

Agenda for **INSTRUCTIONAL IMPROVEMENT COUNCIL** Meeting
3:45 – 5:15 p.m. Wednesday, November 10, 2010
Germantown School District – Board Room

"REACHING FOR EXCELLENCE TOGETHER"

Connecting

- ❖ Welcome
- ❖ Team Norms Review
- ❖ Good Things Share Out

*Confusion
about Intervention
& who delivers them*

Learning

- ❖ Response to Intervention Overview
 - Principals share out accomplishments in RTI process at your buildings
- ❖ Elementary School Improvement Plans (Instructional Improvement Council Responsibilities D, IICR – D)
- ❖ Kennedy Middle School – Gateways (PLTW) Course Additions (IICR – A, B)

Managing

- ❖ Meeting Dates and Times (See attachment: Time Table/Topics)
- ❖ Updates on upcoming events through January
 - Wisconsin Graduation Summit – December, March
 - District In-service/Work Day – November 29, January 21, March 11, June 10
 - Response To Intervention Steering Committee Dates Note Date Change in January
 - December 14, 2010 – Development of critical learning targets, differentiation versus intervention, Common Core Standards
 - January 24, 2011 – Consensus on Team meeting log, Consensus on Student Concerns Meeting Log, Training on creating and analyzing data walls
 - March 3, 2011 – Develop vision of how SIMS and/or Skyward RTI Module, collaboration, learning targets, differentiation, data walls, and interventions fit together.

Closing

- ❖ Next meeting date/time: December 15, 2010 3:45-5 pm in the District Office Board Room
 - Agenda item Suggestions:

ELEMENTARY SCHOOL IMPROVEMENT PLANS 2010-11

Goal #1: To improve students' abilities to read and write, and to interpret, analyze, and respond to a variety of texts.

Sources: The following sources of data were utilized in the development of this goal:

- D** Achievement Data:
- WKCE – CRT Wisconsin Knowledge and Concept Examination
 - Proficiency Level Summaries
 - Scale Score Summary
 - Standards Performance Summary
 - Item Analysis Summary (selected response and Constructed Response)
- T** • District Criterion Assessments
- A** Demographic Data:
- WKCE – CRT
 - Economically Disadvantaged
 - Students with Disabilities
 - Ethnicity
 - Individual Student Records

Findings:

In the area of reading, District Reading Results indicated the following:

WKCE-CRT: 3rd Grade READING Proficiency Summary

% Advanced and Proficient	District	Amy Belle	County Line	MacArthur	Rockfield
2005-06	97%	98%	99%	93%	97%
2006-07	99%	100%	98%	98%	100%
2007-08	98%	100%	100%	93%	100%
2008-09	96%	99%	97%	95%	95%
2009-10	97%	98%	98%	97%	95%

WKCE-CRT: 4th Grade READING Proficiency Summary

% Advanced and Proficient	District	Amy Belle	County Line	MacArthur	Rockfield
2005-06	96%	94%	96%	94%	100%
2006-07	97%	95%	100%	93%	97%
2007-08	99%	97%	99%	99%	100%
2008-09	98%	98%	99%	95%	100%
2009-10	96%	99%	96%	92%	98%

WKCE-CRT: 5th Grade READING Proficiency Summary

% Advanced and Proficient	District	Amy Belle	County Line	MacArthur	Rockfield
2005-06	99%	99%	100%	97%	100%
2006-07	98%	98%	99%	96%	100%
2007-08	99%	97%	100%	100%	97%
2008-09	96%	94%	100%	91%	96%
2009-10	96%	95%	96%	95%	96%

WKCE-CRT: 4th Grade LANGUAGE ARTS Proficiency Summary

% Advanced and Proficient	District	Amy Belle	County Line	MacArthur	Rockfield
2005-06	97%	94%	97%	99%	100%
2006-07	95%	98%	98%	87%	94%
2007-08	96%	95%	98%	96%	95%
2008-09	95%	97%	97%	92%	96%
2009-10	96%	97%	95%	93%	98%

