The Budget reflects multi-year compacts with the University of California (UC) and the California State University (CSU), and a multi-year roadmap with the California Community Colleges (CCCs), that focus on shared priorities benefitting students. These shared priorities include increasing access to the UC and CSU, improving student success and advancing equity, increasing the affordability of higher education, increasing intersegmental collaboration to benefit students, and supporting workforce preparedness and high-demand career pipelines.

The Budget includes total funding of $41.6 billion ($28.6 billion General Fund and local property tax and $13 billion other funds) for all higher education entities in 2022-23. The state’s three public segments—the UC, the CSU, and the CCCs—each receive substantial ongoing base augmentations, and the Budget includes significant investments to make postsecondary education more affordable, including investments in low-income student housing, and expansions to financial aid and student success programs.

University of California

The Budget reflects a multi-year compact that includes substantial and sustained funding increases for the UC, in exchange for clear commitments to expand student access, equity, and affordability, and to create pathways to high-demand career opportunities.
NOTABLE ONGOING INVESTMENTS FOR THE UC INCLUDE:

• **Base Growth**—An increase of approximately $200.5 million ongoing General Fund for operating costs, representing a five-percent base increase in ongoing General Fund resources.

• **Resident Undergraduate Enrollment Growth**—An increase of $67.8 million ongoing General Fund to support California resident undergraduate student enrollment growth of 6,230 full-time equivalent students between 2018-19 and 2023-24. In addition, the Budget provides $31 million ongoing General Fund to offset revenue reductions associated with the replacement of 902 nonresident undergraduate students enrolled at three campuses with an equivalent number of California resident undergraduate students at these campuses in 2022-23.

• **Support Student Academic Preparation and Educational Partnership (SAPEP) Programs**—An increase of $22.5 million ongoing General Fund for SAPEP programs.

• **UC Labor Centers**—An increase of $13 million ongoing General Fund to support the operations of existing UC Labor Centers and Occupational Safety and Health Programs, and invest in similar new initiatives throughout the UC system.

• **Foster Youth Supports**—An increase of $6 million ongoing General Fund to increase support for foster youth students.

• **UC Division of Agriculture and Natural Resources**—An increase of approximately $5.4 million ongoing General Fund to increase support for the UC Division of Agriculture and Natural Resources.

• **Undocumented Student Support**—An increase of $5 million ongoing General Fund to support undocumented students.

• **Underground Scholars**—An increase of $4 million ongoing General Fund to increase support for the Underground Scholars program.

• **Firearm Research**—An increase of $2 million ongoing General Fund to support research conducted by the UC Firearm Violence Research Center.

• **ASSIST Integration for Independent Institutions**—An increase of $1.5 million General Fund, $650,000 of which is ongoing, to integrate member institutions of the Association of Independent California Colleges and Universities onto the ASSIST platform. ASSIST provides prospective transfer students with information on course transferability to four-year institutions.
**Research on Economic Impact of Climate Change**—An increase of $379,000 General Fund, of which $75,000 is ongoing, for the UC Los Angeles (UCLA) Anderson School of Management to include climate change economic impacts by California region in the UCLA Anderson Forecast economic forecasting model for California.

**Notable One-time Investments for the UC Include:**

- **Institute for Immunology and Immunotherapy**—An increase of $500 million one-time General Fund over a three-year period ($200 million in 2022-23, with an additional $200 million in 2023-24 and $100 million in 2024-25 planned for this purpose) to establish the Institute for Immunology and Immunotherapy at UCLA, bringing together academics and researchers for collaborative research to maintain California’s leading edge in biotechnology.

- **Climate Initiatives**—An increase of $185 million one-time General Fund to support climate initiatives, including $100 million for climate action research seed and matching grants, and grants for projects at UC Innovation and Entrepreneurship Centers to incentivize and expand climate innovation and entrepreneurship; $47 million for climate initiatives at UC Riverside; $20 million for climate initiatives at UC Santa Cruz; and $18 million for climate initiatives at UC Merced.

- **Deferred Maintenance, Seismic Mitigation, and Energy Efficiency**—An increase of $125 million one-time General Fund for deferred maintenance, seismic mitigation, and energy efficiency projects at UC campuses.

