



# EDI Community Summary

MAPPING EARLY CHILD DEVELOPMENT:

Kootenay-Columbia  
(SCHOOL DISTRICT #20)

COMMUNITY SUMMARY – Fall 2009

## Introduction

The Human Early Learning Partnership (HELP) brings together academic, government, school, and community partners to help us understand early child development across British Columbia. Beginning in 1999, HELP has collected and mapped population level child development data province wide. This data has been combined with socio-economic and community asset information to enhance the understanding of factors that influence children's development. An important goal of the project is to assist communities in using maps to monitor early child development, and in developing effective local responses that support the needs of children and families. The project is administered by HELP, in partnership with community networks and school districts of British Columbia. The project is funded by the Province of British Columbia through the Ministries of Children & Family Development, Education and Healthy Living and Sport.

This report provides a summary and analysis of data collected in Kootenay-Columbia, (School District #20).

## Assessing Children's Development

### The Early Development Instrument

A key component of the project is the Early Development Instrument (EDI), a research tool that assesses the state of children's development in kindergarten. Measuring children's development at school entry is important because it reflects the quality of children's early experiences. We now understand how early experiences set trajectories for lifelong health, learning and behaviour.<sup>1</sup>

The EDI is a checklist that kindergarten teachers complete for each child in their class after they have known their students for several months. All teachers undergo a standardized training in the administration of the instrument.

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<sup>1</sup> Hon. Margaret Norrie McCain, J. Fraser Mustard and Dr. Stuart Shanker (2007), *Early Years Study 2: Putting Science into Action*, Council for Early Child Development



The EDI is a holistic measure of children's development, providing measurement on these five distinct scales:

- 1) **Physical health and well-being**
- 2) **Social competence**
- 3) **Emotional maturity**
- 4) **Language and cognitive development**
- 5) **Communication skills and general knowledge**

In its development, the EDI has undergone psychometric testing across Canada to ensure its validity and reliability.<sup>2</sup> Ongoing testing is carried out both in Canada and other countries that are using the EDI.

## **Vulnerability**

The EDI is most commonly used in B.C. to understand the vulnerability of the population of children. The determination of vulnerability is based on the distribution of scores from the first complete round of data collection in the province. The vulnerability threshold or cut-off is the EDI score that delineates the children who scored in the bottom of the distribution. Children who fall below the cut-off are said to be vulnerable on that scale of development. The appropriate interpretation of vulnerability is that the child is, on average, more likely to be limited in his or her development than a child who scores above the cut-off. Vulnerabilities are determined on each scale, and on one or more, scales.

After the first provincial data collection, the vulnerability cut-offs were converted into *fixed scores* for each scale of children's development. These scores serve as a "baseline" of the state of early child development in kindergarten, and create a stable unit of comparison to show how vulnerabilities may change over time.

## **Interpretation**

Results from the EDI are interpreted only at the level of the group (school, neighbourhood, region, or school district). Results are never interpreted at the individual level. Communities benefit from this research in a number of ways. The research helps show where there are large differences in children's development; where groups of children are more or less developmentally ready for school across communities, regions, and the province; and how broad socio-economic factors may influence children's early development. This information can help community members become more aware of ways to create environments to help children thrive.

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<sup>2</sup> Magdalena Janus, et al (2007), *The Early Development Instrument: A Population-based Measure for Communities*, Offord Centre for Child Studies

## Understanding Change

Children's development is influenced by a variety of factors, among them: genetics, family environment, socio-economic conditions, neighbourhood influences, availability of early child development services and policy directions. Changes in the state of children's development at the level of the population will be as a result of the interplay of these factors in a community. EDI results can be used to guide community planners and policy makers in making decisions about priorities for early child development supports and services, but they cannot be accurately used to evaluate one aspect of the environment, or one specific program, in isolation from the others.

Now that we have at least three data collection points, trends in children's development over the entire period of time can be considered. Many areas show a consistent increase or decrease in vulnerability, while others have had a similar proportion of vulnerability each time. These, now at least seven year trends, provide a solid understanding of children's development for those areas. Less clear are the areas where the results have not followed a consistent pattern, but have fluctuated from one time to the next. In these areas, analysis of change results must include a finer understanding of each of the cohorts and of the parallel growth or change in the community. Is the size of the population similar from one time to the next? With smaller cohorts, fewer children will influence a larger change in the proportion vulnerable. Did the same schools and communities participate in each data collection? In which years were the data collected and have there been notable changes in the community in that time?

