SACRAMENTO CITY UNIFIED SCHOOL DISTRICT
Position Description

TITLE:	Database Administrator	**CLASSIFICATION:**	Non-Represented Management, Classified
SERIES:	Coordinator III	**FLSA:**	Exempt
JOB CLASS CODE:	1972	**WORK YEAR:**	12 Months
DEPARTMENT:	Technology Services	**SALARY:**	Range 13 Salary Schedule A
REPORTS TO:	Assigned Supervisor	**BOARD APPROVAL:** **HR REVISION:** **CABINET REVISION:**	12-13-10 04-18-13 10-02-15

BASIC FUNCTION:

Serve as a technical database administration expert; coordinate the development, installation, implementation, administration, development, security, and support of the district's systems, web-based applications and tools, databases, operating systems, and related software for district servers; responsible for the selection, development, deployment, utilization, access, integrity, and security of/to a variety of database management systems; coordinate assigned activities with other departments.

DISTINGUISHING CHARACTERISTICS

Database Administrator is distinguished from other staff by the overall responsibility for system integration, design, development, and administration. A Database Administrator performs advanced professional and technical duties in the planning, design, and implementation of systems, applications and databases to integrated data systems, reporting tools and elements used by a wide variety of end-users throughout the district. The incumbent oversees the design of the data and systems architecture for the data warehouse, including selection of hardware and software products, the development of logical and physical data models, Extract/Transform/Load (ETL) scripts, metadata definitions and models, queries, and reports, and operations activities. The Database Administrator demonstrates expertise utilizing Structured Query Language (SQL), Procedural Language/Structured Query Language (PL/SQL), and Business Intelligence and ETL tools.

REPRESENTATIVE DUTIES: (Incumbents may perform any combination of the essential functions shown below [E]. This position description is not intended to be an exhaustive list of all duties, knowledge, or abilities associated with this classification, but is intended to accurately reflect the principle job elements.)

Lead, oversee, and participate in the design, implementation, installation, upgrading, monitoring, tuning, and troubleshooting of the district's applications and tools, software and systems, including servers, storage systems, other device hardware, related peripheral equipment, and multi-platform network operating systems and applications. **E**

Oversee and participate in the design, implementation, configuration, upgrading, testing, troubleshooting, tuning, and maintenance of the data and systems architecture for the data warehouse, databases, database clusters,

associated systems and system integration tools, including the development of: (a) logical and physical data models, (b) ETL scripts, (c) metadata definitions and models, queries, and reports, and (d) operations activities. **E**

Develop specifications, design, and implementation of database queries, scripts, views, tables, and structures; provide database monitoring, performance tuning, troubleshooting, query development, replications, data mining, and data warehousing. **E**

Lead, oversee, and participate in determining data elements and structures that need to be accessed and extracted, moved and loaded, validated and cleaned, and standardized and transformed; use data integration tools to support all these processes, and make it possible to execute the rules created in the design phase of data warehousing. **E**

Provide advanced technical support for the district's network operating systems and applications; troubleshoot and resolve data integration and reporting problems; provide information, technical direction, and training to staff on activities required to implement projects, upgrades, new procedures, and techniques. **E**

Coordinate review of the technical environment to evaluate, measure and maximize system performance, security, availability and effectiveness; utilize management software and tools to monitor and analyze data mart and data warehouse operations; analyze capacity and growth requirements, and recommend systems, system upgrades and enhancements to meet long-term district needs; develop and recommend specifications for network hardware and software enhancements. **E**

Define database items, structures, and relationships, including redundancy; develop, maintain, and provide district specific documentation including data standards, policies, procedures, designs, and definitions for the data dictionary (metadata). **E**

Recommend and coordinate with staff and vendors on the design, documentation, implementation, maintenance, testing, and monitoring of storage, archival, backup, business continuity and recovery procedures; periodically test and ensure that storage, archival, backup, business continuity and recovery procedures are functioning correctly. **E**

Maintain and update schematics and documentation of data mart and data warehouse structures and devices; develop and recommend operational contingency and disaster recovery plans. **E**

Develop, maintain, and enforce database procedures, standards, and security practices to safeguard information against accidental or unauthorized access, damage, modification, or disclosure of data. **E**

Plan for and support the processing of upgrades, patches, and major releases for the district's database systems and applications; coordinate administration and operation of systems with outside vendors and users to integrate software into district databases; communicate and act as a liaison between users, managers, staff, consultants, and vendors to ensure database integrity and security. **E**

Analyze, modify, enhance, test, and debug existing database structures, systems, and programs to meet user needs and/or system design changes; analyze problems and make modifications to systems and individual programs; preserve the performance and integrity of data. **E**

Conduct a variety of organizational studies, investigations, and operational studies; recommend modifications to database administration programs, policies, and procedures. **E**

Lead and work with school improvement initiatives that close student achievement gaps between racial, ethnic, and economic groups by working with all of the diverse communities. **E**

Act as a liaison and serve on a variety of committees, task forces, and professional group meetings; maintain awareness of new trends and developments in the fields of Educational Technology, Information Technology, database administration and security; incorporate new developments as appropriate. **E**

Promote teamwork by sharing knowledge, providing cross-training for other employees, cooperating with others, participating in meetings and work groups, and supporting the goals and objectives of the district and the department; may operate a vehicle to conduct work. **E**

Perform related duties as assigned.

