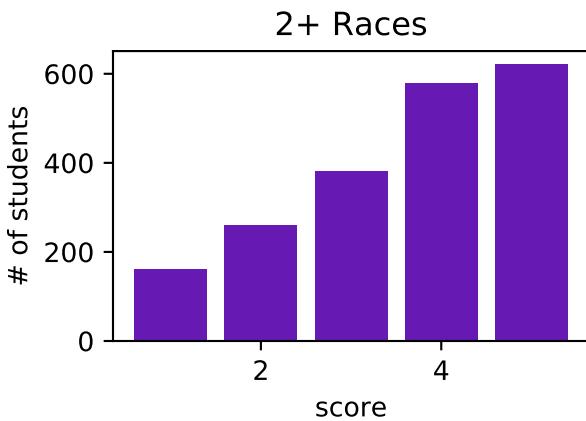
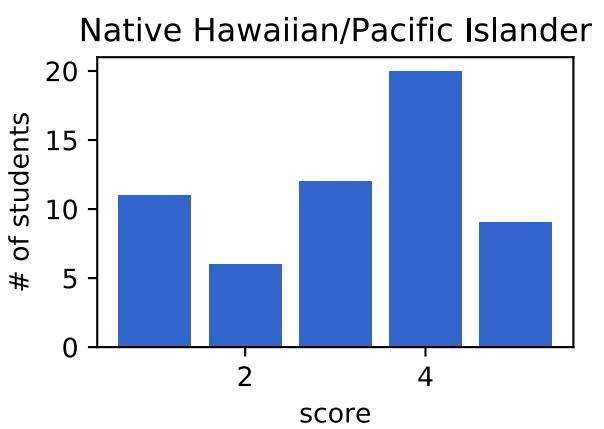
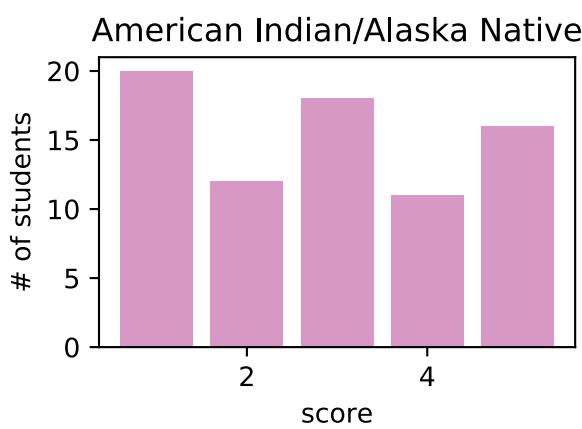
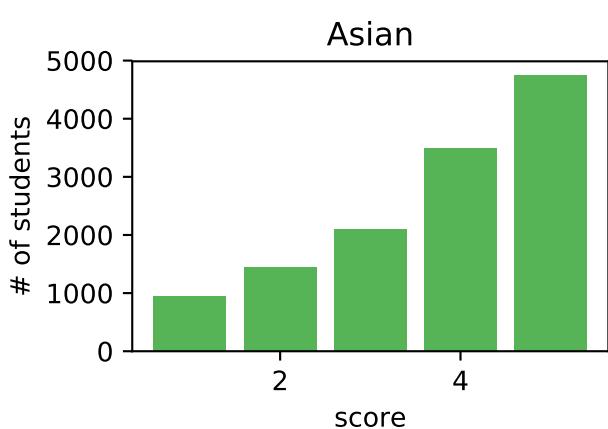
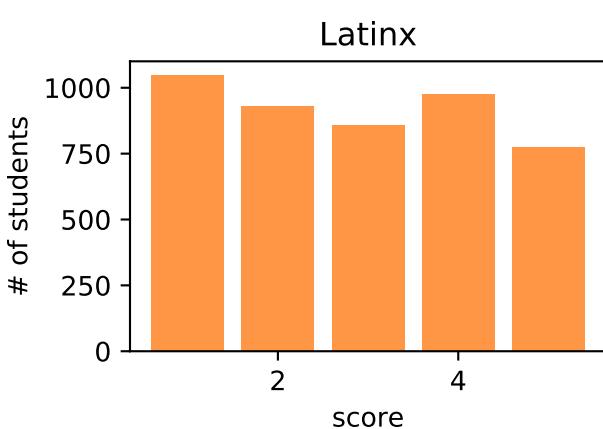
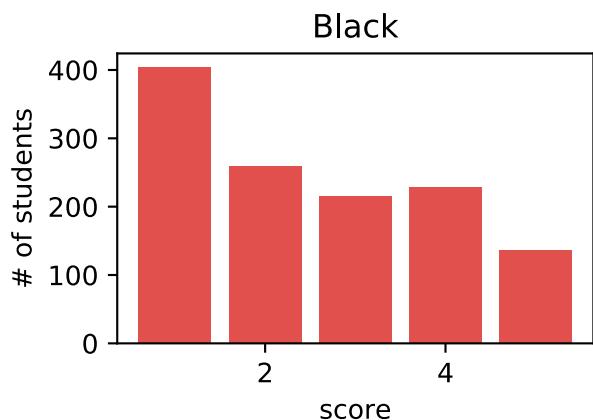
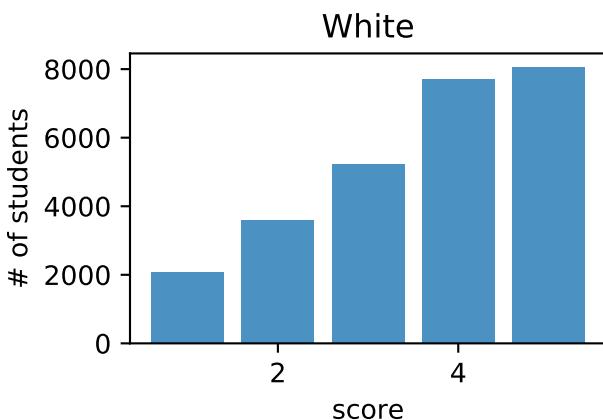
χ^2 statistic = 1539.6358885908082

PHYSICS C: ELECTRICITY & MAGNETISM



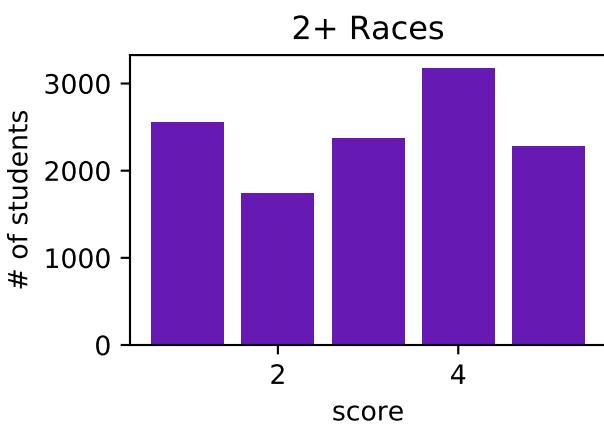
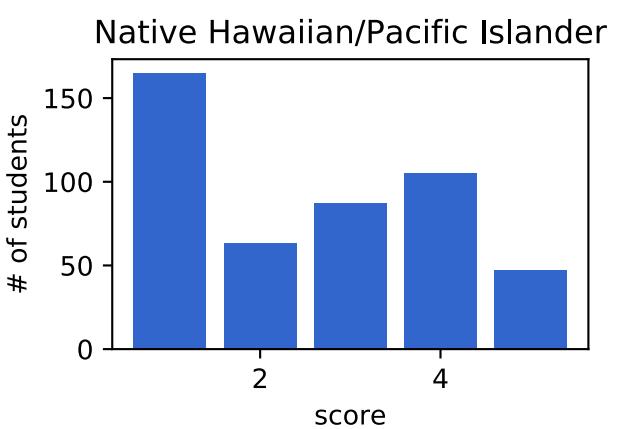
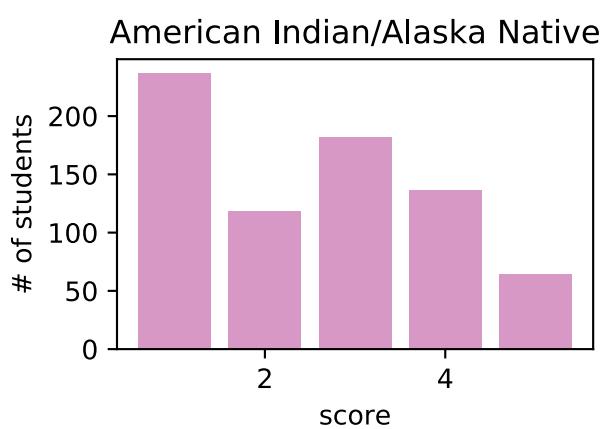
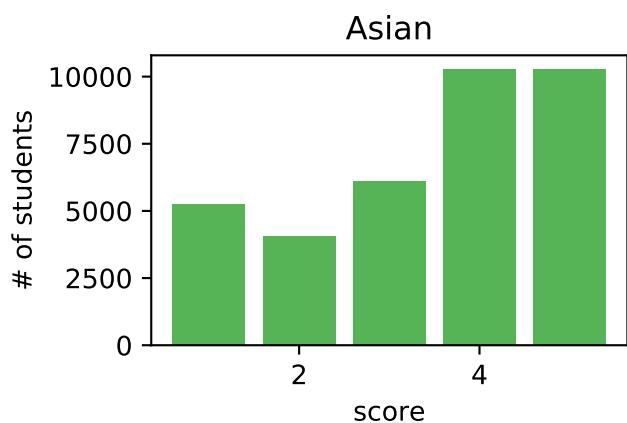
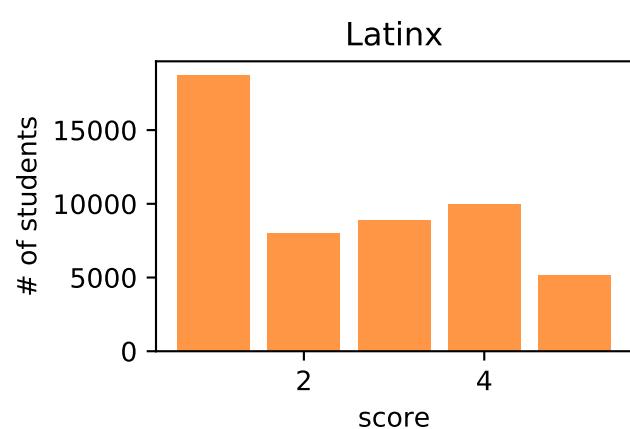
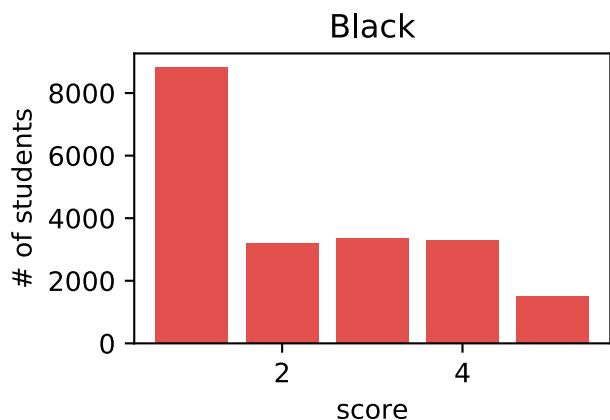
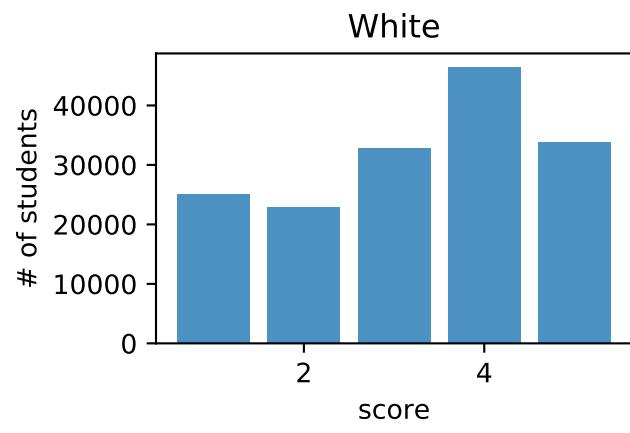
χ^2 statistic = **636.9279539471867**