Large fluctuations in vulnerability from one data collection year to the next are also important to note. Changes in vulnerability are worth noting if they are larger than 5% or if they represent a quintile (or colour) change in the area.

## The Community

For the purposes of this project, the Kootenay-Columbia district has been divided into five neighbourhoods or areas. For comparative purposes, two neighbouring school districts, Kootenay Lake (SD#8) and Arrow Lakes (SD#10) are included on this map. Children's scores are mapped in their neighbourhood of residence, not where they go to school. Neighbourhood boundaries were originally established through the consensus of local ECD intersectoral coalitions in most communities in the province. HELP was instrumental in coordinating this boundary definition process.

The table below shows the number of children in each neighbourhood in each round of data collection. There were a total of 288 children in Wave 1 (2000-2004), 267 children in Wave 2 (2005 – 2007) and 263 in 08/09\*.

<i>Neighbourhood</i>	<i>Wave1</i>	<i>Wave2</i>	<i>08/09</i>
Rosland/Warfield	51	44	45
Beaver Valley	49	50	43
Trail	46	40	42
Robson/Thrums	55	56	46
Castlegar	87	77	87

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## EDI Results

### Vulnerable on at Least one Scale of Development

See Appendix 1 for the neighbourhood distribution of percent vulnerable on each EDI scale and Appendix 2 for a summary of the data.

- **District wide**, 16.3% of children were vulnerable on at least one scale of development in 08/09. This is similar to the vulnerability rate in Wave 1, a decrease from Wave 2 when vulnerability was over 20%.
- Kootenay-Columbia was the third least vulnerable district in 08/09.
- Rosland/Warfield had the lowest level of vulnerability of all of the neighbourhoods (8.9%). This is a large decrease from both Wave 1 and Wave 2.
- Castlegar and Beaver Valley also had decreases of greater than 5% or representing a shift in quintile colour between Wave 2 and 08/09.
- The neighbourhood with the highest proportion of children vulnerable was Trail (26.2%). This level of vulnerability has been consistent across all three data collections.
- There were no neighbourhoods that had increases of greater than 5% or representing a shift in quintile colour.

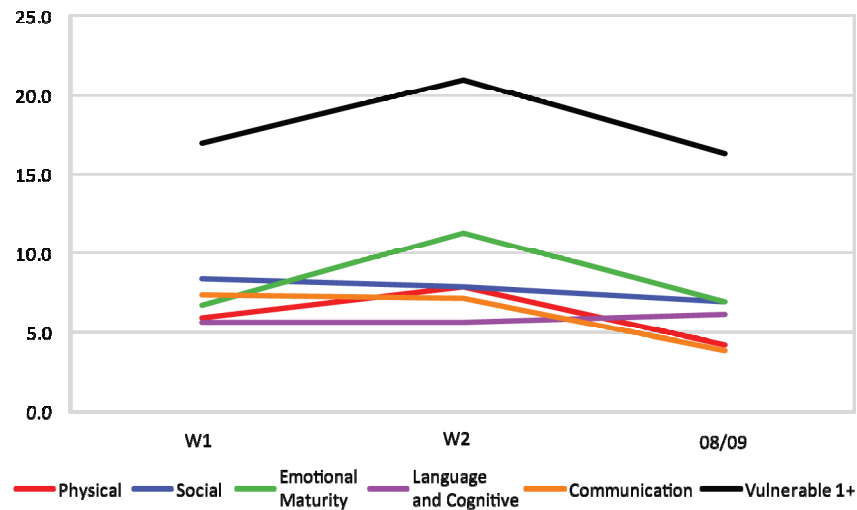
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\* Beginning in 2008, EDI is now collected on an annual basis. Reporting will be done annually, rather than on a three year "Wave" cycle.

