

# SD8 Budget Application - February 2016

## On Behalf of Technology Education Teachers and Programs

**Preamble:** This budget application is the result of collaboration amongst the Technology Education Teachers across School District #8 and represents the sixth step in a six year equipment replacement program. We have met a number of times over some years, inventoried equipment across the district, identified needs for replacement, prioritized and reprioritized those needs and engaged in a comprehensive, multi-year initiative to address the needs. The details of that program are available upon request but not included here as those details, while relevant, do not fit within the format of this application process which asks for rationale to justify the amount requested as opposed to the particulars of the request. The important point for the Budget Committee to be aware of as they consider this application is that it is not a one time request but fits into a multi-year program, already underway.

### **1 Alignment with Student Expectations:**

- SE1 - Academic Success: Although not strictly academic, students working in Technology Education programs are certainly lead to think, plan and problem solve; sometimes in very sophisticated and challenging ways.
- SE2 - Creativity and Imagination: Technology programs are a natural venue for the development of creativity and imagination as students conceive, design and develop projects in a variety of materials and pointedly in design challenge opportunities.
- SE3 - Citizenship: Technology programs provide opportunities for teaching and consideration of social issues such as resource consumption, waste management, moral decision making around technological issues and responsible use of technology.
- SE4 - Resiliency: There is no better or more natural means of teaching resiliency than the experience of cutting a piece for a project and discovering that it doesn't fit. The lesson is obvious, non-judgemental and demands a response which clearly provides the lesson in resilience.

### **Alignment with Board Goals:**

- DG1 – Transparency in Fiscal Accountabilities: All spending in this budget item is coordinated at the district level.
- DG2 – Relationship Building with Staff and Unions: Over the past few years this budget program has provided a valuable tie between Technology teachers across the district.
- DG3 – Increased Engagement with Communities and Constituents: Many Technology programs in our schools build or coordinate on projects for people and organizations in their communities outside the school.
- DG4 – Enhanced Marketing of Program Opportunities for Students: The obvious program opportunity that this budget initiative serves is any ACE IT or Trades training program.
- DG5 – Alignment of Programs and Facilities to Better Meet Student Needs: This is the precise goal of this budget application – an initiative to align facilities (shop equipment) across the district to better meet student needs, save money (through bulk purchasing) and simplify maintenance through acquisition of similar equipment in the different schools.

- DG6 – Enhance Support for Successful Transition to Kindergarten: N/A
- DG7 – Provision of More Program Choices throughout the District: The preservation, support and enhancement of “trades” courses as an elective option for students fully and clearly address this goal.
- DG8 – Advocate for Transportation That Supports Student Learning: N/A
- DG9 – Increase Effort to collaborate with and Engage Individuals and Organizations: Again, Technology Education projects in schools often reach out into the community to find partners or to fulfill needs of the community. For example: the ACE IT Carpenter course at PCSS that constructs a house every year.

## **2 Impact on Students:**

This budget application has a clear and direct impact on students. In most district middle and high schools *all* students are given an exposure to trades courses at the junior high level and *many* students continue in those programs throughout their high-school, and ultimately, post-secondary careers. Further, these programs address the needs of students who are, to a degree, marginalized in a society and an institution that leans its priorities towards intellectual and academic pursuits.

## **3 Achievement Contract Gaps:**

In as far as gaps go, so far there are no gaps between the District Achievement Contract 2013 to 2016, and the expectations, and resulting accomplishments of this program. Six years ago we were in desperate need of replacement of various pieces of shop equipment used by all learners in our schools. We can confidently say, with minimal deviation, that by sticking to priorities established six years ago, with your support, the program has been able to achieve all objectives to date. (the full six year plan available upon request) Though this is the final year of a six year plan we continue to meet regularly to review overall progress and always, the plan looking forward.

## **4 SD8 Support Person:**

This budget request is the last phase of an ongoing initiative that has been unfolding over the past five years. The planning and coordination of this equipment replacement program has proceeded with the knowledge, participation and oversight of the District Director of Operations and safety officer, Mr. L. Brown.

## **5 Alignment with Global Education Trends:**

The modern world is increasingly technological and there is a current and growing demand for skilled trades-people. B.C. has a resource-based economy. Resource extraction industries depend on a skilled workforce. Recognition of trades training as a valuable investment has never been more prevalent.

## **6 Need Versus Wish:**

Technology Education programs *must* have equipment to function. Do they need new equipment? – No. Is the existing equipment in many of the shops around the District at the end of its lifecycle? – Yes. Much of it is well used and worn out. Parts are missing or broken, bearings are loose, accuracy impacted, and student safety compromised. Further, there have been improvements in equipment design, advances in types of equipment doing work that was expected of original school shop equipment of twenty, thirty or forty years ago. It is possible for programs to limp along with existing equipment, however, vibrant,

effective and safe programs are becoming increasingly difficult to deliver without safe, reliable, and sometimes conceptually new, equipment for student to learn on.

**7 Measure of Project Success:**

While it may be difficult to define an objective measure of success for this proposal, its economic impact is reduced as savings are realized through bulk-purchase of the same equipment, for all schools, district wide. As well, when the equipment does eventually wear and require maintenance, all of the equipment is the same requiring considerably less time to track down and warehouse and replace parts. The maintenance procedures and processes on one in one school, will be the same in all of our schools. And of course, there is a direct and immediate benefit to students as the new machines are quieter, smoother, safer, easier to use and more reliable; but how does one measure this element of success?