Sources: The following sources of data were utilized in the development of this goal:

- Program Data:**
- Gates MacGinitie Assessment Data
 - Kindergarten Assessments
 - Harcourt Brace Assessments
 - Running Records
 - Lexile Scores
- Perception Data:**
- Informal Teacher Observations
 - Schools Climate Data
 - BLT Analysis/Observations
 - Reading Specialist Analysis

**Standards Performance Summary
Projected Number of Questions Correct/100**

Third Grade

Standards Performance Summary: Reading (State/Local/Difference)

Projected # Questions Correct/100	Determines Meaning		Understands Text		Analyzes Text		Evaluates/Extends Text					
	Diff. State Ave.	State Ave.	Diff. State Ave.	State Ave.	Diff. State Ave.	State Ave.	Diff. State Ave.	State Ave.				
2005-06*	64.0	77.2	13.2	70.4	83.9	13.5	63.5	76.5	13.0	54.8	66.6	11.8
2006-07	63.4	75.0	11.6	75.8	88.2	12.4	67.9	80.5	12.6	61.7	72.2	10.5
2007-08	65.4	78.0	12.6	74.2	86.5	12.3	65.5	77.9	12.4	48.5	59.1	10.6
2008-09	69.7	81.7	12.0	70.7	82.9	12.2	62.6	74.8	12.2	52.7	63.2	10.5
2009-10	69.6	80.7	11.1	74.5	86.4	11.9	66.5	78.7	12.2	46.1	55.6	9.5

Fourth Grade

Standards Performance Summary: Reading (State/Local/Difference)

Projected # Questions Correct/100	Determines Meaning		Understands Text		Analyzes Text		Evaluates/Extends Text					
	Diff. State Ave.	State Ave.	Diff. State Ave.	State Ave.	Diff. State Ave.	State Ave.	Diff. State Ave.	State Ave.				
2005-06*	67.3	78.2	10.9	65.0	77.1	12.1	58.2	69.1	10.9	52.9	62.6	9.7
2006-07	73.5	84.8	11.3	71.7	82.9	11.2	59.0	70.8	11.8	49.5	60.3	10.8
2007-08	71.7	83.4	11.7	69.3	80.3	11.0	62.6	73.6	11.0	56.5	65.9	9.4
2008-09	68.2	80.3	12.1	69.4	80.7	11.3	61.1	73.0	11.9	58.2	68.9	10.7
2009-10	66.0	75.8	9.8	68.3	78.2	9.9	61.7	72.0	10.3	58.8	68.8	10.0

Standards Performance Summary: Language (State/Local/Difference)

Projected # Questions Correct/100	Writing		Language		Research and Inquiry				
	Diff. State Ave.	State Ave.	Diff. State Ave.	State Ave.	Diff. State Ave.	State Ave.			
2005-06*	71.7	83.1	11.4	70.8	80.8	10.0	56.4	70.7	14.3
2006-07	70.8	82.1	11.3	67.5	76.6	9.1	57.4	70.3	12.9
2007-08	72.4	83.6	11.2	54.8	64.4	9.6	53.4	62.2	8.8
2008-09	63.4	74.7	11.3	65.8	76.4	10.6	59.9	73.0	13.1
2009-10	65.7	75.3	9.6	59.3	68.0	8.7	56.7	69.0	12.3

Fifth Grade

Standards Performance Summary: Reading (State/Local/Difference)

Projected # Questions Correct/100	Determines Meaning		Understands Text		Analyzes Text		Evaluates/Extends Text		Diff. State Ave.	Diff. State Ave.
	Diff. State Ave.	Text	Diff. State Ave.	Text	Diff. State Ave.	Text	Diff. State Ave.	Text		
2005-06*	70.9	83.0	12.1	76.8	88.6	11.8	56.3	68.9	12.6	78.9
2006-07	67.9	79.8	11.9	76.3	88.1	11.8	58.6	70.3	11.7	72.8
2007-08	68.3	81.4	13.1	77.8	88.2	10.4	61.0	71.3	10.3	68.1
2008-09	73.4	84.3	10.9	70.6	81.4	10.8	62.6	73.8	11.2	69.9
2009-10	73.6	84.8	11.2	70.4	81.5	11.1	61.0	71.9	10.9	73.4