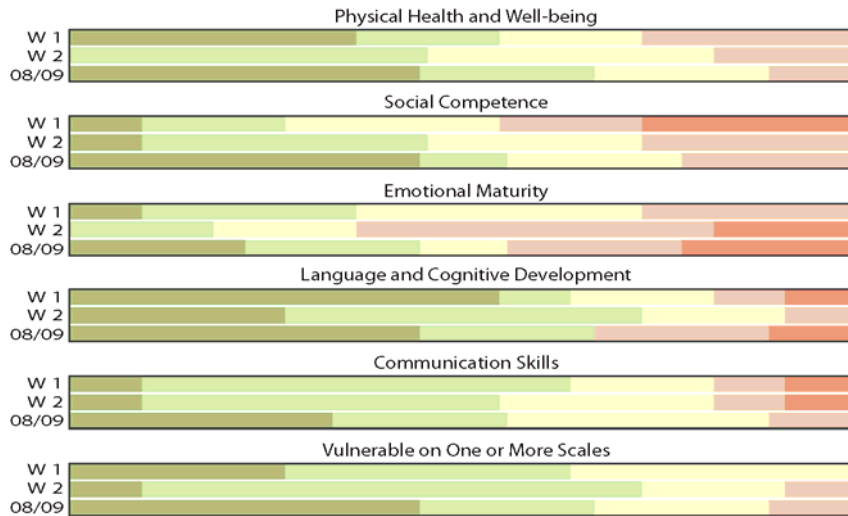
## Vulnerability across the Scales

- **District wide**, the largest proportion of children vulnerable was on both the Social Competence and Emotional Maturity scales (6.9%).
- The smallest proportion of children vulnerable was on the Communication Skills and General Knowledge scale (3.8%).
- There were decreases in vulnerability on all of the scales with the exception of Language and Cognitive Development where there was basically no change.

## District Trends



## Neighbourhood Trends



The graph above shows the distribution of neighbourhood vulnerability in each round of data collection and on each scale. HELP classifies EDI results into five colours based on the proportion of children vulnerable. These numerical classifications, or quintiles, were established based on the distribution of vulnerability in the first complete round of provincial data collection (Wave 1, 2000-2004). The lowest vulnerability areas are dark-green, with increasing vulnerability represented by light green, yellow, light red and finally, dark reddish brown for the highest vulnerability areas. This graph shows the distribution of neighbourhoods in the Kootenay-Columbia, Arrow Lakes and Kootenay Lake School Districts.

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## What Next? - Taking Action for Change

The EDI provides population-based data about early child development to communities and governments so that it can be used, in combination with local knowledge and additional data (e.g. socioeconomic) to put into place programs and policies to support children's healthy development within the context of their families. Illustrating with data the disparities in children's development inspires action to redress these inequities. Given what we know about the importance of early child development to lifelong learning, health and behaviour, we must take action to reduce vulnerability levels for today's children and for the future of our province.

The 08/09 EDI data shows that province-wide 28.6% of children in kindergarten were vulnerable. Between 2001 and 2004 the proportion of all BC children vulnerable was 26%. Between 2004 and 2007, the proportion was over 29%. Consistently, then, over the last 8 years more than a quarter of BC's children have been developmentally behind in kindergarten. In the Kootenay-Columbia district, the vulnerability has consistently been lower than the provincial rate.

The vulnerable children in BC are not spread evenly throughout the province. Rather, EDI research reveals a large “geography of opportunity,” one that is much like our topography: some children face steep difficulties, while others do not. The disparity is significant: on the low end, some neighbourhoods report rates of vulnerability that are below 3% of children, others report vulnerability rates of over 60%. In the Kootenay-Columbia district, the range is from 8.9% to 26.2%.

The BC government, as part of their overall strategic plan, has articulated a goal of reducing EDI vulnerability to 15% by the year 2015. In the 08/09 data collection, only 46, or less than 10% of all neighbourhoods in B.C. had vulnerability rates below 15%. In the Kootenay-Columbia district, there were three neighbourhoods below the 15% threshold.

Action for change must be a partnership between communities and government and must occur at all levels of the system. HELP has articulated a comprehensive “15 by 15” policy framework designed to reduce child vulnerability to the levels targeted by government.<sup>3</sup> Central to this framework is the concept that “children thrive, when families thrive” and that supporting children’s development requires policy to address families’ needs for time, resources and community supports in caring for their children.