PHYSICS C: MECHANICS



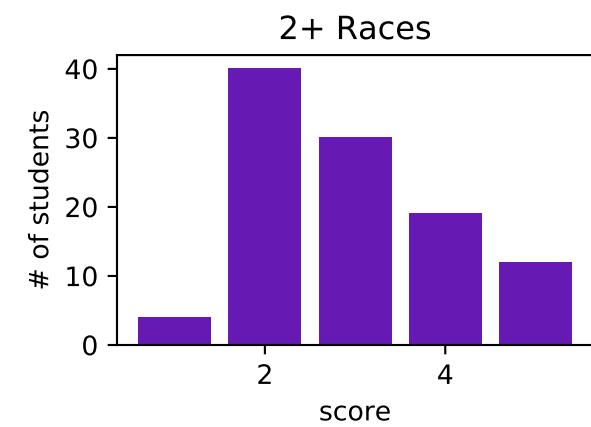
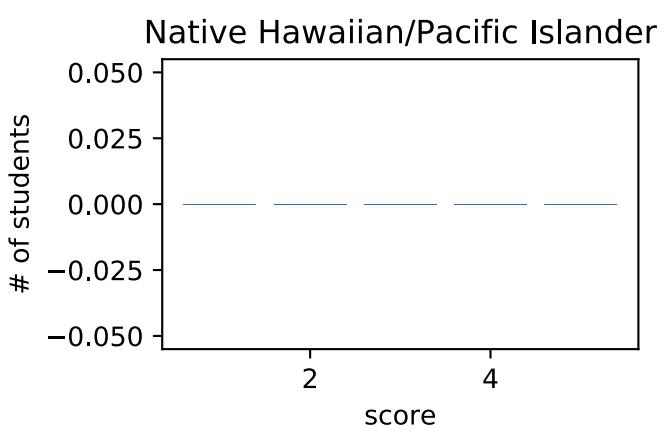
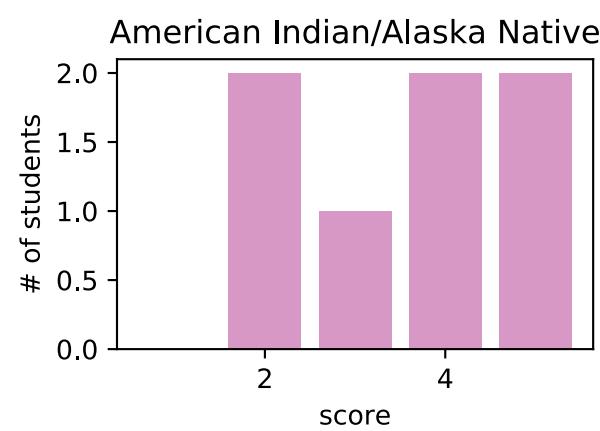
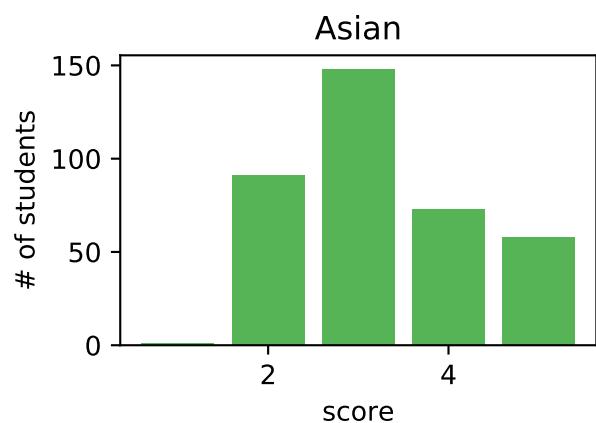
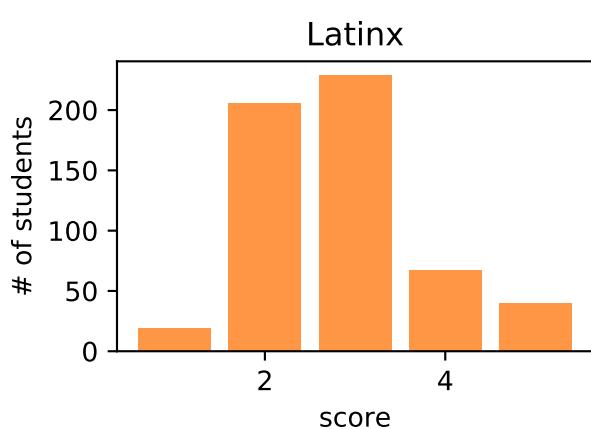
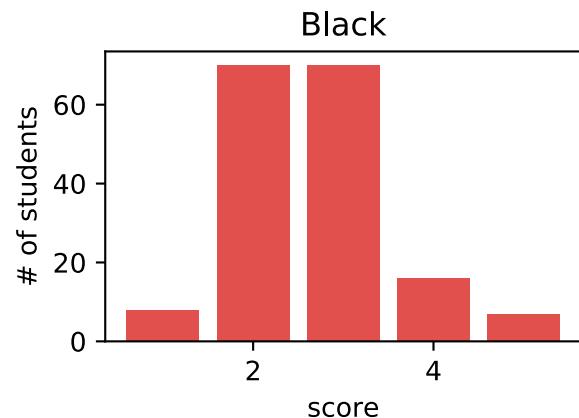
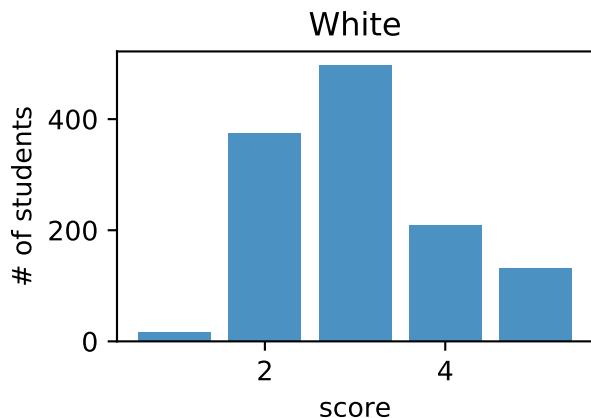
χ^2 statistic = 2706.474310916142

