Abstract: Discovery Elementary is READY!!!

Discovery Elementary is a school intent on transforming our learning environment to meet the needs of 21st century learners by providing student-centered, authentic, individualized learning opportunities where students create content through the use of digital tools--with a focus on collaborative learning and critical thinking. Our classrooms will be student-centered, mobile and flexible learning environments focused on academic achievement and social interaction. We are dedicated to changing our instructional practices to maximize student growth.

Discovery has the vision, readiness and ability to deliver. We have one 21st century classroom in our building—allowing us to quickly learn what does and does not work. We need to expand our 21st century vision to redefine all students' learning experiences; giving students full ownership of their learning.

Need: Our school would not be able to implement this change without the financial support of this grant. Funds will purchase devices, allowing the implementation of a rotational model, creating a technology-rich learning environment for individualized instruction addressing all of our students' abilities.

Our school is the best candidate for this grant because our teachers, students and parents are ready to embrace this manner of learning. (*Support letters in appendix*.) Schools without the experience of a 21st century classroom will have a greater learning curve and a less transformative impact on students. Discovery knows that integrating technology is more than teaching old lessons with new tools.

This grant will allow Discovery students to blossom beyond standardized testing scores, creating innovative, self-directed learners with the skills and love of learning that will make them productive, successful citizens ready to embrace future challenges.

Opportunities to collaborate, research, problem solve, demonstrate creativity, innovation, and critical thinking will increase student achievement by strengthening students' involvement, engaging all learners, and deepening content knowledge, providing solid evidence of academic and social growth.

All of our classrooms will embrace the critical attributes of the Next Generation Learning Classroom: personalized learning, varied use of technology tools, world-class knowledge and skills, performance-based learning, anytime-anywhere opportunities, and authentic student voice. Today's classrooms are characterized by lecture-driven, teacher-directed learning delivered to the masses. Our plan will transform Idaho education by creating a more student-focused model of instruction.

Our classroom rotational model of adding shared devices into the classroom (not a one-to-one model) is scalable to other schools in Idaho ($121 per student). It is designed to create an advanced learning environment, and includes strategic professional development on all technology devices. Its sustainability across Idaho is ensured through community partnerships (BSU/PCS-letters attached), district and PTA support, and the results of data-driven student achievement measures.

Educational Needs and Goals

It is a challenge that classroom teachers understand all too well: how can one person deliver engaging, challenging lessons to students who possess unique styles of learning and varying levels of prior knowledge and interests in any given topic of study? How does a teacher keep students from glazing over and not engaging in any given lesson on any given day? Technology can provide one solution.

In 2012-2013, our district studied excellent teachers with technology in their classrooms and excellent teachers lacking the same technology. Our findings indicated teachers with devices in their classrooms had more engaged students. (Data in Appendix A) A challenge facing teachers today is to provide personalized learning to every student, so that all can show growth toward mastery of the Common Core standards.

At Discovery, we have an extended resource room and a positive behavior program where students need highly specialized learning tools. Technological innovations have been shown to level the playing field for special needs students, enabling them to succeed in the regular classroom. (http://www.futureofchildren.org/).

At Discovery 38% of our learning disabilities population did not meet proficiency in math--missing AYP in 8 target groups last year. This grant would help to personalize learning for these groups. Students who are proficient or advanced on the state ISAT need ways to continue to grow. NWEA Map scores show the growth for the highest achieving students is often less than expected compared to lower scoring students.

Critical Academic Needs

Group	Meet Proficiency
Students with Disabilities-Math	61.6%
Students with Disabilities- Reading	64.3%

An identified weakness embedded throughout the Common Core State Standards (CCSS) is writing. We will use technology to create opportunities for student publication of their writing to a larger audience. Another identified weakness is students scoring significantly lower on the science ISAT than on other ISATs. The availability of technology will allow students to delve deeper into topics and provide more relevant, engaging and timely information. This grant will take our district's students to the next level of learning: producing, innovating, collaborating and directing their own learning.