The five “15 by 15” recommendations for government require action to be taken provincially and federally, but they can also be considered within each local context. Talk to your local MLA or MP to discuss what can be done. Understanding your population, along with the community specific strengths and limitations of existing early child development services and supports, can allow you to maximize what does exist for children and families and inform you to take action for broader systemic change.

### The Recommendations Are:

- **Enhance Community Supports**
  - **Strengthen ECD intersectoral coalitions and local planning functions.** *Are you connected to your local coalition? Can the coalition be strengthened through a renewed commitment to local control and collaboration between agencies?*
  - **Build on ECD programs and services - pregnancy, parenting and early learning resources, screening and intervention.** *What services exist in your community? What are the gaps? How can they be more closely integrated with each other and more accessible to families? Are the services matched with the socio-economic character of the local child and family population?*
  - **Build on early childhood education and care to provide universal access to quality ECEC, with inclusion, and seamless transitions to elementary school.**

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<sup>3</sup> Kershaw, P., Anderson, L., Warburton, B., and C. Hertzman. (2009) *15 X 15: A comprehensive policy framework for early human capital investment in BC*. Human Early Learning Partnership, University of British Columbia: Prepared for the Business Council of BC Opportunity 2020 Project.

Lack of access to quality child care is an acute crisis for families in B.C. Substantively responding to this crisis requires public commitment to public funding of the system. There are though some local activities that can be undertaken to better support families and raise awareness. *How are ECEC services and professionals integrated with the local ECD planning and delivery system? What links exist to the K to 12 education system? What type of child care is most needed in your community? How do parents access information about what is available?*

- **Enhance Family Time and Resources.** These recommendations require broad policy change and public investment. Communities can take action by raising the awareness of the issues and understanding the impact on children and families in your area.
  - **Build on parental leave**, by working with the federal government to increase duration to 18 months, improve coverage and benefit levels and reserve time for fathers.
  - **Build on income support policies** to reduce child and family poverty and to enhance work/family life balance.

EDI results can be used as one tool to guide planning for young children and families in the community. The results must be considered within the context of the variety of factors that influence early child development: family environment, socio-economic conditions, neighbourhood influences, availability of early child development services and policy directions. The first step in understanding results is to take time to reflect, as individuals and community members, as to the environmental trends that may be impacting children's development in your area. The EDI results will provide a catalyst for both community conversation, and action.

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This research was conducted by the Human Early Learning Partnership. Community maps created for this project are available on the HELP website: [www.earlylearning.ubc.ca](http://www.earlylearning.ubc.ca).

All materials from the project are available to be used liberally in support of activities that assist in early child development.

*For further information, contact:*

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Human Early Learning Partnership [joanne.schroeder@ubc.ca](mailto:joanne.schroeder@ubc.ca)**

*Or for information on local ECD planning and services, contact:*

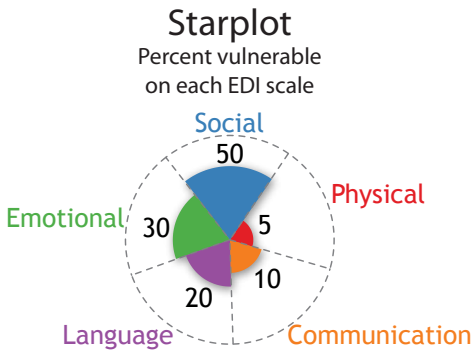
**Val Mayes, HELP Community Trainer, [valmayes@telusplanet.net](mailto:valmayes@telusplanet.net)**