PSYCHOLOGY



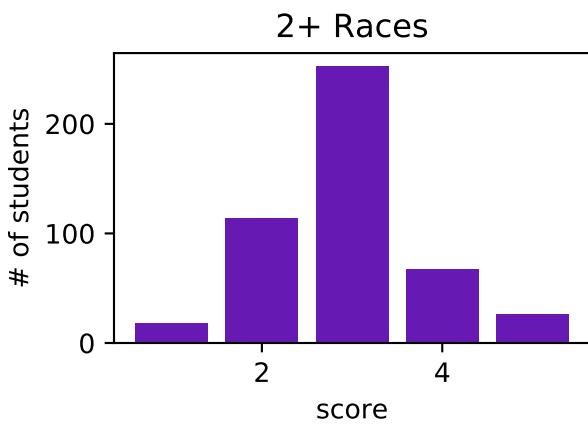
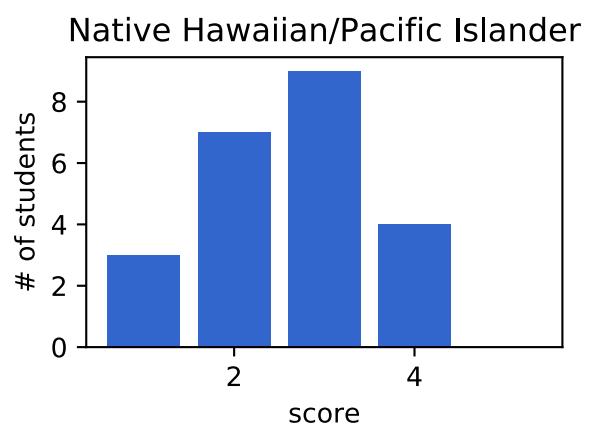
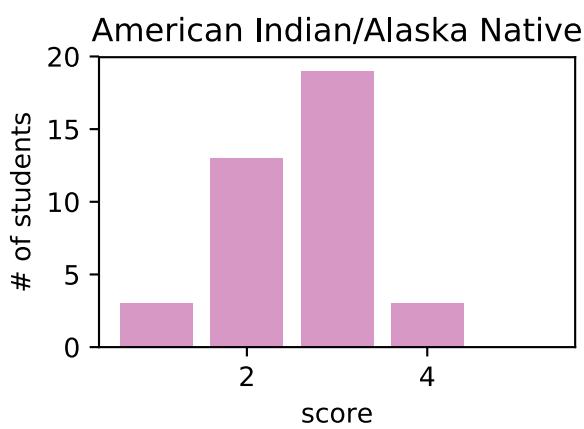
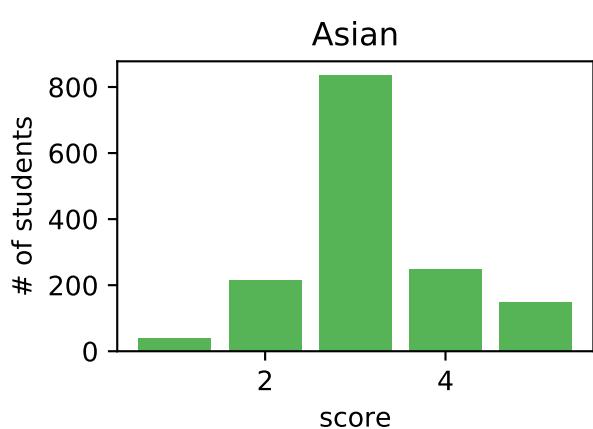
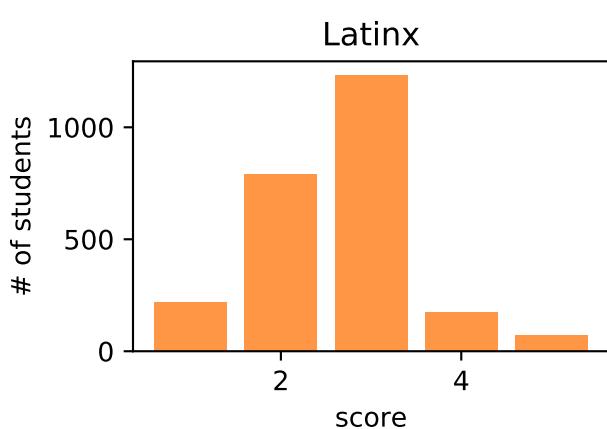
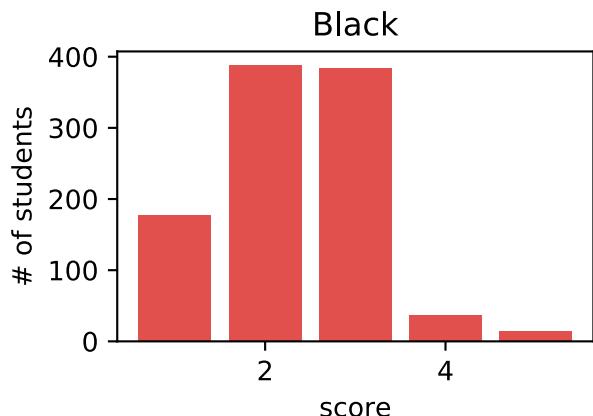
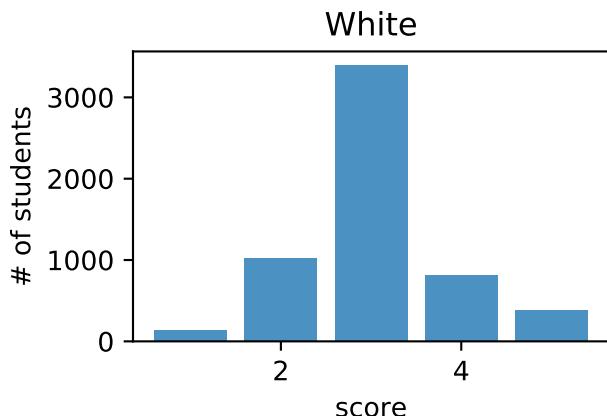
χ^2 statistic = 22093.79996698069

RESEARCH



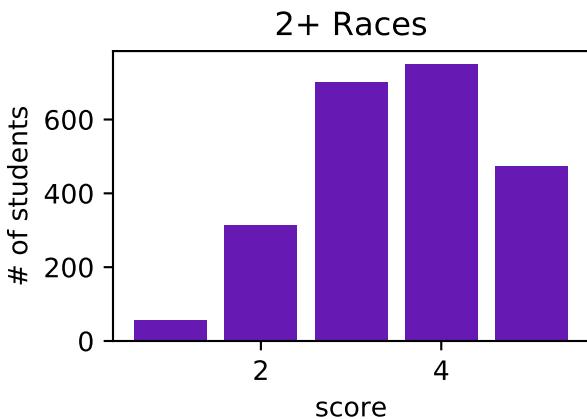
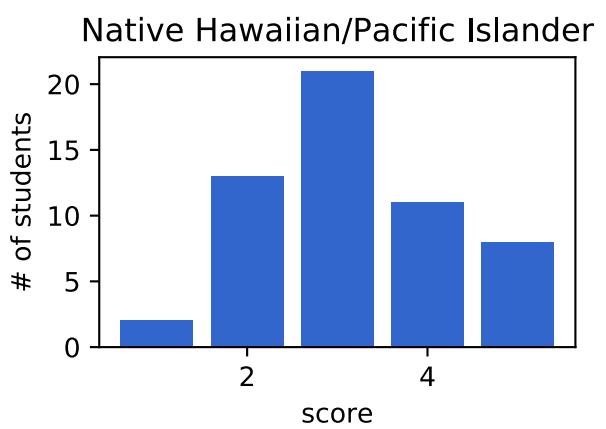
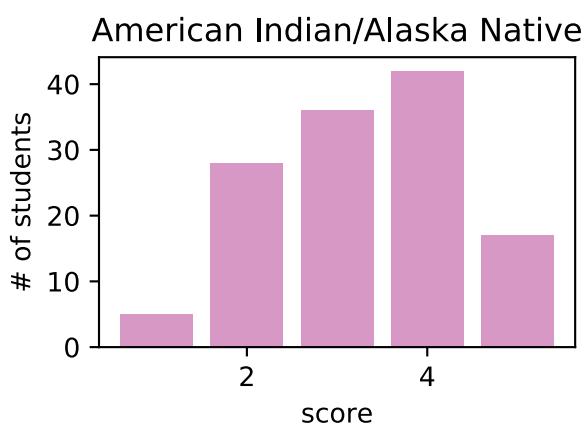
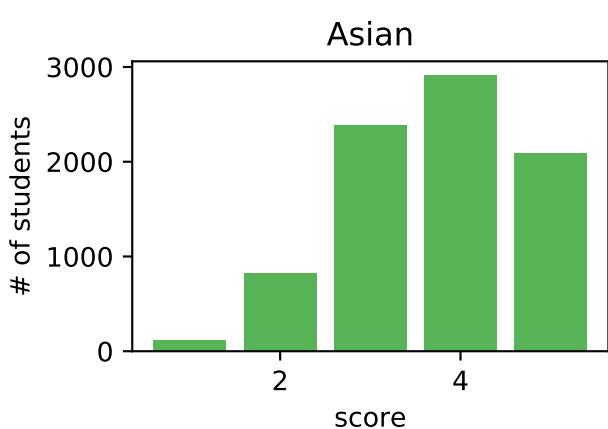
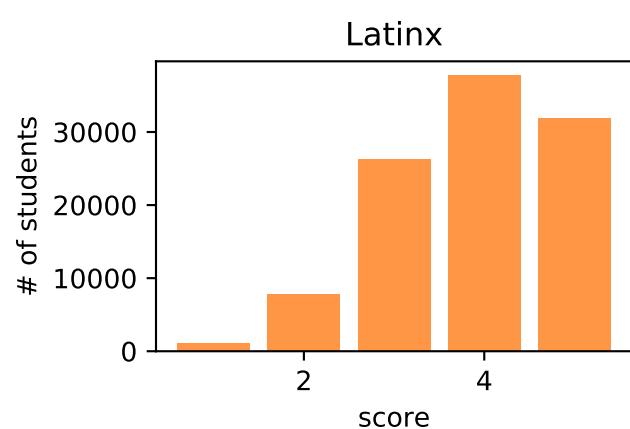
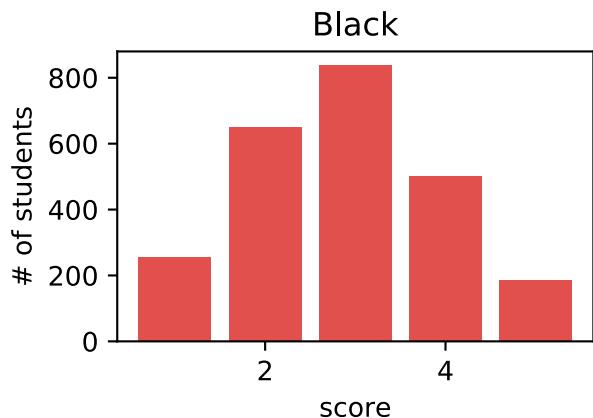
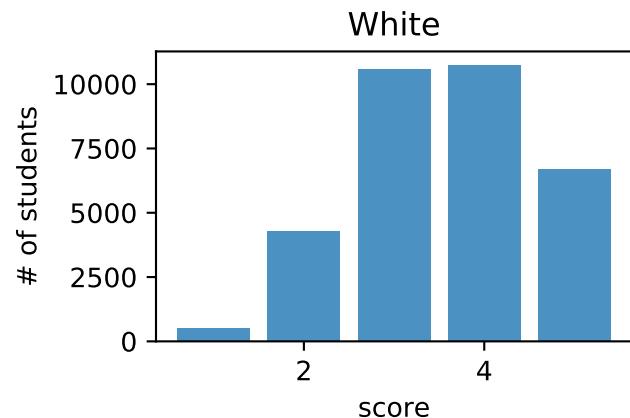
χ^2 statistic = 85.86329953450917