- **UC Riverside and UC Merced Infrastructure**—An increase of $249 million one-time General Fund over a three-year period ($83 million one-time General Fund in each of 2022-23, 2023-24 and 2024-25) to support campus expansion projects at the Riverside and Merced campuses.

- **UC Berkeley Clean Energy Campus**—An increase of $249 million one-time General Fund over a three-year period ($83 million one-time General Fund in each of 2022-23, 2023-24 and 2024-25) to support the UC Berkeley Clean Energy Campus project.

- **Dyslexia Research**—An increase of $10 million one-time General Fund to support the University of California San Francisco Dyslexia Center.

- **Ralph J. Bunche Center**—An increase of $5 million one-time General Fund to support the Ralph J. Bunche Center for African-American Studies at UCLA.
• **Center for Responsible, Decentralized Intelligence**—An increase of $2.5 million one-time General Fund to support the Center for Responsible, Decentralized Intelligence at UC Berkeley, which promotes research, education, and entrepreneurship in blockchain and Web3.

• **Additional Investments**—An increase of approximately $57.5 million one-time General Fund to support various programs, services, and research at UC campuses.

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### CALIFORNIA STATE UNIVERSITY

The Budget reflects a multi-year compact that includes substantial and sustained funding increases for the CSU, in exchange for clear commitments to expand student access, equity, and affordability, and to create pathways to high-demand career opportunities.

**Notable Ongoing Investments for the CSU Include:**

• **Base Growth**—An increase of $211.1 million ongoing General Fund for operating costs, representing a five-percent base increase in ongoing General Fund resources.

• **Resident Undergraduate Enrollment Growth**—An increase of $81 million ongoing General Fund to support California resident undergraduate student enrollment growth of 9,434 full-time equivalent students in the 2022-23 academic year.

• **Graduation Initiative**—An increase of $35 million ongoing General Fund to expand support for the CSU’s Graduation Initiative 2025.

• **Foster Youth Supports**—An increase of $12 million ongoing General Fund to increase support for foster youth students.

• **Basic Needs**—An increase of $10 million ongoing General Fund to expand support for the basic needs component of Graduation Initiative 2025.

• **Asian American, Native Hawaiian, and Pacific Islander Student Achievement Program**—An increase of $8 million ongoing General Fund to establish the Asian American, Native Hawaiian, and Pacific Islander Student Achievement Program.

• **Project Rebound**—An increase of $8 million ongoing General Fund to expand the Project Rebound program.
• **Fellowship Programs**—An increase of $300,000 ongoing General Fund to increase support for the legislative, executive, and judicial fellows programs, and the Sacramento Semester program.

**Notable One-time Investments for the CSU Include:**

• **Deferred Maintenance, Seismic Mitigation, and Energy Efficiency**—An increase of $125 million one-time General Fund for deferred maintenance, seismic mitigation, and energy efficiency projects at CSU campuses.

• **CSU Bakersfield Energy Innovation Center**—An increase of $83 million one-time General Fund to support the construction of the CSU Bakersfield Energy Innovation Center.

• **San Diego State University, Brawley Center**—An increase of $80 million one-time General Fund to expand the San Diego State University, Brawley Center in Imperial Valley to support a local workforce pipeline to aid the state’s goals for development of the Lithium Valley vision.

• **CSU San Bernardino, Palm Desert Campus**—An increase of $79 million one-time General Fund to support a new student center at the Palm Desert campus of CSU San Bernardino.

• **University Farms**—An increase of $75 million one-time General Fund for equipment and infrastructure improvements at CSU University Farms.

• **CSU Fullerton Engineering and Computer Science Innovation Hub**—An increase of $67.5 million one-time General Fund toward construction of the Engineering and Computer Science Innovation Hub.

• **Swanton Pacific Ranch**—An increase of $20.3 million one-time General Fund to rebuild the Cal Poly San Luis Obispo Swanton Pacific Ranch.

• **Foster Youth Support Services**—An increase of approximately $1.5 million General Fund to support First Star Foster Youth Cohorts at two CSU campuses.

• **Additional Investments**—An increase of approximately $32.4 million General Fund to support various programs and services at CSU campuses.
California Community Colleges

The Budget reflects a multi-year roadmap that focuses on equity, student success, and enhancing the system’s ability to prepare students for California’s future. The roadmap works in tandem with the UC and CSU compacts to increase transfer capacity and streamline transfer pathways between the segments.