Sixth Grade

Standards Performance Summary: Reading (State/Local/Difference)

Projected # Questions Correct/100	Determines Meaning		Understands Text		Analyzes Text		Evaluates/Extends Text		Diff. State Ave.	Diff. State Ave.
	Diff. State Ave.	Text	Diff. State Ave.	Text	Diff. State Ave.	Text	Diff. State Ave.	Text		
2005-06*	68.5	73.4	4.9	74.2	79.3	5.1	59.7	64.6	4.9	61.7
2006-07	70.4	77.8	7.4	73.7	80.2	6.5	60.9	67.7	6.8	62.0
2007-08	68.3	74.3	6.0	64.0	69.5	5.5	62.1	67.5	5.4	64.7
2008-09	61.6	68.4	6.8	69.0	75.4	6.4	70.0	75.8	5.8	57.7
2009-10	66.7	73.2	6.5	75.5	80.9	5.4	70.1	75.8	5.7	64.8

2009-20 District-Wide Writing Assessment

Grade 3										
	I	O	V	WC	SF	C	Avg.			
Fall	2.34	2.08	2.38	2.29	2.24	2.34	2.28			
Spring	2.86	2.63	2.91	2.82	2.80	2.90	2.82			
Change	0.52	0.56	0.54	0.53	0.56	0.56	0.54			
Grade 4										
	I	O	V	WC	SF	C	Avg.			
Fall	2.38	2.28	2.49	2.41	2.56	2.98	2.52			
Spring	3.17	2.80	3.11	2.97	2.95	2.98	3.00			
Change	0.79	0.52	0.61	0.56	0.39	0.01	0.48			
Grade 5										
	I	O	V	WC	SF	C	Avg.			
Fall	2.72	2.54	2.98	2.72	2.72	3.01	2.78			
Spring	3.17	2.97	3.18	2.98	3.17	3.27	3.12			
Change	0.44	0.42	0.21	0.25	0.45	0.26	0.34			

Goal #1: To improve students' abilities to read and write, and to interpret, analyze, and respond to a variety of texts.		EVALUATION STRATEGIES AND MEASURES																												
SMART OBJECTIVES (Strategic, Measurable, Attainable, Results-Oriented, Time-Bound)	SPECIFIC STRATEGIES WITH TIMELINES	RESOURCES AND PERSONS RESPONSIBLE	RESOURCES AND MEASURES																											
A	<p>1.) All students will progress the equivalent of one year reading level as determined by the GATES, running records and Universal Screener.</p> <p>2.) All students will meet or exceed grade level benchmarks as determined by local criterion assessments.</p>	<ul style="list-style-type: none"> Classroom Teachers Principals Reading Specialists Support Staff Instructional Specialists Building Site Committees <p>Rtl District Committees</p> <p>Benchmark Assessments, Gates MacGinitie Tests, observations and informal reading assessments</p>	<p>Completion of resources made available on district website</p> <p>Universal Screener Gates</p> <p>Local Criterion Assessment Records</p> <p>On The Mark Running Records</p> <table border="1"> <thead> <tr> <th colspan="3">% of Students at Grade Level Reading end of 09-10 year</th> </tr> <tr> <th></th> <th>09-10</th> <th>10-11</th> <th>11-12</th> </tr> </thead> <tbody> <tr> <td>Grade 1</td> <td>92%</td> <td></td> <td></td> </tr> <tr> <td>Grade 2</td> <td>90%</td> <td></td> <td></td> </tr> <tr> <td>Grade 3</td> <td>86%</td> <td></td> <td></td> </tr> <tr> <td>Grade 4</td> <td>84%</td> <td></td> <td></td> </tr> <tr> <td>Grade 5</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Year-End Targeted Guided Reading Levels First Grade = Level J Second Grade = Level M Third Grade = Level P Fourth Grade = Levels Q/R Fifth Grade = Levels S/T</p>	% of Students at Grade Level Reading end of 09-10 year				09-10	10-11	11-12	Grade 1	92%			Grade 2	90%			Grade 3	86%			Grade 4	84%			Grade 5			
% of Students at Grade Level Reading end of 09-10 year																														
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Grade 5																														
C																														
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I																														
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N																														
P	<ul style="list-style-type: none"> Develop a menu of strategies and resources, per grade level, to share that focus upon Author's Purpose/Text Organization (Sept. through January) Investigating and implementing "Best Practice in Reading" Interventions for Tier II Rtl students. Develop a menu of strategies and resource, per grade level to share that focus on Inferential Questioning (January through May) Involve and inform staff of identified students; use diagnostic assessments to design and implement intervention strategies for remediation. Train and use the following assessments to identify and monitor performance of identified students <p>Gates MacGinitie District Criterion Assessments Running Records (Kindergarten, Grade 1, and students in Grade 2 who are below 2.5) Local WKCE 20th percentile and below</p>																													
L																														
A																														
N																														