Probably, the best way to measure the success of this project would be to ask the Technology Education teachers if their programs have benefited by the new equipment. As one of those teachers I can assure you that mine certainly have. I know I can speak for every technology education teacher in our district when I say at least the reliability of the equipment is no longer something we worry about. I actually sleep better at night knowing a student can't cut his or her finger off on our new table saws.

**8 Lifecycle Analysis:**

This proposal is the sixth phase of a six year equipment replacement program. As such, if this request is successful, pretty much everything that needed replacement six years ago will have been replaced. Except for installation costs of the new pieces of equipment, maintenance costs have been extremely minimal, and should continue to be so for the foreseeable future. This program has been a great asset to Technology Education courses across the district. It should be recognized, however, that even new equipment will wear, and some equipment that was not a priority to replace six years ago, has, or may soon become a concern, and therefore, we thank you in advance for your consideration with any future request we may have.

**9 Budget:**

For each of the past five years the budget for this equipment replacement program has been in the neighbourhood of \$80,000. The request for this budget is \$84,645.00 An itemized list of the equipment to be purchased with this year's allocation is attached.

**10 Alignment with Local Education Trends:**

Below, in italics, are educational goals identified by the District, and, following them in plain text, comments as to how this budget request addresses each particular goal.

*Maintain student learning at the forefront or resource allocation.* As observed in item #6, students can't learn practical skills without equipment to train on. Therefore, the provision of such resources is clearly and directly applicable to providing learning opportunities for students.

*To ensure students are active leaders of their own learning.* In Technology Education courses projects are the vehicle by which skills are learned and students frequently have a lot of freedom and input into the selection and design of their projects. Hereby they become active leaders in their own learning.

*Development of skills and competencies as curriculum.* The development of skills and competencies is the raison d'être of Technology Education classes. They unequivocally address this District goal.

*Solve complex world issues and challenges.* Technology students are constantly solving challenges and in some shop courses, notably design and technology type programs, the focus is on realizing and addressing social and global issues through "Technology Learning Activities". Examples would be designing and building solar vehicles or identifying problems faced by handicapped people and seeking to design a solution to that problem.

**11 One Time Savings versus Annual On-Going Savings:**

It is hoped that this equipment replacement program will provide the District with both one time savings – to be realized through reduced pricing due to bulk purchasing – and annual ongoing savings – to be realized lower maintenance costs on the new equipment and standardization of maintenance needs by virtue of having the same equipment in schools across the District.

**12 Student Support:**

This application is not accompanied by any formal record of student support. However, it is noted that it would be hard to imagine any student taking classes in the workshops across our district, and many more besides, who wouldn't support the application.

**13 Alignment with Provincial Curriculum:**

The equipment to be purchased under this program goes into facilities that are teaching Provincially prescribed curriculum including courses in Automotive, Woods, Metals, Design, and Construction. It also supports ACE IT programs in Welding, Millwright, Machinist, Automotive Service Technician, Carpenter, Heavy Duty mechanic, Steam Fitter/Pipe Fitter, Metal Fabrication, and Electrician.

**School District #8 Kootenay Lake  
Construction Foundation of BC Grant Application 2014**

<b>Shop</b>	<b>Item</b>	<b>Make &amp; Model</b>	<b>Schools</b>	<b>No.</b>	<b>Item Cost</b>	<b>Total Cost</b> (inc. taxes & shipping)
<b>Auto</b>	Parts Washer	BIOMATIC 436R-A	PCSS, LVR, MTSS, JVH	4	\$ 3,000.00	\$ 12,000.00
	6 Hp motors Briggs & Stratton	Horizontal cranks	PCSS(5),LVR(5),MTSS(7)	17	\$ 325.00	\$ 5,525.00
						\$ -
					<b>TOTAL</b>	<b>\$ 17,525.00</b>
<b>Metal</b>	Cutting Torch assem.	Miller SC229/SC179	PCSS(2),LVR(2),MTSS(1), JVH(2)	7	\$ 400.00	\$ 2,800.00
	Milling machine	857II	PCSS	1	\$ 18,500.00	\$ 18,500.00
	Slip Roll Former	Modern 36"x22 gaug	JVH,LVR,MTSS	3	\$ 1,400.00	\$ 4,200.00
	CNC Plasma cutter		MTSS	1	\$ 29,200.00	\$ 29,200.00
	Bench grinder	Gen - 8" - 15-825 M1	Crawford Bay	1	\$ 200.00	\$ 200.00
					<b>TOTAL</b>	<b>\$ 54,900.00</b>
<b>Wood</b>	Jointer	PJ - 882HH	Salmo	1	\$ 3,000.00	\$ 3,000.00
	Lathes	16"x42" Gen - 25-650	JVH(2), Trafalgar(2),	4	\$ 1,500.00	\$ 6,000.00
	Drill Press	22" Gen - 75-500 M1	Trafalgar/WEG	2	\$ 1,000.00	\$ 2,000.00
	Scroll saw	Dewalt DW788	Crawford Bay/WEG	2	\$ 500.00	\$ 1,000.00
	Spindle Sander	King KC700C	WEG	1	\$ 220.00	\$ 220.00
					<b>TOTAL</b>	<b>\$ 12,220.00</b>
				<b>TOTAL GRANT REQUEST</b>	<b>\$ 84,645.00</b>	