Apportionments and College Finance Investments:

• **Base Increase**—An increase of $600 million ongoing Proposition 98 General Fund for a base increase to the Student Centered Funding Formula (SCFF), which is comprised of $400 million to increase the SCFF’s funding rates for the base, supplemental, and success allocations, and $200 million to augment the SCFF’s basic allocation within the base allocation. This base increase is provided in recognition of increasing operating costs, including the significant digital footprints that districts have developed to accommodate long-term shifts in student learning modality demand.

• **CCC Apportionments**—An increase of $493 million ongoing Proposition 98 General Fund to provide a 6.56-percent cost-of-living adjustment for apportionments and $26.7 million ongoing Proposition 98 General Fund for 0.5-percent enrollment growth.

• **COVID-19 Recovery Block Grant**—An increase of $650 million one-time Proposition 98 General Fund to provide funds to community college districts for activities that directly support community college students and mitigate community college student learning loss related to COVID-19 impacts.

Student-Focused Program Investments:

• **Student Enrollment and Retention**—An increase of $150 million one-time Proposition 98 General Fund to continue to support community college efforts and focused strategies to increase student retention rates and enrollment, building on an investment of $120 million one-time Proposition 98 General Fund for student enrollment and retention in the 2021 Budget Act.

• **Categorical Program Augmentations**—An increase of $129.7 million ongoing Proposition 98 General Fund to support budget augmentations for the Student Equity and Achievement Program; Extended Opportunity Programs and Services; Disabled Student Programs and Services; the Rising Scholars Network; the Cooperative Agencies Resources for Education program; the Umoja Program; the Mathematics, Engineering, Science Achievement Program; and the Puente Project.
Higher Education

- **Transfer Reform**—An increase of $65 million one-time Proposition 98 General Fund for CCCs to implement the transfer reform provisions required by Chapter 566, Statutes of 2021 (AB 928).

- **Equitable Placement and Completion Support Block Grant**—An increase of $64 million one-time Proposition 98 General Fund to support the implementation of equitable placement and completion policies and practices.

- **Hire UP Pilot Program**—An increase of $30 million one-time Proposition 98 General Fund to establish the Hire UP Pilot Program to provide stipends to formerly incarcerated individuals, CalWORKS recipients, and former foster youth.

- **Native American Student Support and Success Program**—An increase of $30 million one-time Proposition 98 General Fund to establish the Native American Student Support and Success Program at up to 20 colleges.

- **Foster Youth Support Services**—An increase of $30 million ongoing Proposition 98 General Fund to expand availability of foster youth support services offered by the NextUp program.

- **Hunger and Homelessness Initiatives**—An increase of $10 million ongoing Proposition 98 General Fund to increase funds available for CCC basic needs centers, and $10 million ongoing Proposition 98 General Fund to increase funds available for rapid rehousing programs.

- **Asian American, Native Hawaiian, and Pacific Islander Student Achievement Program**—An increase of $8 million ongoing Proposition 98 General Fund to establish the Asian American, Native Hawaiian, and Pacific Islander Student Achievement Program.

- **African American Male Education Network and Development (A2MEND) Student Charters**—An increase of $1.1 million ongoing Proposition 98 General Fund to support the expansion of A2MEND student charters to an increased number of community college districts.

- **Support for Umoja Program Study**—An increase of $179,000 one-time Proposition 98 General Fund to support a study of the Umoja program practices that promote student success for African American students.
CCC COLLEGE AFFORDABILITY INVESTMENTS:

• **Student Success Completion Grant**—An increase of $250 million ongoing Proposition 98 General Fund to increase Student Success Completion Grant award amounts and to expand available funds for students newly eligible for the Student Success Completion Grant due to establishment of the CCC Cal Grant Entitlement Awards in the 2021 Budget Act.

• **California College Promise Program**—An increase of $25 million ongoing Proposition 98 General Fund to expand availability of the California College Promise Program to returning community college students.

• **Emergency Financial Assistance Grants for AB 540 Students**—An increase of $20 million one-time Proposition 98 General Fund to support emergency student financial assistance grants to eligible AB 540 students.

WORKFORCE-FOCUSED INVESTMENTS:

• **Healthcare Vocational Education**—An increase of $130 million one-time Proposition 98 General Fund, of which $30 million is for 2022-23, $50 million is for 2023-24, and $50 million is for 2024-25, to support healthcare-focused vocational pathways for English language learners across all levels of English proficiency, through the Adult Education Program.