SEMINAR



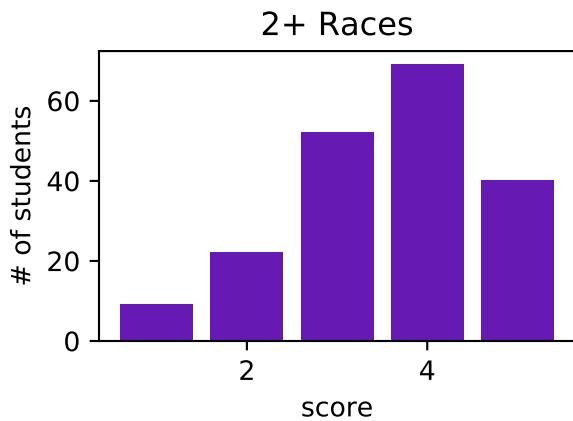
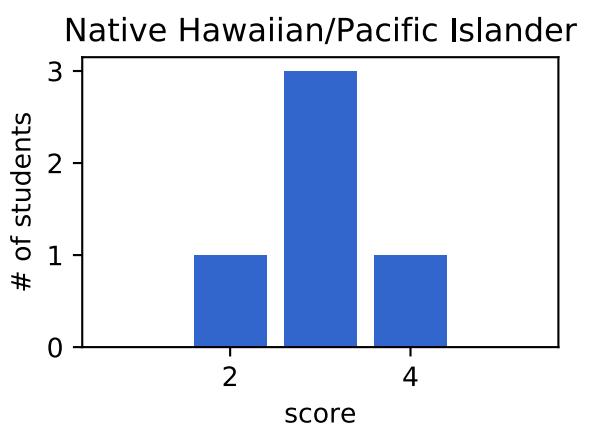
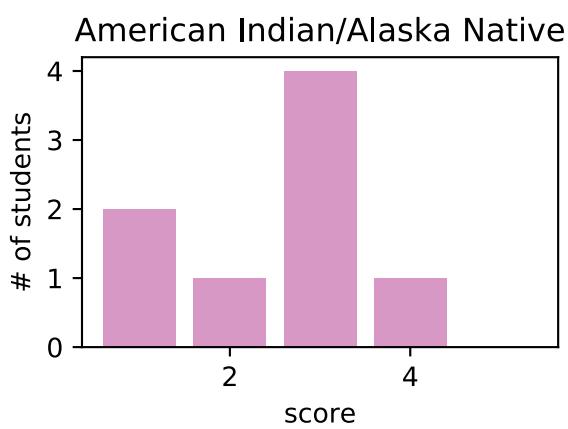
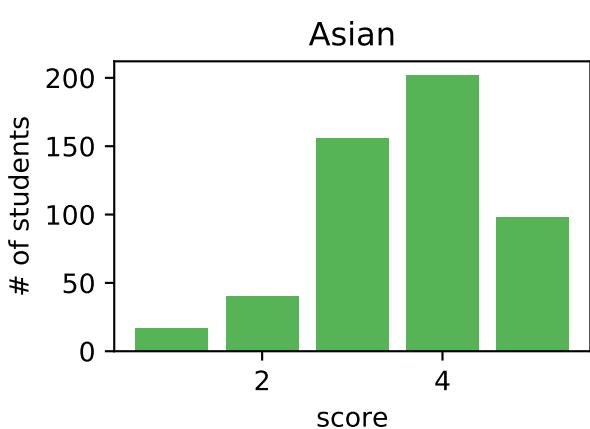
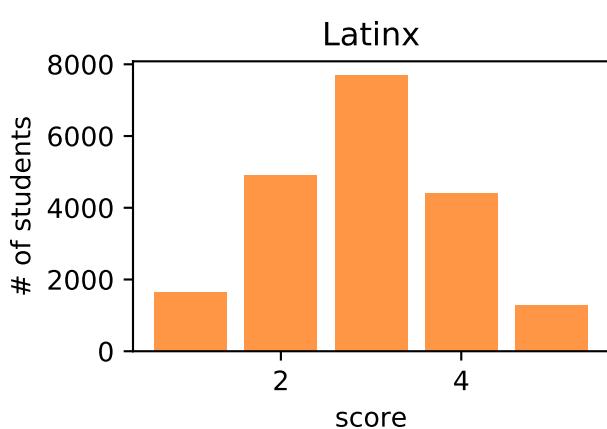
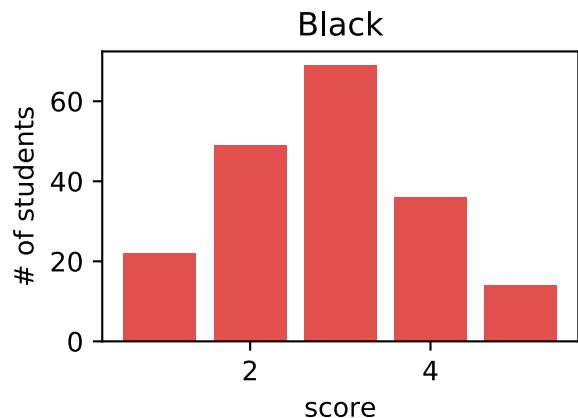
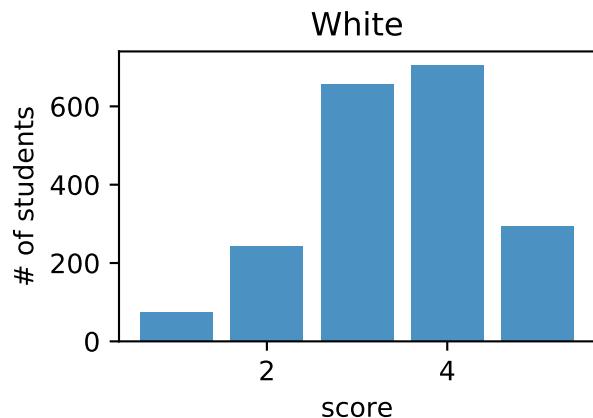
χ^2 statistic = 1125.6680499127926