✦ Incorporate writing strategies and instructional resources that support voice and text organization in writing; applying connections to reading strategies.

District-wide writing assessments; traits of voice and organization (Spring Assessment)

DW WA Voice	2009-10	2010-11	2011-12 Target
1 st grade	NA		
2 nd grade	NA		
3 rd grade	2.91		
4 th grade	3.11		
5 th grade	3.18		
DW WA Organization	2009-10	2010-11	2011-12 Target
1 st grade	NA		
2 nd grade	NA		
3 rd grade	2.63		
4 th grade	2.8		
5 th grade	2.97		

3.) Teachers will focus on inferential thinking, author's purpose, and text organization so that student's achievement in reading standards of Analyzing Text and Evaluates/Extends text will exceed the state average by at least 12 points on the 2011-12 WKCE.

SPI Compared To State 11-12 Analyzing Text		
	09-10	10-11
Grade 3	12.2	12
Grade 4	10.3	12
Grade 5	10.9	12
SPI Compared To State 11-12 Evaluates/Extends Text		
	09-10	10-11
Grade 3	9.5	12
Grade 4	10.0	12
Grade 5	12.3	12

4.) To maintain or increase the percentage of students who score in the proficient and advanced ranges in Reading on the WKCE - CRT, comparing same groups of students in Grades 4, 5, and 6.

Advanced and Proficient % - Same Students

WKCE - CRT	2009-10	2010-11	2011-12 Target
3 rd graders			
2009-10	97%		
4 th graders			
2010-11			
4 th graders			
2009-10	96%		
5 th graders			
2010-11			
5 th graders			
2009-10	96%		
6 th graders			
2010-11			

5.) To increase the performance of identified students who ranked in the local 20thtile on the Reading WKCE-CRT, comparing same groups of students after one year of intervention.

(Increased scale scores targets were determined by using the average WKCE Proficient cut-off scale score from one grade to the next, plus 5 points.)

Scale Score Average Targets for 2011-12

WKCE - CRT	2009-10	2010-11	2011-12 Target
3 rd graders 2009-10	441	456	471
4 th graders 2010-11			
4 th graders 2009-10	448	463	478
5 th graders 2010-11			
5 th graders 2009-10	457	472	487
6 th graders 2010-11			

Goal #1: To improve students' abilities to read and write, and to interpret, analyze, and respond to a variety of texts.