• **California Healthy School Food Pathways Program**—An increase of $45 million one-time Proposition 98 General Fund to support the implementation of the California Healthy School Food Pathways Program, which is a pre-apprenticeship, apprenticeship, and fellowship workforce training pipeline pilot program for school food service workers.

• **Apprenticeship Program Related and Supplemental Instruction (RSI) Rate**—An increase of $20.5 million ongoing Proposition 98 General Fund to align the apprenticeship program RSI rate with the SCFF credit rate, rather than the noncredit rate.

TECHNOLOGY-FOCUSED INVESTMENTS:

• **CCC Technology Modernization and Sensitive Data Protection**—An increase of $100 million Proposition 98 General Fund, of which $75 million is one-time and $25 million is ongoing, to address modernization of CCC technology infrastructure, including sensitive data protection efforts at CCCs.
• **Common Course Numbering**—An increase of $105 million one-time Proposition 98 General Fund to support the systemwide implementation of a common course numbering system pursuant to the provisions of Chapter 568, Statutes of 2021 (AB 1111). This investment builds upon $10 million one-time Proposition 98 General Fund in the 2021 Budget Act to plan for and begin developing a common course numbering system throughout the CCCs.

• **Intersegmental Pathways Software**—An increase of $25 million one-time Proposition 98 General Fund to assist CCCs with the procurement and implementation of software that maps intersegmental curricular pathways to help students choose their pathway, facilitate streamlined transfer between segments, and reduce excess units taken on the path to degree or program completion.

**OTHER INVESTMENTS:**

• **CCC Facilities**—General Obligation bond funding of $403 million one-time for the construction phase of 19 projects anticipated to complete design by Spring 2023, the design phases of 2 projects, and both the working drawings and construction for 1 project. This allocation represents the next installment of the $2 billion available to CCCs under Proposition 51.

• **Part-Time Faculty Health Insurance**—An increase of $200 million ongoing Proposition 98 General Fund to augment the Part-Time Faculty Health Insurance Program to expand healthcare coverage provided to part-time faculty by community college districts.

• **College Augmentations**—An increase of $171.5 million one-time Proposition 98 General Fund to support local requests.

• **Cost-of-Living Adjustments**—An increase of approximately $64 million Proposition 98 General Fund for cost-of-living adjustments for select categorical programs.

• **Equal Employment Opportunity**—An increase of $10 million ongoing Proposition 98 General Fund to support the sustainable implementation of Equal Employment Opportunity program best practices to diversify community college faculty, staff, and administrators.

• **Financial Aid Administration**—An increase of $10 million ongoing Proposition 98 General Fund to augment resources provided to community college financial aid offices.
• **State Operations Support**—An increase of approximately $3.9 million ongoing General Fund to support 26 new positions at the CCC Chancellor’s Office beginning in 2022-23, bolstering the Chancellor’s Office capacity to support the CCC system.

• **Local Property Tax Adjustment**—A decrease of $117.4 million ongoing Proposition 98 General Fund as a result of increased offsetting local property tax revenues.

• **Classified Community College Employee Summer Assistance Program**—An increase of $10 million ongoing Proposition 98 General Fund to establish the Classified Community College Employee Summer Assistance Program.

• **Foster and Kinship Care Education Program**—An increase of $500,000 ongoing Proposition 98 General Fund to backfill an estimated decrease in federal matching funds provided to Foster and Kinship Care Education programs, maintaining current funding levels.

• **Deferred Maintenance**—An increase of approximately $840.7 million one-time Proposition 98 General Fund to address deferred maintenance needs.

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### California Student Aid Commission

#### Cal Grant Reform

The Budget commits to prioritize the Cal Grant Reform Act beginning in 2024-25 if a determination is made in the spring of 2024 that General Fund over the multiyear forecast is available to support this ongoing augmentation. The Cal Grant Reform Act would make significant changes to the state’s largest financial aid program, replacing the existing Cal Grant program with a new version of the program that provides a Cal Grant 2 for eligible CCC students with financial need, and provides a Cal Grant 4 for eligible four-year university students with financial need.