Every classroom in our district has a computer, projector and document camera. The attached District technology plan outlines our plan for moving classrooms to the 21st century model.

Joint School District No. 2 has (5) 21st Century Classrooms; one at Discovery Elementary. Established in 2012-2013 school year, these classrooms have interactive boards, response systems, document cameras, projectors, iPads, iTouches, laptops, and collaborative furniture. Northwestern University and Digital Promise have conducted national studies on these classrooms collecting data defining what the best practices are; we will apply their findings to all our classrooms. We will also provide a website for sharing these best practices with other schools throughout Idaho.

The data in our (5) 21st classrooms has been impressive. (Data in appendix) The 21st Century teachers have integrated the technology creating classrooms where Common Core Standards are taught using performance-based assessments and anytime-anywhere learning—resulting in deep student engagement and collaboration. We believe this is scalable to an entire school building and district.

Discovery Elementary has also been a pilot school for Exceeds (a case management platform that personalizes learning), KLT (Keeping Learning on Track--an assessment program encompassing classroom management and progress monitoring systems) and DMT (Developing Mathematical Thinking--a student-centered math strategy). Our teachers were trained on and used Exceeds, KLT and DMT this year--making Discovery an excellent candidate for this grant. Technology, such as student response systems, provided in this grant will allow these programs to provide even more information to teachers.

These tools will give us extensive formative and summative student achievement data. The student response systems used during a lesson can be used to give immediate feedback to quickly personalize learning. It has been shown that students in Positive Behavior and Extended Resource programs are more engaged, on task, and demonstrate more growth than students without the tools. Students with disabilities often struggle with worksheets—where an iPad would allow them to demonstrate their knowledge by creating a paper slide video or audio recording. The interactive board/slate would be used as a center rotation to promote collaborative group educational gaming. Accessible netbooks and iPads in classrooms will engage students in the planning, writing, editing, and publishing processes. These tools will be used for higher-order thinking tasks in project-based learning models, ensuring even our highest level students will exceed targeted growth goals.

Discovery has 588 students, 82% white, 18% other than white. We have an extended resource room, positive behavior intervention program, and serve ESL and hearing impaired students. We have an even ratio of boys to girls. Our daily attendance is 96%.

Discovery students, parents, and 100% of teachers are ready and eager for a 21st century school. (*See attached grade level/parent addendum.)* A technology team is in place to receive the technology items, and to provide teacher training and support.

Discovery Elementary School would be a technology outreach center allowing community members to be trained in the use of technology. The fire training center across the street from Discovery would be able to use these tools for training. STEM research/training/education programs and community technology classes, would be held at Discovery in the evenings and weekends.

Other Relevant Data:

- Teachers with Masters: 12, highly qualified teachers: 100%, 1 Doctoral candidate
- Technology Training: 100% have attended some trainings including: SuccessMaker, Waterford, Harvard Training, Exceeds, Khan Academy, Flipped Classroom, MyOn, iPad integration - Teacher Inservice KLT and DMT Discovery Ed training and Common Core (We haven't all attended all of these trainings.)

Discovery is ready to create the 21st Century School. (*See support letters in appendix*).

Scope and Sequence

Discovery Elementary has always been a school of teacher leaders and has been a leader in the development of new ideas which promote students' learning. Discovery staff members collaborate within and between grade levels on a regular basis. Teachers embrace new ideas and implement programs to help students, showcasing best instructional practices during the District's annual Expo and at our Learning Showcases. Discovery staff participate in state training and conferences. Even with a very steep learning curve our teachers look forward to learning how to use the new technology, to discovering the best practices for student use of technology, and to embracing the challenge of increasing student learning possibilities.

Mike Dudley, the school's principal, is 100% supportive of the school becoming a 21st Century School. (*See attached supportive letter*.). Some of our goals are:

Goal: Increase student achievement

Objective: To increase the proficiency of our targeted AYP areas by 25%

95% of students meet growth goals

Activities: Use of stations and technology to individualize instruction

Goal: Increase student writing

Objective: Increase ISAT language growth--90% of students will meet growth goals in language.