SPANISH LANGUAGE



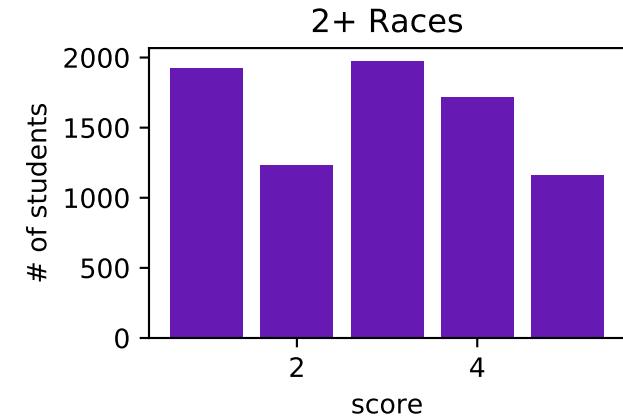
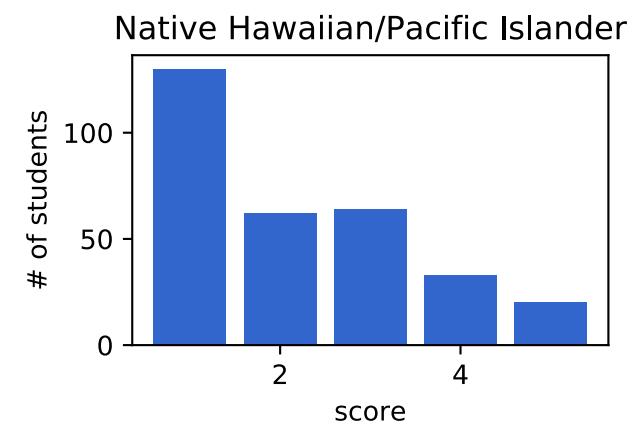
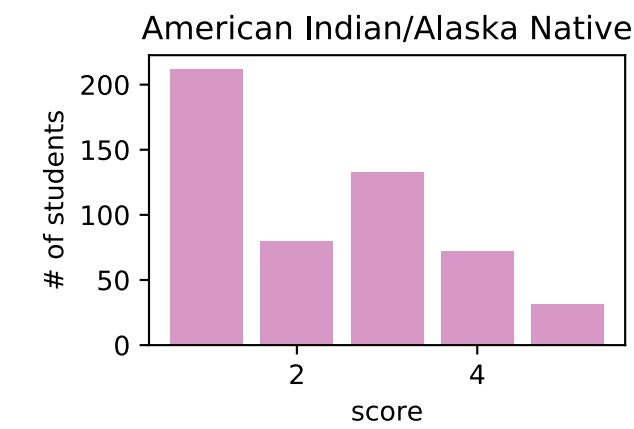
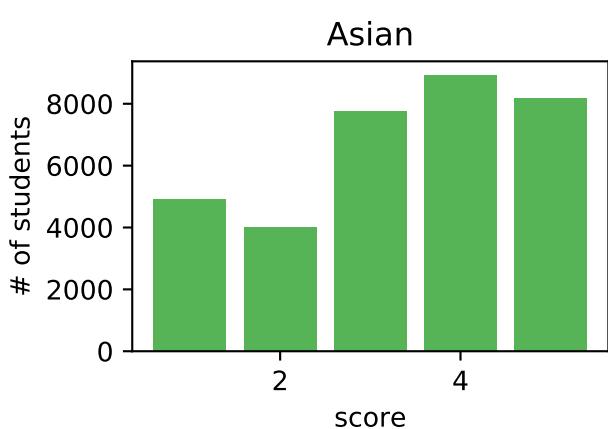
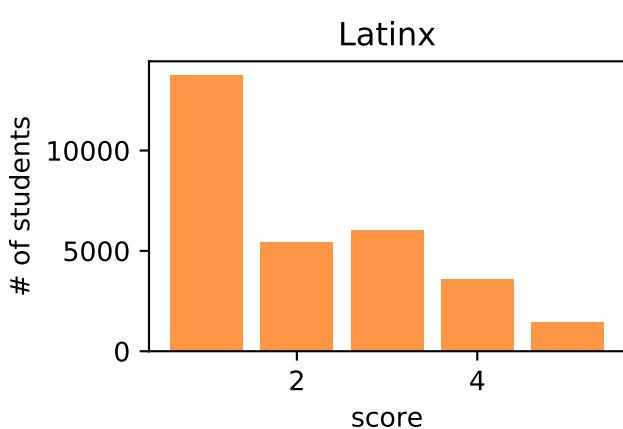
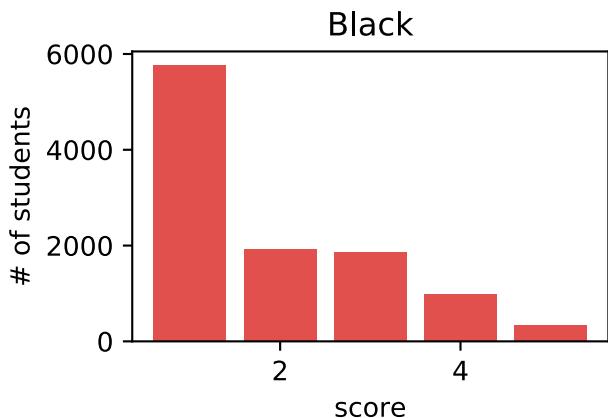
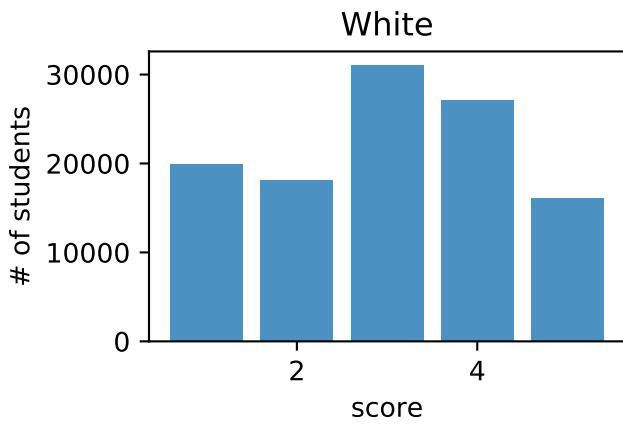
χ^2 statistic = 5480.764108914975

SPANISH LITERATURE



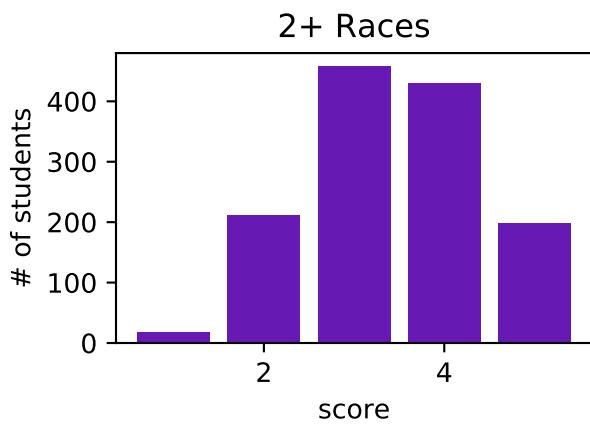
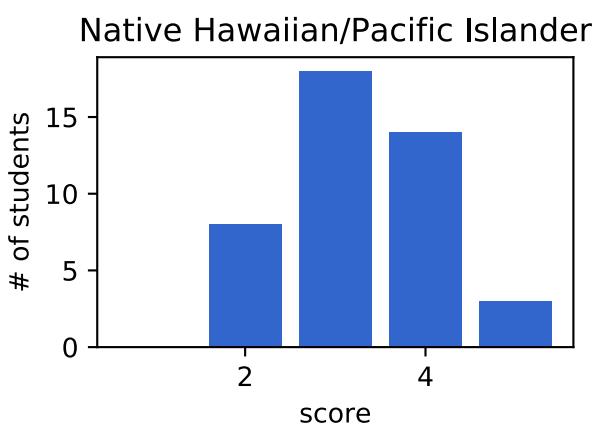
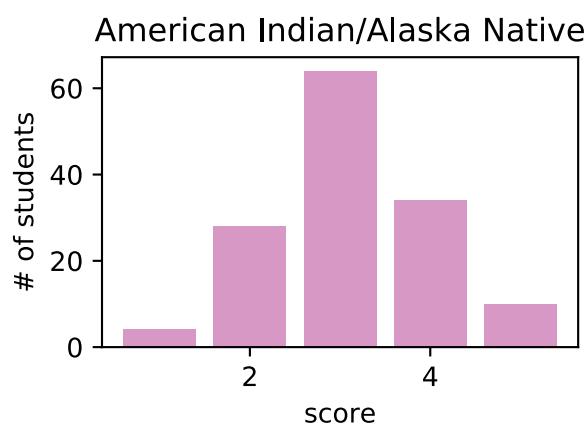
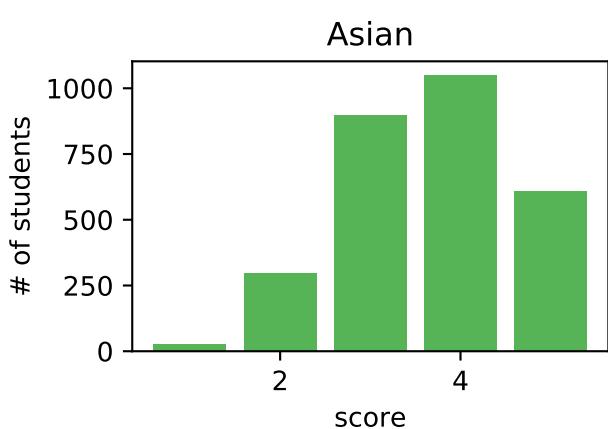
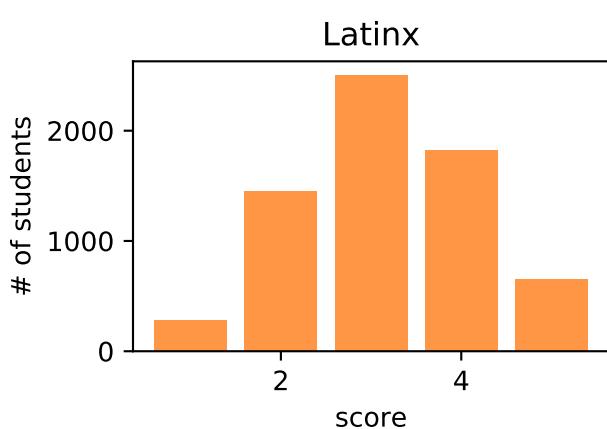
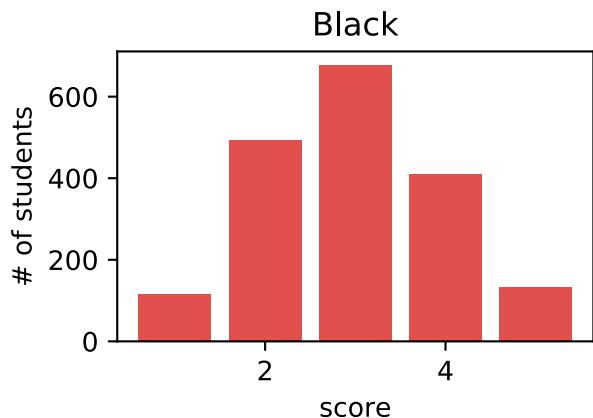
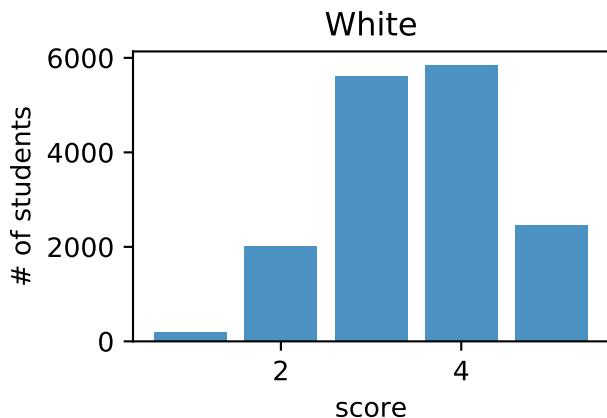
χ^2 statistic = 793.6774474014817

