



K-12 Science Curriculum

Inquiry in School Science

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When you inspire students to imagine beyond their expectations, to seek more questions than they will ever answer, and to persist when others concede, you are becoming an inquiry-based teacher.

-Douglas Llewellyn

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GREAT FALLS PUBLIC SCHOOLS

VISION:

All kids are engaged in learning today ... for life tomorrow.

MISSION:

We successfully educate students to navigate the future.

WE BELIEVE:

- All students deserve teachers and staff who thrive on student success.
- Each student will have fair and equitable opportunity for quality instruction and academic success.
- All students learn when their individual needs are met.
- All students and staff learn and work best in a safe, secure, and nurturing environment.
- Highly skilled and committed personnel are our greatest asset.
- Quality education is a partnership of student, staff, family, and community engagement.
- Dedication to acknowledging, affirming, and including diversity enriches the educational experience for all.
- District resources, programs and staff are flexible and adaptable to meet the changing needs of all students.
- A well-educated community is the foundation of our democracy.

GREAT FALLS - GREAT SCHOOLS - GREATER TOMORROWS

Introduction

Great Falls Public Schools presents the 2008 K-12 science curriculum which is designed to be implemented using the essential features of classroom inquiry. Scientific classrooms in Great Falls Public Schools strive to engage learners in scientifically oriented questions which require investigation, gathering of data and development of explanations for scientific phenomena.

As endorsed by the National Academy of Sciences, the National Academy of Engineering, the Institute of Medicine, and the National Research Council, the Essential Features of Classroom Inquiry include the following:

- Learners are engaged by scientifically oriented questions.
- Learners give priority to evidence which address those questions.
- Learners formulate explanations from evidence.
- Learners evaluate their explanations in light of alternative explanations.
- Learners communicate and justify their proposed explanations.

The K-12 science instruction program is framed around three enduring understandings which align to state and national standards:

- **Scientific inquiry affords all learners opportunities to make observations, pose questions, develop hypotheses, design and conduct investigations, and analyze data to draw conclusions.**
- **Exploring systems, order, and organizations in our natural and designed world are integral to understanding the scientific disciplines and their interdependence.**
- **Both contemporary and historical scientific understandings inform technological, ethical, cultural and life decisions.**

As students develop their abilities and understanding of scientific concepts and procedures, they become more adept at designing and conducting scientific investigations for the purpose of understanding their world in a scientifically literate way.

Essential Features of Classroom Inquiry

Committee Membership-elementary

Verna Copeland	Longfellow	Kindergarten
Judy Shattuck	Sac	Kindergarten/1st
Pat Stratton	Sunnyside	Third Grade
Kirsten Dige	Lincoln	Fourth Grade
Lori Vinson	Valley View	Third Grade
Heather Beck	Loy	Fifth Grade
Tara Rosipal	Sac/North	6, 7, 8 Grade
Megan May	Roosevelt	Sixth Grade
Beth Thomas	District	Environmental
Kathy McLean	Sunnyside	Principal
Kim Kellogg	District	TSA
Luke Diekhans	District	Environmental
Jean Jones	East MS	7/8 Grades
Cynthia Jacobsen	East MS	7/8 Grades
Sharon Fox	North MS	7/8 Grades
Mary Somerfeld	North MS	7/8 Grades
Mary Rearden	District	Extended Services
Debby Kelly	WH	1 st Grade
Diane Seder	L&C	1 st Grade

Additional Writing Participants-elementary

Lynn Ryerson	SS	Kindergarten
Jolene DeRosa	Loy	1 st Grade
Teresa Sprague	SC	2 nd Grade
Jean Smith	ML	2 nd Grade
Everett Hall	SC	3 rd Grade
Laurie Matteson	LN	3 rd Grade
Noelle Johnson	CJ	3 rd Grade
Ryan Edwards	SS	4 th Grade
Jon Konen	MS	5 th Grade
Char Bunker	WT	6 th Grade
Todd Ondick	MS	6 th Grade

Committee Membership-secondary

Nathan Gregier	Charles M. Russell	Grade 9/10
Tom Cabbage	Charles M. Russell	Grade 10/11
Mike Lathrop	Charles M. Russell	Grade 9/11/11/12
Shelli Lavinder	Charles M. Russell	Grade 9/10/11/12
Karen Spencer	Charles M. Russell	Department Leader
Gary Copeland	Great Falls High	Department Leader
Jan Mader	Great Falls High	Grade 9/10/11
Mike Hodges	Great Falls High	Grade 9/10
Joe Barlow	Great Falls High	Grade 11/12
Chris Crocker	Great Falls High	Grade 9/Higher Ed.
Elaine Blythe	Paris Gibson Education Center	All
Kerry Parsons	Charles M. Russell	Assistant Principal
Christine Lencioni	District	Reading Coach
Kathy Wanner	Great Falls High	Special Education
Dulce Whitford	District	IEFA Coach
Christopher Lohse	State & National Relations	Specialist
Heather Hoyer	East/GFHS	7-12

Additional Writing Participants-secondary

Josy McLean	Charles M. Russell	Foundations
Matthew Krahe	Great Falls High	Geology
Christine Sundly	Charles M. Russell	Biology
Christopher Hibbert	Charles M. Russell	Geology

Advisory Team

Diana Leonard	Parent	Alli Stacy	Student	CMR
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Marni Napierala	Parent	Kevin Kundis	Student	CMR
Martha Judice	Parent	Kyle Wanner	Student	Sunnyside
Karen Ryan	Parent	Levi Mael	Student	Sunnyside
Dr. Cherie McKeever	Parent	Zachary Lavinder	Student	NMS