Activities: Use targeted rotation centers to offer more opportunities to write to varied audiences.

All state and district accounting practices will be followed. JSD2 has award winning budget processes, and we will involve the business department in the grant. We will use our yearlong experiment with our 21st century classroom to identify the best practices and best technology to purchase. Our purchasing agent will secure the best prices.

The project team members will include one grade level representative, the principal, the counselor, support staff, IT professionals, and district special projects coordinator.

This grant has been written by school staff, teachers and the building administrator with the intent that the best instructional practices be used to help increase levels of student achievement. We will create a collaborative professional learning community designed to guide the implementation of this project. Our iTeam (Instructional Technology Educational Achievement Members) will collaborate with the school community to ensure that best practices and policies are utilized. The iTeam will consist of teachers, the building administrator, district technology staff, counselors, parents, students, and other relevant district personnel. The principal will be the leader of the team. Teachers, counselors, and staff will guide instruction. Parents will provide input through surveys and will help to provide sustainable funding. Students will give feedback about what does and doesn't work. Teachers were involved in the process of writing this grant. Parents and students have been surveyed for input. The Parent-Teacher Organization is committed to this vision. (*See appendix for detailed project plan*.)

Our three-year district technology plan (attached) is to improve instructional practice through expanding the use of emerging technologies by staff and students. Money has

been budgeted to expand the presence of emerging technologies, including funding for professional development. District training is focused on the implementation and use of 21st century tools. JSD2 has an extensive website dedicated to training teachers in the use of 21st century technologies. JSD2 trainers include two educational technology specialists, academic coaches, and Media Center personnel.

We will need training on effective use of technology tools and vendor training on specific tools. Individual's training and support needs will be identified and applied over 2 years.

Our key hindrances now are time and training. We have an implementation plan to address these issues.

Discovery will hire a half time Instructional Educational Technology Specialist to assist staff in the building. Our school will build a website for sharing ideas with schools across the state. Staff meetings will serve as opportunities for learning, sharing, and cross-grade level collaboration. Collaboration time will be spent developing lessons that utilize technology. We will use the teacher development programs in SchoolNet. Professional development days are built into the budget to support the implementation of this grant as well as one professional day each trimester for teachers to share, receive training, and engage in collaboration.

We will standardize equipment, so training, troubleshooting, and sharing will be easier. This will minimize our total cost of ownership and can be duplicated statewide.

Discovery building leadership has an understanding of how to successfully integrate technology into the building. Our iTeam will apply for Professional Standards Commission grants to attend the Northwest Council for Computer Education (NCCE) conference so we can continue to grow. (Plan below and in Appendix.)

Milestones	June	July	August	September	October	November	December	January	February	March	April	May	June
Grant award													
iTeam Meeting - Review Project Plan including - continual planning, reporting, evaluation, and revision of project goals and objectives)													
Hire Instructional Educational Technology Coach													
Purchase Technology													
Review & establish policy procedure guidelines													
Review & schedule training & professional development													
Set up scheduled data collection process													
Set up devices													
Vendor training & deployment of digital tools													
Parent/Community Open House & Training													
Student Training													
PLC Meetings (weekly gradelevel meetings, bi monthly staff meetings)													
Data Collection and Reporting (Engagement, State testing scores, Parent, Teacher Surveys)				E	S	P/T		E		P/T	E	S	P/T
Professional Development: Basic integration skills & Digital Citizenship													
Professional Development: Device Management & Integration													
Professional Development: Rotational Model													
Professional Development: Interactive Whiteboard & Slates													
Professional Development: Project Based Learning													
Professional Development: Assessment & Student Response Systems													
Professional Development: Digital Publishing													
Professional Development: Science Inquiry Project													
Professional Development: Math Inquiry Projects													
Professional Development: Survey Team for Needs													