STATISTICS



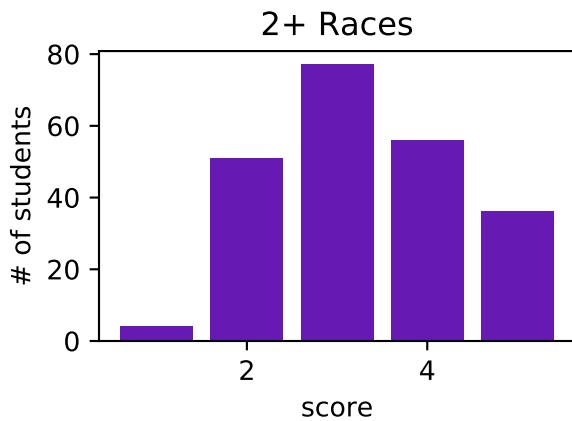
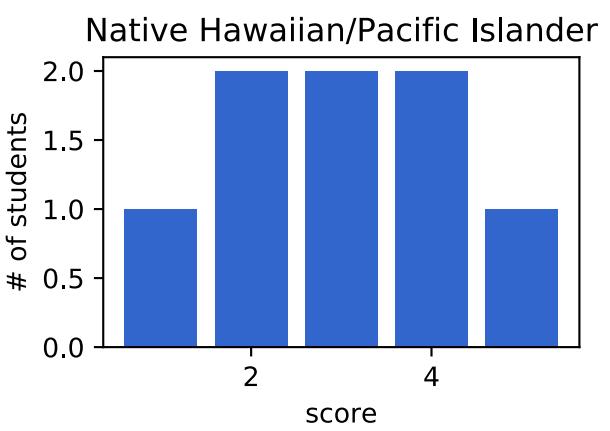
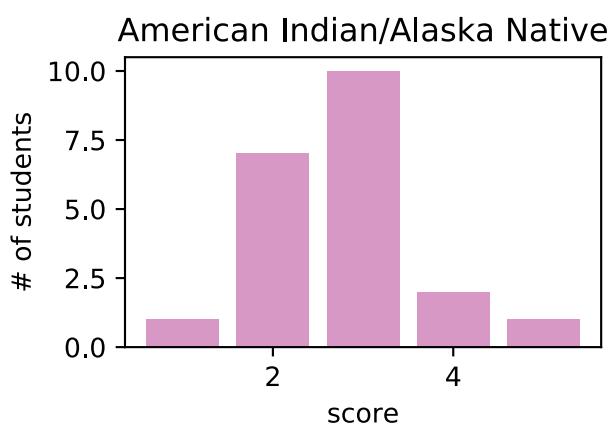
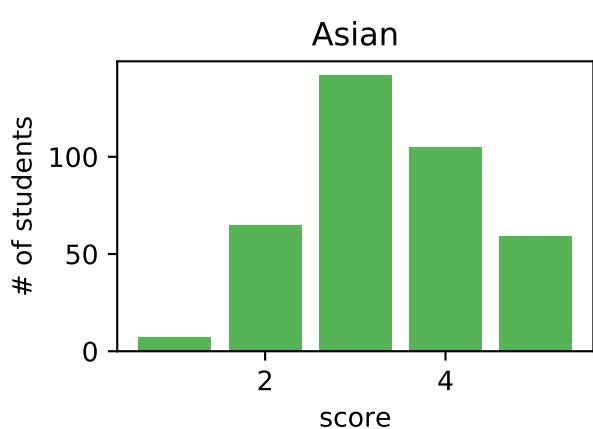
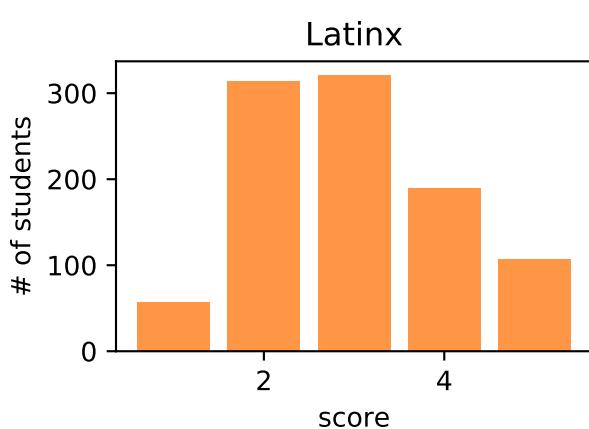
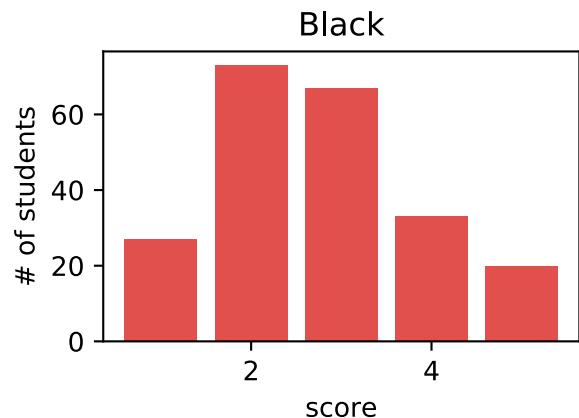
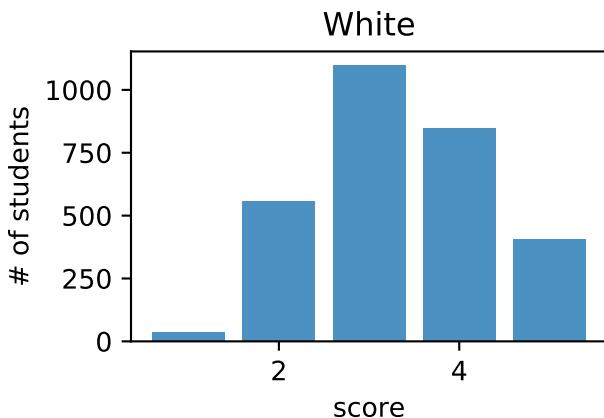
χ^2 statistic = 22532.110792247673