TRAINING, EDUCATION, AND EXPERIENCE:

Any combination equivalent to: bachelor's degree in information systems, computer science, or a related field, and three years of experience as a database administrator. Experience should include installing, implementing, and maintaining SQL Server in a clustered and highly available environment. Incumbent must have expertise with Microsoft SQL Server, database performance tuning and capacity planning, report development and systems integration. Microsoft Certified Database Administrator (MCDBA) Certification, as well as experience with Microsoft Active Directory, data warehousing systems, and financial and/or student information systems is preferred.

LICENSES AND OTHER REQUIREMENTS:

Valid California driver's license; provide personal automobile and proof of insurance. Alternative work schedule may be mandatory to prevent end-user interference.

KNOWLEDGE AND ABILITIES:

KNOWLEDGE OF:
Data warehouse and systems architecture, including the development of logical and physical data models including
    multidimensional data cubes, metadata definitions, and models.
Principles and practices of Business Intelligence and data integration constructs.
Industry design and configuration standards for data transformation and data warehouse technologies and tools.
Principles and practices of business and technical communications, including techniques in the development of
    system and user documentation.
Operating principles, parameters, uses, capabilities, characteristics, and limitations of servers, network operating
    systems, personal computers, mid-range computers, and related equipment.
Standard principles, practices, methods, and tools of project management.
Database design and management of SQL and other programming environments.
Programming languages and reporting tools for SQL.
Relational database management systems, computer network topologies, and the security implications of each.
Conceptual design processes.
Problem solving skills.
Documentation of standards, including procedures and definitions for metadata.
Data modeling, normalization, mining, warehousing, and security.
Operation of computer, related software, and standard office equipment.
Effective oral and written communication skills.
Principles and practices of providing work direction to others.

Health and safety regulations.

ABILITY TO:

Develop and deploy conceptual frameworks, and apply state-of-the-art technology to the design, development, implementation and management of data warehouse and data integration infrastructures and functionality.

Install, configure, maintain, and manage the operations of complex database and data warehouse systems to achieve optimal technical performance and end-user support.

Analyze and determine data entities, relationships, attributes, data flow, storage requirements, data output, and reporting capabilities.

Determine and develop solutions to meet the functional requirements and specifications of hardware and software systems.

Act as project manager for implementation of software application features or subsystems.

Analyze and troubleshoot complex scripting, data cleansing, data integration, and data warehouse system issues; identify the reasons for problems, failures, and malfunctions; develop optimal solutions.

Test new systems; monitor data integration and reporting anomalies, and make adjustments as required.

Perform business and functional analyses, and reach sound conclusions regarding customer requirements and efficient, cost-effective systems, and technology solutions.

Read, interpret, and apply complex technical publications, manuals, and other documentation.

Identify data communication and information management issues and opportunities; analyze problems and alternatives; develop sound conclusions and recommendations.

Prepare clear, concise, and accurate program documentation, reports of work performed, and other written materials.

Conscientiously preserve the confidentiality of all proprietary and confidential data and information residing in the district, in accordance with departmental and district policy and state and federal law.

Translate user requirements into computer programs and systems. Apply creative thinking and critical reasoning to resolve complex system issues.

Adapt, learn new technologies, methodologies and practices, skills, concepts, frameworks, tools, resources and approaches associated with changes, developments and innovations in the fields of Educational Technology, Information Technology, and database administration.

Analyze problems, identify alternative solutions, project consequences of proposed actions, and implement recommendations in support of goals.

Implement system software and data changes in accordance with security and change control policies. Work individually, as well as part of a collaborative team.

Establish and maintain cooperative relationships with others. Lead and work with school improvement initiatives that close student achievement gaps between racial, ethnic, and economic groups by working with all of the diverse communities.

Communicate effectively, both orally and in writing. Alternative work schedule may be mandatory to prevent end-user interference.

Operate a computer, related software, and standard office equipment.

Provide leadership, guidance, and training to other technical and non-technical personnel.

Meet state and district standards of professional conduct as outlined in Board Policy.

WORKING CONDITIONS:

SAMPLE ENVIRONMENT:
Office environment; drive a vehicle to conduct work; subject to noise from equipment operation.

SAMPLE PHYSICAL ABILITIES:
Hear and speak to make presentations, and exchange information in person and on the telephone; dexterity of hands and fingers to operate a computer keyboard; see to read, inspect manuals and other written materials with fine print, prepare documents and reports, and view a computer monitor; sit or stand for extended periods of time; bend at the waist, reach overhead, above the shoulders, and horizontally to retrieve and store files from cabinets and shelves;

lift light objects; physical, mental, and emotional stamina to endure long hours under sometimes stressful conditions.

HEALTH BENEFITS: District pays a portion of the employee's health benefits through District-offered plans.