Our district level research coordinator will conduct research to evaluate the success of the program comparing our school with Prospect Elementary, a school with a similar socio-economic population and will identify best practices to be implemented statewide. We will compare ISAT growth (pre-post 21st century classroom implementation), evaluate student digital portfolios, and survey students, staff and parents;

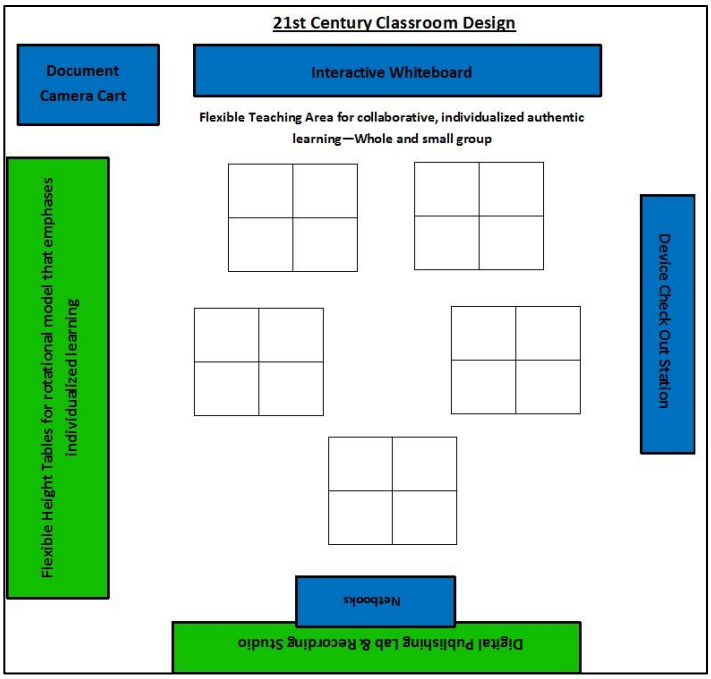
Sustainability and Scalability

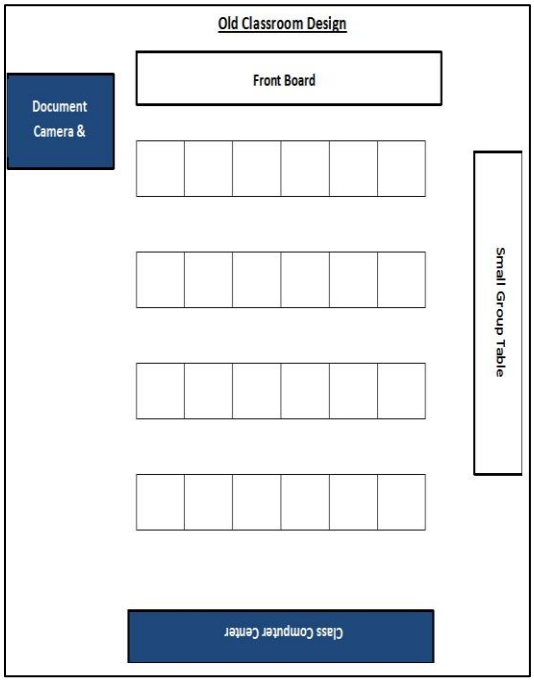
Dr. Clark and the school board of Joint School District No. 2 have consistently made technology integration a district priority. They are committed to supporting this program and to expanding it with district resources. We are purchasing netbooks that are durable and consistent with our district plan. The laptops are a full Windows Netbook and allow for integration into the Active Directory. They will be able to use district office licenses.

Discovery's PTA is very supportive of technology in the classroom and will continue to fund these efforts.

We have created this program with the state in mind. The total cost of this project is $370,501 and we have 588 students. We have designed a program with a cost of approximately $630 per student. We anticipate the ongoing costs of this program to decrease as teachers are trained. We feel these products will last for five years which brings the cost per student to $126 per year.