# West Kootenay

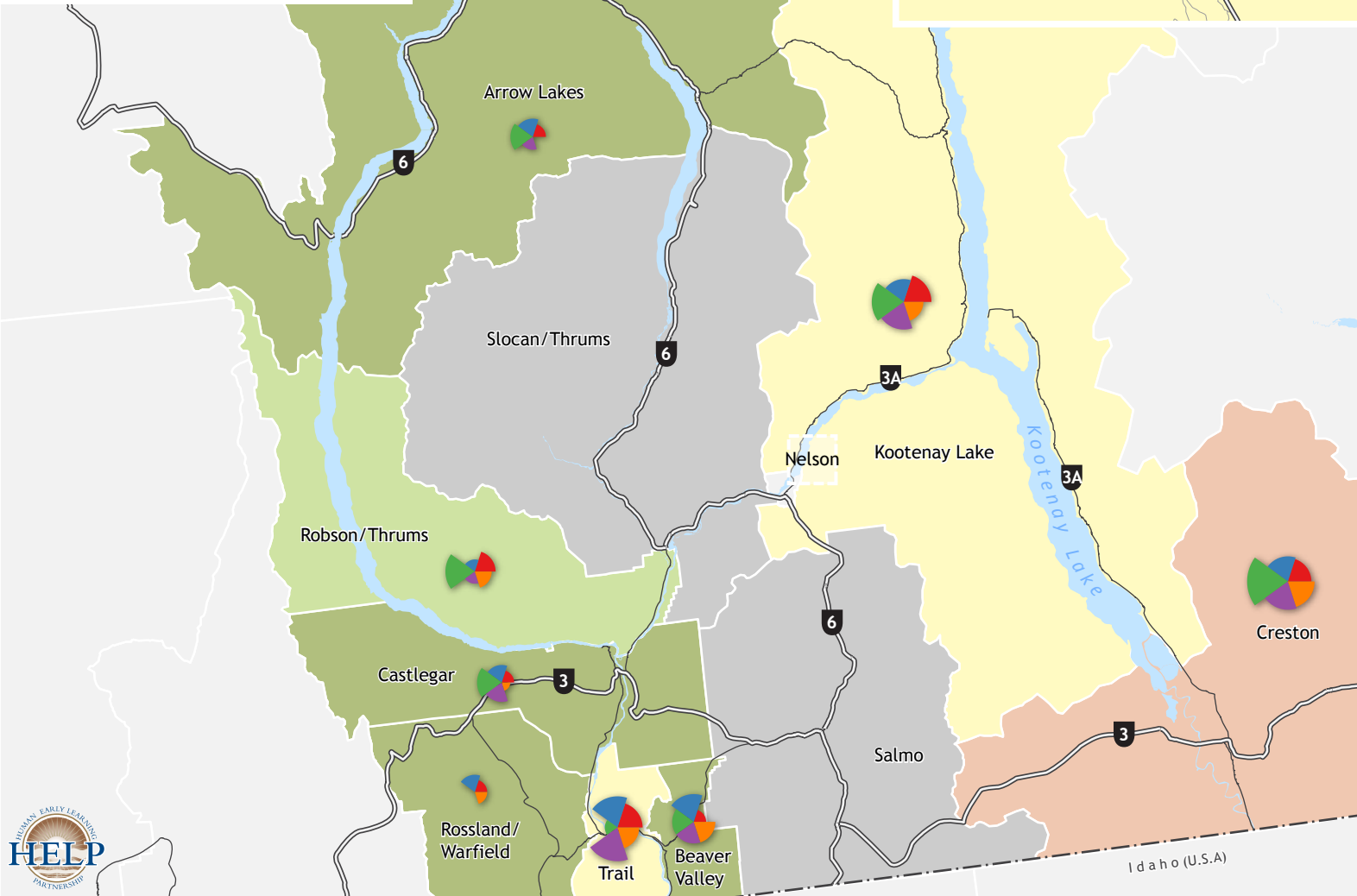
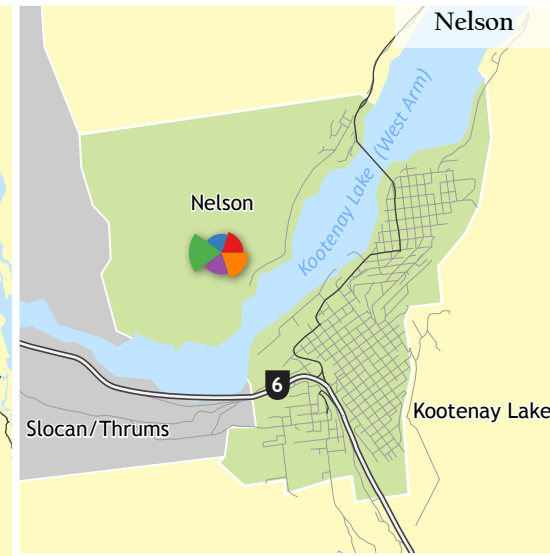
## School District 8, 10 and 20