**Detailed Budget Investments:**

• **Middle Class Scholarship**—An increase of $515 million ongoing General Fund, for a combined total of $632 million, to support a modified version of the Middle Class Scholarship Program that will focus resources toward reducing a student’s total cost of attendance consistent with the 2021 Budget Act. The Budget also includes intent to add $227 million on a one-time basis in 2023-24 to supplement funding available for the program.
• **Learning-Aligned Employment Program**—An increase of $300 million one-time General Fund for the Learning-Aligned Employment program, which provides a two-year total of $500 million when combined with funds provided to establish the program in the 2021 Budget Act. This investment is consistent with intent expressed in the 2021 Budget Act.

• **Independent Institutions**—The Budget includes several investments benefitting students attending independent higher education institutions. The Budget provides $15.5 million ongoing General Fund to increase the maximum Cal Grant award for students attending independent institutions to $9,358 in the 2022-23 award year, and to extend availability of access awards for students with dependent children and foster youth or former foster youth attending independent institutions. Additionally, the budget commits to prioritize continued availability of CCC Cal Grant Entitlement Awards upon an eligible student’s transfer to an independent institution beginning in 2024-25, if a determination is made in the spring of 2024 that General Fund over the multiyear forecast is available to support this ongoing augmentation.

• **Inland Empire Student Opportunity and Access Program (Cal-SOAP)**—An increase of $2.4 million ongoing General Fund to support Inland Empire Cal-SOAP projects.

• **Cash for College Program**—An increase of $500,000 one-time General Fund to expand and supplement existing Cash for College Regional Coordinating Organizations that offer technical assistance to help complete college financial aid applications.

• **California Indian Nations College**—An increase of $5 million one-time General Fund to support the California Indian Nations College as it seeks federal accreditation.

• **Financial Aid Programs**—An increase of approximately $1.4 million ongoing General Fund and 8 positions at the California Student Aid Commission beginning in 2022-23 to support financial aid programs.

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**ScholarShare Investment Board**

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**Child Savings Accounts**

The Budget provides additional resources for the ScholarShare Investment Board to implement and administer the California Kids Investment and Development Savings Program (CalKIDS), which funds college savings accounts targeted to low-income and
underrepresented public school students, in addition to establishing college savings accounts for all newborns.

Detailed Budget Investments:

- **Future CalKIDS Cohorts**—An increase of approximately $170 million ongoing General Fund to establish college savings accounts for incoming first-grade cohorts of low-income public school students, as defined for purposes of the Local Control Funding Formula, with supplemental investments for foster youth and homeless students enrolled in a public school. This investment is consistent with intent expressed in the 2021 Budget Act.

- **CalKIDS Implementation**—An increase of approximately $5.3 million one-time General Fund in 2022-23, approximately $2.1 million ongoing General Fund, and 2 positions to support CalKIDS implementation and administration, including participant notifications and marketing, call center services, and information technology needs.

- **Financial Literacy**—An increase of $5 million ongoing General Fund for financial literacy outreach efforts that will inform families of the long-term benefits of savings associated with CalKIDS.

- **Coordination with Local Programs**—An increase of $5 million one-time General Fund for local child savings account programs’ outreach and coordination with CalKIDS.

UC Hastings College of the Law

Detailed Budget Investments:

- **Base Growth**—An increase of $2 million ongoing General Fund for operational costs.

- **Support for 100 McAllister Street Project**—An increase of $90 million one-time General Fund to support the facility improvement project at the institution’s 100 McAllister Street building. This project will provide for the institution’s continued use of 252 campus housing units at below-market rents, will add at least 5 additional campus housing units, and will renovate space within the facility to be used for academic purposes.

- **Support for Renaming Costs**—An increase of $885,000 one-time General Fund to support costs associated with changing the name of the institution, conditioned upon enactment of legislation authorizing a name change.
CALIFORNIA STATE LIBRARY

DETAILED BUDGET INVESTMENTS:

• **Library Infrastructure**—An increase of $50 million one-time General Fund in 2022-23, and a planned increase of $100 million one-time General Fund in 2023-24, for an equity-focused matching grant program to support local library maintenance, improve energy efficiency and sustainability, and expand digital and physical access to libraries.

• **Dolly Parton Imagination Library**—An increase of $68.2 million one-time General Fund to establish the Statewide Imagination Library.