	SMART OBJECTIVES (Strategic, Measurable, Attainable, Results-Oriented, Time-Bound)	SPECIFIC STRATEGIES WITH TIMELINES	RESOURCES AND PERSONS RESPONSIBLE	EVALUATION STRATEGIES AND MEASURES															
A C T I O N P L A N	<p>District third, fourth and fifth grade students will improve their performance by two percentage points on Standards C (Analyzes text) and D (Evaluates/Extends text) as measured by the WKCE-CRT Reading Standards Performance Summary.</p> <table border="1" data-bbox="553 1455 766 1927"> <thead> <tr> <th></th> <th>Analyzes text</th> <th>Eval/Ext text</th> </tr> </thead> <tbody> <tr> <td>Grade 3</td> <td>78.7</td> <td>55.6</td> </tr> <tr> <td>Grade 4</td> <td>72.0</td> <td>68.8</td> </tr> <tr> <td>Grade 5</td> <td>71.9</td> <td>73.4</td> </tr> <tr> <td>Grade 6</td> <td>75.8</td> <td>71.1</td> </tr> </tbody> </table>		Analyzes text	Eval/Ext text	Grade 3	78.7	55.6	Grade 4	72.0	68.8	Grade 5	71.9	73.4	Grade 6	75.8	71.1	<ul style="list-style-type: none"> ➔ Continue to identify, plan and implement intervention strategies for students demonstrating needs through the use of on-site resources and staff. ➔ Expand and enhance the implementation of the guided reading format through training and professional development. ➔ Provide opportunities for all students to demonstrate interpretation and analysis of texts through writing. ➔ Provide continued instruction in the writing process supported by traits to improve students' ability to interpret and analyze text through writing. ➔ Implement and utilize the technology tools available to share resources from school to school; grade level to grade level. 	<ul style="list-style-type: none"> • Classroom Teachers • Media Specialist • Reading Specialists • Instructional Specialists • Site Committees • Support Staff 	<p>Analyzes text: From Grade 3 – 78.7 to 80.7 From Grade 4 – 72.0 to 74.0 From Grade 5 – 71.9 to 73.9 From Grade 6 – 75.8 to 77.8</p> <p>Evaluate/Extend text: From Grade 3 – 55.6 to 57.6 From Grade 4 – 68.8 to 70.8 From Grade 5 – 73.4 to 75.4 From Grade 6 – 71.1 to 73.1</p>
	Analyzes text	Eval/Ext text																	
Grade 3	78.7	55.6																	
Grade 4	72.0	68.8																	
Grade 5	71.9	73.4																	
Grade 6	75.8	71.1																	

PROFESSIONAL DEVELOPMENT PLAN FOR 2010-11

Goal #1: To improve students' abilities to read and write, and to interpret, analyze, and respond to a variety of texts.

<p>1. Action Research</p> <ul style="list-style-type: none"> ▶ Implement findings and strategies from school data retreats for reading and writing ▶ Instructional/Reading Specialist presentation/inservice ▶ Application of building study groups findings/discussion ▶ Continued implementation of strategies to support skills development ▶ Review of current research for the development of readers and writers to support instructional practices ▶ Implement K - 5 District-wide Reading Plan, School Improvement Plan activities and network ▶ Implement progress monitoring system 	<p>2. Developmental Improvement Process</p> <ul style="list-style-type: none"> ▶ Representation on District Curriculum Committees ▶ Representation on District IIC ▶ Site Data Retreats ▶ Monthly Building Leadership Team ▶ Individual/Grade Level S.M.A.R.T. Goal development ▶ Implement K - 5 District-wide Reading Plan, School Improvement Plan activities and network
<p>3. Individually Guided Activities</p> <ul style="list-style-type: none"> ▶ Individual S.M.A.R.T. goals aligned to school plans ▶ Participation in curriculum committees or study groups ▶ Participation in professional growth classes, conferences, workshops 	<p>4. Mentoring</p> <ul style="list-style-type: none"> ▶ District Mentor Program ▶ Peer Coaching ▶ Modeling by Reading and Instructional Specialists
<p>5. Collegial Collaboration/Observation</p> <ul style="list-style-type: none"> ▶ Professional networking ▶ Grade Level meetings and collaboration ▶ Reciprocal classroom demonstrations ▶ Staff meeting instructional practices sharing 	<p>6. Study Groups</p> <ul style="list-style-type: none"> ▶ Reading and Writing Strategies to improve comprehension ▶ Early Progress Monitoring Assessments ▶ Ongoing Reading and Writing Intervention Techniques ▶ Book Studies including, but not limited to: <u>Reading with Meaning (Mac)</u>, <u>Beyond Guided Reading (Mac)</u>, <u>Strategies That Work (Mac, CL)</u>, <u>Kindergarten Literacy: Matching Assessment and Instruction in Kindergarten (CL)</u>, <u>Teaching for Comprehension in Reading – Grades K-2 (CL)</u>, <u>Daily Five, Café (RK)</u>
<p>7. Training</p> <ul style="list-style-type: none"> ▶ Reading and Instructional Specialist presentations/inservice ▶ Testing Strategies to support achievement ▶ Common Core Standards and Benchmarks for Reading and Language Arts ▶ Faculty Meetings - Vertical Grade Level Team Structure ▶ Running Records Training for fidelity – K-2 ▶ Guided Reading Components 	