2008 - 2009  
EDI

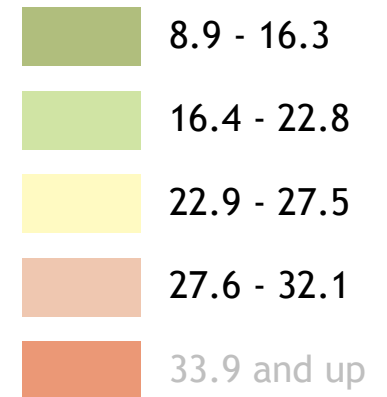
### Starplot Map



**How to Read the Starplot:**  
Each scale of the EDI is represented by a triangle. Larger triangles represent higher vulnerability & smaller triangles represent lower vulnerability for each scale of the EDI.



#### Percent Vulnerable on One or More Scales of the EDI

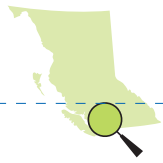


#### School District Starplots



Notes: The total EDI population for School Districts 8, 10 and 20 is 567. 2 neighbourhoods are suppressed as there are fewer than 35 children.

Source: EDI 2008-2009 (includes 2007-2008 EDI Results for SD20), Human Early Learning Partnership.



# EDI Data Table

## SD 8, 10 & 20 West Kootenays



	EDI Count			Physical Health & Well-being			Social Competence			Emotional Maturity			Language & Cognitive Dvlpt.			Communication Skills			Vulnerable 1+			
	W1	W2	08-09	W1	W2	08-09	W1	W2	08-09	W1	W2	08-09	W1	W2	08-09	W1	W2	08-09	W1	W2	08-09	
<b>SD 8</b>																						
Nelson	171	225	75	12.3	10.7	5.3	10.5	7.1	4.0	10.7	11.7	12.0	3.5	6.2	5.3	6.4	5.8	8.0	22.2	20.0	20.0	
Kootenay Lake	120	184	52	4.2	8.2	11.5	8.3	7.1	7.8	5.3	8.8	15.4	3.3	5.4	11.5	2.5	4.4	5.8	13.3	19.6	26.9	
Creston	294	248	84	7.5	11.3	8.3	5.4	11.3	9.5	10.0	18.1	25.0	7.8	10.6	12.0	5.8	9.3	10.7	19.7	33.1	32.1	
Slocan - Thrums	130	166	23	6.2	6.0		10.0	6.0		7.8	6.1		3.8	7.3		6.2	4.8		20.8	16.3		
Salmo	44	76	30	11.4	11.8		15.9	6.6		9.1	14.5		9.1	5.3		4.5	6.6		27.3	21.1		
<b>SD 10</b>																						
Arrow Lakes	39	79	40	10.3	6.3	2.6	17.9	12.7	5.0	10.3	12.7	7.5	15.4	11.4	2.5	17.9	15.2	0.0	25.6	19.0	10.0	
<b>SD 20*</b>																						
Rossland/Warfield	51	44	45	3.9	6.8	2.3	7.8	9.1	4.5	10.4	20.5	0.0	9.8	6.8	0.0	7.8	9.1	2.3	23.5	27.3	8.9	
Beaver Valley	49	50	43	8.2	8.0	2.3	14.3	8.0	11.6	8.2	6.1	7.0	0.0	4.0	7.0	8.2	6.0	7.0	20.4	18.0	14.0	
Castlegar	87	77	87	3.4	6.5	2.3	5.7	7.8	4.6	3.4	10.4	9.2	4.7	6.5	5.7	5.8	3.9	1.1	8.0	19.5	14.9	
Robson/Thrums	55	56	46	3.6	8.9	6.5	1.8	3.6	2.2	7.3	8.9	13.0	1.8	1.8	2.2	5.6	7.1	4.3	14.5	17.9	19.6	
Trail	46	40	42	13.0	10.0	9.5	15.2	12.5	14.6	6.8	12.5	2.4	13.3	10.3	17.1	10.9	12.5	7.1	26.1	25.0	26.2	

**Notes:**

\*08-09+ for SD 20 includes results from 07-08. Grey cells indicate suppressed data values (EDI Count <35).

**Source:**

2008-2009 EDI (HELP - Human Early Learning Partnership)