STUDIO ART: 2-D DESIGN



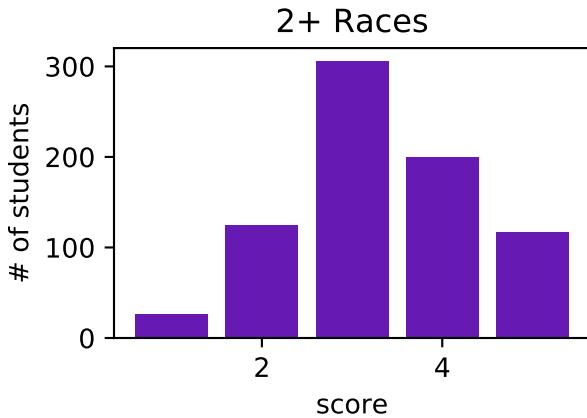
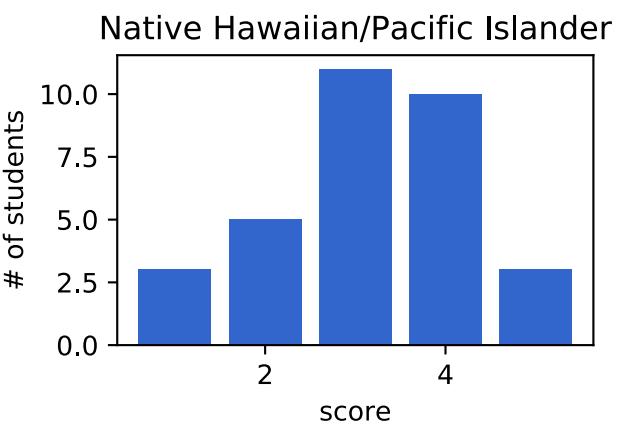
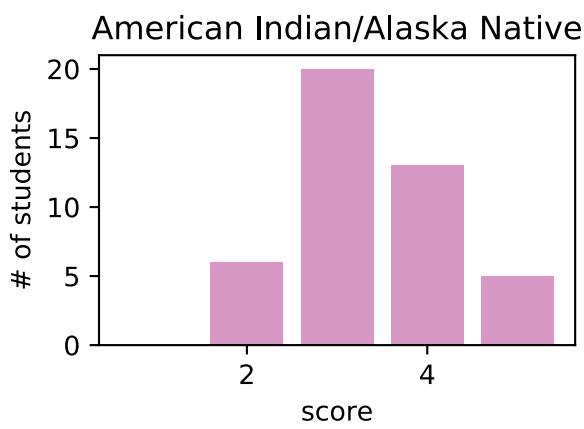
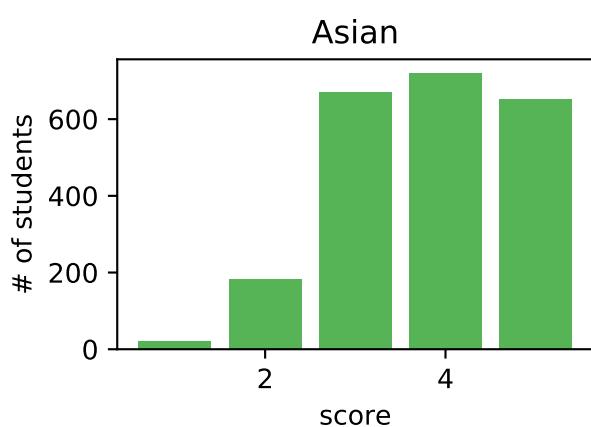
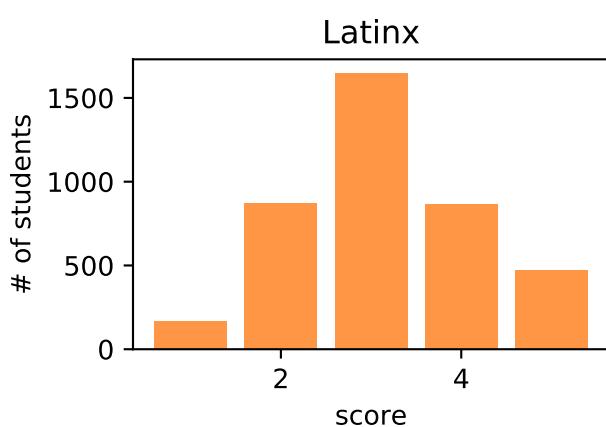
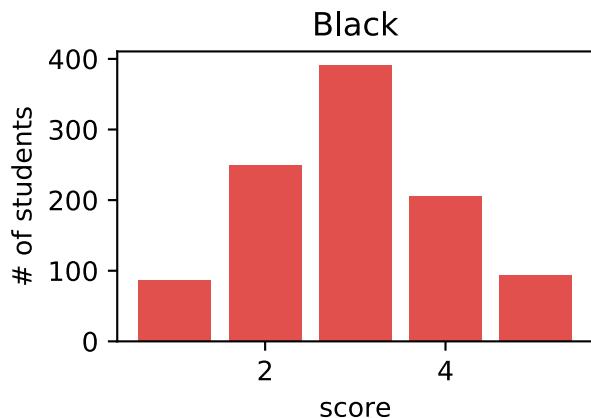
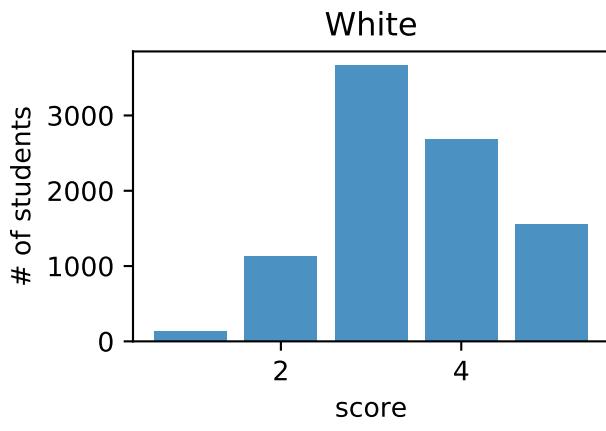
χ^2 statistic = 1318.7670068904279

STUDIO ART: 3-D DESIGN



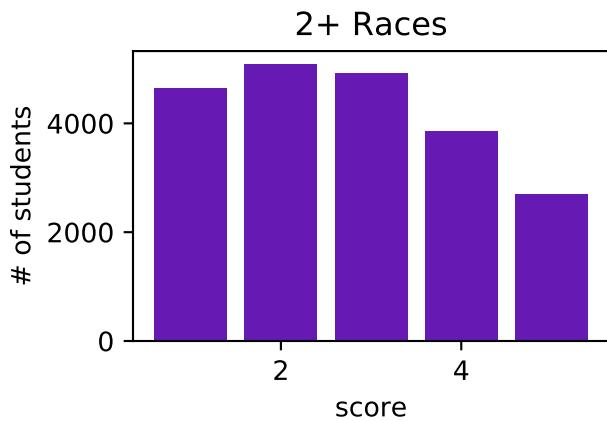
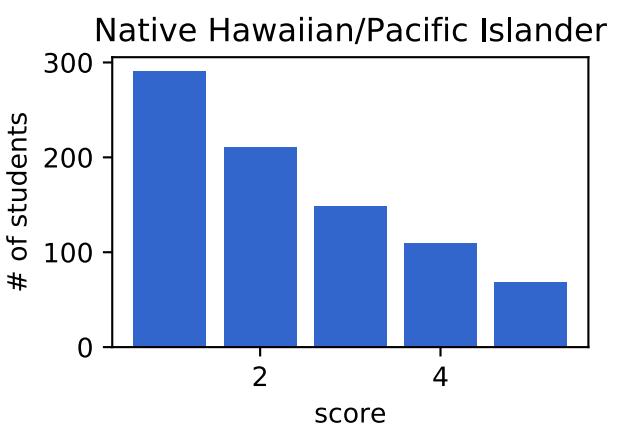
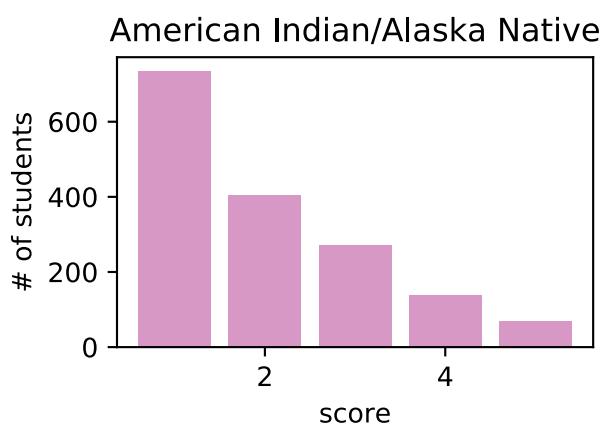
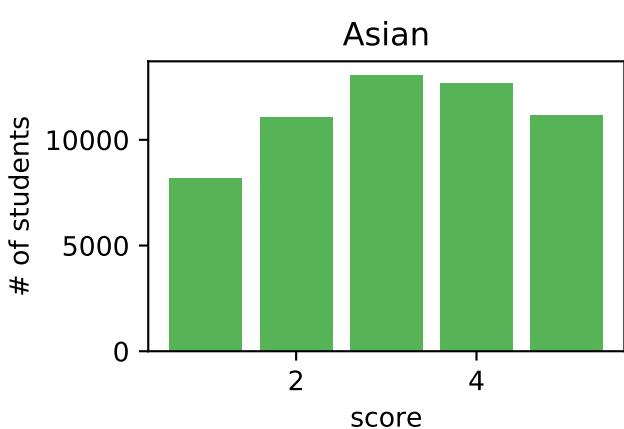
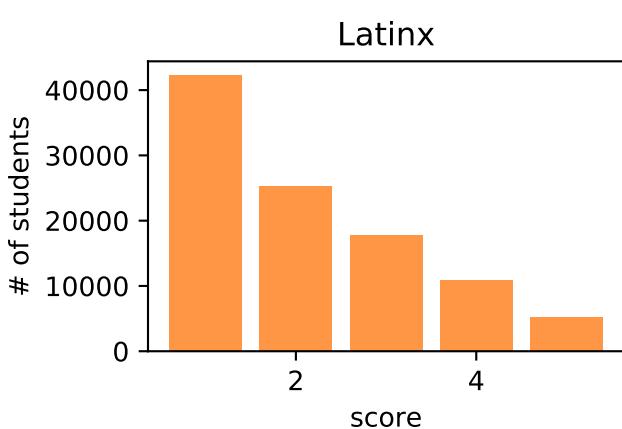
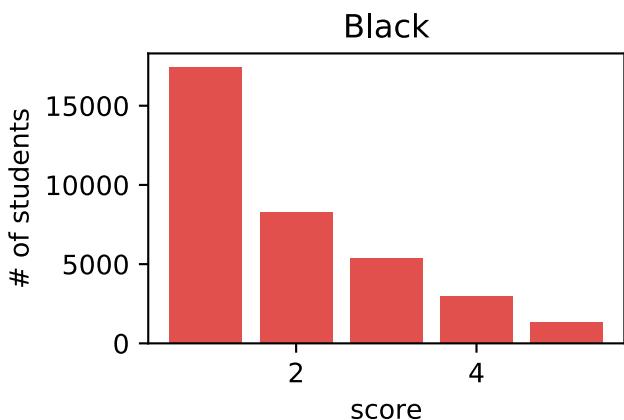
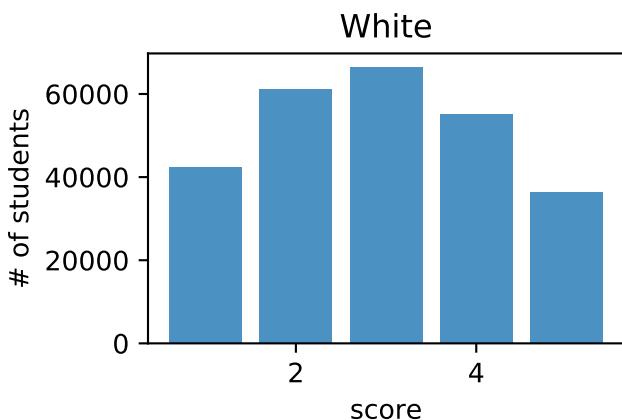
χ^2 statistic = 255.40818185711865