• **State Parks Passes**—As referenced in the General Government and Statewide Issues Chapter, an increase of $13.5 million one-time General Fund for the California Department of Parks and Recreation to expand availability of state parks passes offered via local libraries, in partnership with the California State Library.

• **Digitization of Significant Materials**—An increase of $12.8 million one-time General Fund and $1.2 million ongoing General Fund for 9 positions, equipment, and other resources to support the digitization of historically and culturally significant materials, improved cataloging of library collections, and specialized digital concierge services for state agencies.

• **Online Job Training and Workforce Development**—An increase of $10.2 million one-time General Fund to support two additional years of free online job training and educational upskilling programs available through local public libraries.

• **Lunch at the Library**—An increase of $5 million ongoing General Fund and 2 positions to expand the number of library jurisdictions providing summer meal programs for students in low-income communities.

• **Ethnic Media Grants**—An increase of $5 million one-time General Fund for ethnic media outreach grants.

• **Holocaust Library Renovation**—An increase of $3 million one-time General Fund to renovate and enhance the Jewish Family and Children’s Services Holocaust Center Library and Archives building.

• **Building Rental Costs**—An increase of $2.2 million ongoing General Fund for increased building rental expenses at the Library and Courts II building.
• **Library Services Modernization and Online Database Subscriptions**—An increase of $570,000 ongoing General Fund to modernize State Library services with an automated loan system, and provide subscriptions to e-books and specialized online databases.

• **Administrative Workload**—An increase of $363,000 ongoing General Fund and 3.5 positions to support increased administrative and personnel workload.

• **Communications and Outreach to Local Libraries**—An increase of $335,000 ongoing General Fund and 3 positions to expand public outreach and education to California local libraries and patrons in under-served and multilingual communities.

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**STUDENT HOUSING**

The 2021 Budget Act established the Higher Education Student Housing Grant Program to provide grants for the CCCs, CSU, and UC to construct student housing or to acquire and renovate commercial properties into student housing for low-income students. In addition to $2 billion one-time General Fund set-aside by the 2021 Budget, the 2022 Budget provides $200 million one-time General Fund for this program, bringing the total allotment to $2.2 billion for student housing grants over a three-year period.

Using funds appropriated for this program for the 2021-22 and 2022-23 fiscal years, the Budget provides approximately $1.4 billion one-time General Fund for student housing construction grants for specified projects. Of this amount, $389 million is provided for UC projects, $487.9 million is provided for CSU projects, $542.1 million is provided for CCC projects, and $9.1 million is provided for an intersegmental project. In addition, the Budget provides $18 million one-time General Fund for planning grants at specified CCCs. Additional General Fund resources are allocated in 2023-24, for a total of $2.2 billion for student housing grants.

The Budget also includes intent language to provide $1.8 billion one-time General Fund over a two-year period in 2023-24 and 2024-25, to establish a student housing revolving loan program for the UC, the CSU, and the CCCs. Additional details are contingent upon future legislation.

**ADDITIONAL INVESTMENTS:**

• **Bureau for Private Postsecondary Education**—The Budget includes $24 million General Fund over three years to provide the Bureau with stable funding while the Bureau develops an improved fee model for its licensees. This funding will help
support the continuation of the Bureau’s role to protect students and consumers through the oversight of California’s private postsecondary educational institutions.

- **Carnegie Science Grant**—The Budget includes $20 million one-time General Fund for the Office of Planning and Research to support a grant to Carnegie Science for the Pasadena Climate Research Hub facility.

- **Student Loan Borrower Assistance**—The Budget includes $10 million one-time General Fund for the Department of Financial Protection and Innovation to implement a Student Loan Borrower Assistance Program that includes a marketing campaign and grant program to provide assistance and information to the approximately 3.9 million Californians with outstanding student loans.

- **Golden State Awards**—The Budget includes $10 million one-time General Fund for the California Education Learning Lab to establish and support the Golden State Awards Program.

- **California Education Learning Lab Restoration**—The Budget includes an increase of $2 million General Fund annually through 2025-26 to restore the 2020 Budget Act reduction to the California Education Learning Lab’s grant pool.

- **Individualized Adaptive Learning**—The Budget includes $1 million General Fund annually through 2025-26 for the California Education Learning Lab to establish an open educational resources platform offering free and responsive homework modules in science, technology, engineering, and mathematics.