Goal #1: To improve students' abilities to read and write, and to interpret, analyze, and respond to a variety of texts.

**Kennedy Middle School
Improvement Plan: School Board Presentation – October 25, 2010**

<p>Goal 1: Increase overall student achievement levels of all students from the time they enter 6th grade to the time they exit 8th grade as measured by the 8th Grade W.K.C.E.</p> <p>New Action Items</p> <ul style="list-style-type: none"> • Link completed Consensus Maps to the Skyward Program. • Orientate parents regarding Curriculum Maps and how to access. • Vertical Teams to present progress and skill area plans during 3rd & 4th Qtr. Faculty Mtgs. • Create Skyward Pilot Team 	<p>Progress of Continuing Action Items</p> <ul style="list-style-type: none"> • 2010-11 all students will be involved in pre-post writing assessments. Prior two years included "pilot group" • Complete remaining Consensus Curriculum Maps. • Vertical teams to analyze item analysis • Continue to utilize the technology committee to promote greater uses of technology to enhance learning • Explore ways to access "cutting edge" technology to Kennedy Middle School. 	<p>Nearly Embedded</p> <ul style="list-style-type: none"> • Test prep opportunities and mini course. • Identify SPAR and provide interventions (leading into RtI). • Maintain monthly content curriculum team meetings. • Vertical teams to align commons assessments. • Professional development opportunities for technology. 	<p>"System Priorities"</p> <ul style="list-style-type: none"> • A-3;3(d) • A-3; 3(e) • A-3; 3(f) • D-15; 15(a) • D-17; 17(a)
<p>Goal 2: Increase overall student achievement levels of all students from the time they enter 6th grade to the time they exit 8th grade as measured by the 8th Grade W.K.C.E.</p> <p>New Action Items</p> <ul style="list-style-type: none"> • Consistently communicate via Skyward expectations per Pilot Team developed standards. • Initiate Student Breakfast Program • Expand participation to RI Leadership Team. • Finalize Core Essential Skills Inventory • Identify Learning Targets in the areas of Rdg, LA, & Math • 3-5 KMS staff to participate on CREATE team & Student disproportionality of students with disability, poverty and ethnicity. Eventually, this team will use a "Trainer of Trainer" model to educate other staff. • Utilize "Start, Stop & Continue" feedback tool. • Create B.O.C. advisory committee regarding school practices to identified areas of concern; i.e. dress code, cell phones, etc. 	<p>Progress of Continuing Action Items</p> <ul style="list-style-type: none"> • Continue, but simplify Parent Ambassador Program • Establish a Parent Resource Center by the end of the 2010-11 Sch. Year • Orientate students to the FISH Philosophy • Safe Culture curriculum integrated with consistency and continuity • Improve staff communication and spirit. • Provide Love & Logic Prof. Development Opportunity • Provide induction of various student support programs; K.M.S. Class, Life Skills, E.L.L., etc. 	<p>Nearly Embedded</p> <ul style="list-style-type: none"> • Safe Culture Committee continues to promote initiatives • Partnership between Kennedy PTA and Safe Culture Committee to provide learning opportunities for students, staff and parents regarding Bullying and AODA Issues. • Start of the year Grade Level Presentations regarding school wide expectations. • Confirm standards of practice relating to Homeroom Group. • Explore Qtr. 3 spirit activities 	<p>"System Priorities"</p> <ul style="list-style-type: none"> • A-1; 1(a) • A-1; 1(b) • A-1; 1(c) • A-2; 2(a) • A-5; 5(a) • A-5; 5(b) • B-9; 9(a)