We will minimize our total cost of ownership by standardizing what we purchase, so technician training will be minimized. We will create images and an infrastructure that will minimize costs. We have a plan below:





Budget Narrative

Item	Explanation	Number of Classrooms	Total Cost
iPad Mini $309.00	Rotation area	K- (2) 1st-3rd (12) 4th-5th (6) PE(1) Music (5) Res/PBI/ERR (5)	$67,362.00
Netbook X131E $595	Rotation area	K- (2) 1st-3rd (12) 4th-5th (6) PE(1) Music (5) Res/PBI/ERR (5)	$127,330.00
Promethean board $1599	Rotation area	K- (2) 1st-3rd (12) Music (12) Music (1) ERR (1)	$25,584.00
Slate- $225	Rotational area and presentation tool	24 classrooms	$5400.00
Wand-$61	Rotation area w/board	All classrooms w/ board	$915.00
Student Response	Group and whole class assessment	24 classrooms	$38,400.00
Apple TV	Rotational Model with projector/collaboration	22 rooms	$2178.00
HDMI Cord	For Apple TV	22 rooms	$1318.90
Teacher Netbook	Teacher can work with students through rotations	24 rooms	$14280.00
Earphones	For student work	Room size and devices count	$5544.45
Device Covers	Maintain devices	Same as iPad Mini	$6540.00
Printer Device	iPad Printing	1 for building	$200.00
Digital TV	Displaying digital work	2 for building	$800.00
Professional Development	Training- 2 years Summer training before contract	25 teachers (2) half days at $23.50 an hour- 2 years	$9400.00
Educational Tech Specialist (ETS)	Integration Training, Implementation and	.5 FTE	$30,000.00
Promethean	Training	Trainer	$449.00
ETS	Benefits	30%	$9000.00
Substitutes	Collaboration/Training Teachers pulled out of classrooms for two hours, teachers trained and subs move classroom to classroom	3 days, 25 teachers, @$97 per day 2 years	$7275.00 $7275.00
Misc-shipping, installation	All boards	Boards, etc.	$11,250.00
Total			370,501.35
Students in Bldg	588	Cost per student over 5 yrs	$126.02

Budget Spreadsheet – see appendix for classroom breakdown

Item	Implementation Date	Total Needed	Number of Classes	Total Cost
iPad Mini $309.00	July 2013	218	K- (2) 1st-3rd (12) 4th-5th (6) PE(1) Music (5) Res/PBI/ERR (5)	$67,362.00
Netbook X131E $595	July 2013	214	K- (2) 1st-3rd (12) 4th-5th (6) PE(1) Music (5) Res/PBI/ERR (5)	$127,330.00
Promethean board $1599	July 2013 Not in 4th and 5th grade	16	K- (2) 1st-3rd (12) Music (1) Music (1) ERR (1)	$25,584.00
Slate- $225	July 2013	24	24 classrooms	$5400.00
Wand-$61	July 2013	15	All classrooms w/ board	$915.00
Student Response	July 2013	24	24 classrooms	$38,400.00
Apple TV	July 2013- classrooms have	22	22 rooms	$2178.00
HDMI Cord	July 2013- 2 classrooms have	22	22 rooms	$1318.90
Teacher Netbook	July 2013	24	24 rooms	$14280.00
Earphones	July 2013	555	555 @9.99	$5544.45
Device Covers	July 2013	218	Same as iPad Mini	$6540.00
Printer Device	July 2013	1	1 for building	$200.00
Digital TV	July 2013	2	2 for building	$800.00
Professional Development	Aug 2013 and Aug 2014	Half day is 4 hours	25 teachers (2) half days at $23.50 an hour- 2 years	$9400.00
Educational Tech Specialist (ETS)	Aug 2013-July 2014	1	.5 FTE	$30,000.00
Promethean	Aug 2013	1	Trainer	$449.00
ETS	August 2013-July 2014	1	30%	$9000.00
Substitutes	10-2013, 1-2014,3-2014		3 days, 25 teachers, @$97 per day 2 years	$7275.00 $7275.00
Misc-shipping, installation	Aug 2013	$750 per board	Boards, etc.	$11,250.00
Total				370,501.35
Students in Bldg	588		Cost per student over 5 yrs	$126.02