STUDIO ART: DRAWING



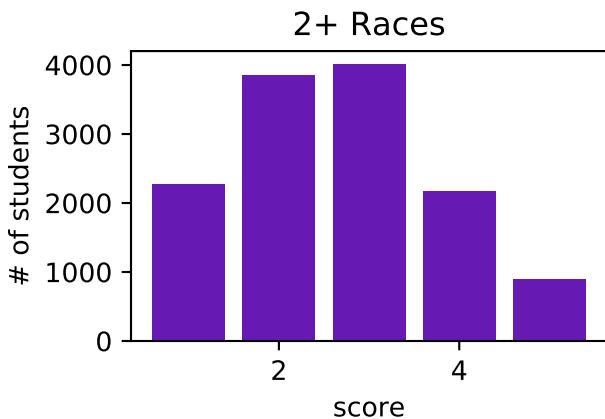
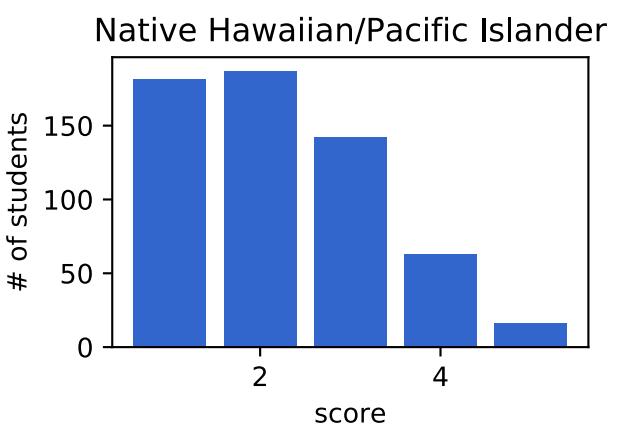
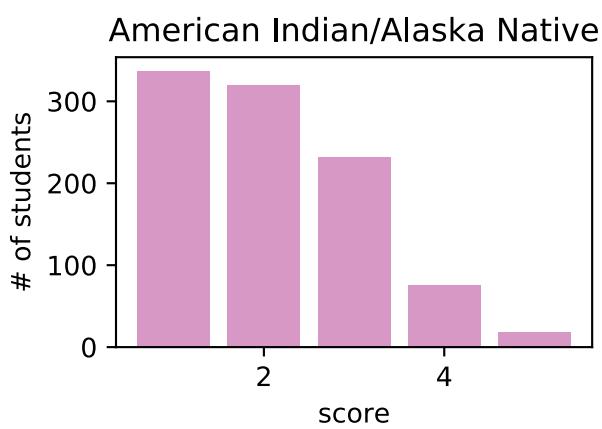
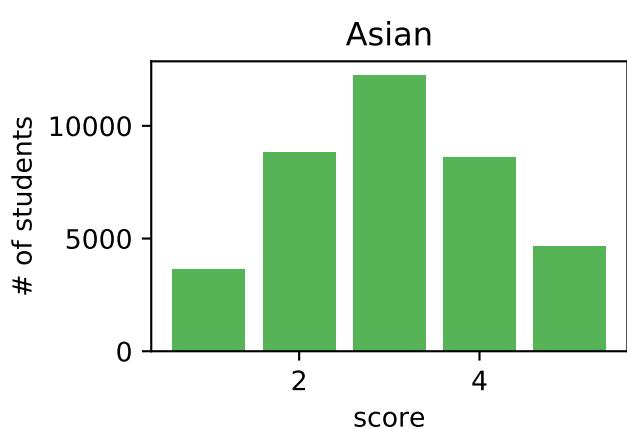
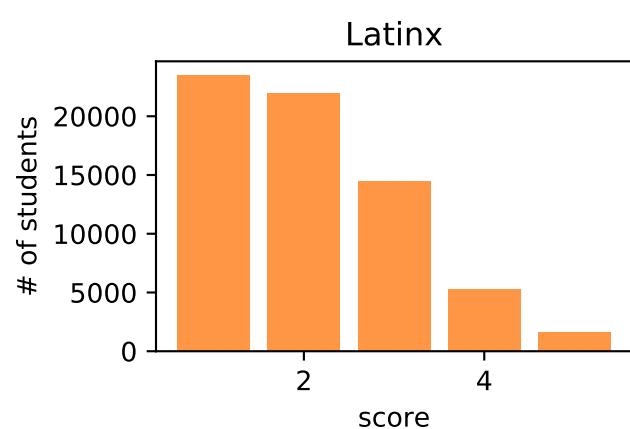
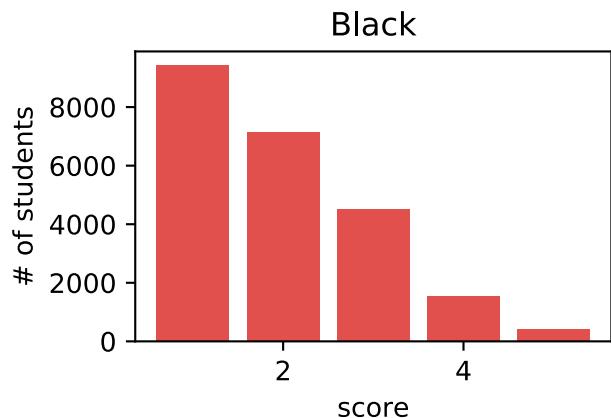
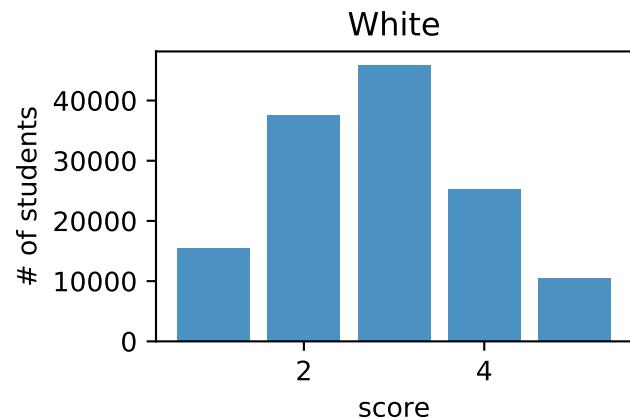
χ^2 statistic = 1013.6301781819227

U.S. HISTORY



χ^2 statistic = 51269.54917217614

WORLD HISTORY



χ^2 statistic = **34841.79695168788**