Goal 3: By the end of the 2010 2011 School Year, KMS Teaching Staff will establish core beliefs regarding the purpose and implementation of Grading and Homework

New Action Items	Progress of Continuing Action Items	Nearly Embedded	"System Priorities"
<ul style="list-style-type: none"> Establish a "Pilot" regarding homework and grading practices Provide feedback to all staff regarding observations from the "Pilot" Team regarding Homework & Grading. Analyze various report card and grade book options via Skyward 	<ul style="list-style-type: none"> Review various practices represented of KMS staff for grading and homework relating to research Assessing Student Success Committee to identify best practices regarding Homework and Grading. Obtain staff feedback regarding various beliefs and thoughts regarding Homework and Grading Increase staff development opportunities for KMS staff regarding Homework and Grading. 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> D-17; 17(b)

Project Lead The Way (PLTW) Course Proposal

1. General Scope of PLTW at Kennedy Middle School

- Science, Technology, Engineering, and Mathematics (STEM) – These are courses that apply math and science concepts to technology education.
- Part of the creation of an “engineering track” in the Germantown School District and in public schools across America.
- Gateway to Technology (GTT) is the middle school curriculum of PLTW and will prepare students for the high school courses.
- GTT will replace Enterprise and Transportation B.

2. Implementation Targets

- Apply for GTT grant (completed 11/5/10)
- Seek IIC endorsement
- Pending IIC endorsement, seek board approval
- Prepare for scheduling upon board approval and reception of grant (notification on 1/28/11)

3. Request from IIC

- Any questions from members
- That the members understand the benefits of GTT at Kennedy Middle School.
- Approval from the Council

GERMANTOWN SCHOOL DISTRICT

Course Proposal

Please check one of the following:

New Course Proposal Revised Course Proposal Course Deletion Proposal Title Change

Date/Time Field Department School

Person Initiating Proposal

Department Chair

Course Title

Certification Required to Teach The Course

Reason for Deletion (If Appropriate):

Course Description:

Gateway to Technology (GTT) is the middle school curriculum of Project Lead The Way (PLTW). It is a series of courses of which two will be implemented if the grant is received. The first course is Design and Modeling. The second course will be Automation and Robotics.

Necessary Prerequisites:

These classes are intended to be more challenging and make use of age appropriate math and science. There is no Technology Education prerequisite beyond the required 6th grade course. A successful student, however, would likely be at or above grade level in math, science and computer skills

Course Objectives:

The primary objective of these courses is to create a middle school "engineering track" that will send learners to the high school ready to be successful in Project Lead The Way. PLTW is an unprecedented combination of math, science, and technology education in the public system that intends to fuel the next wave of American innovation by preparing students for that type of career earlier and better.

Course Content /
Outline: (Please attach
to the form if more
space is needed)

See the attached outline of the class.

Course Evaluation:

Because this is a proprietary curriculum, information is scarce on the details of evaluation. It is likely that students will be assessed on planning and execution of a number of projects.

Identify the Student Need:

These classes are designed to bring a more "academic" style challenge to Technology Education and attract that type of student. We already have many students who can work to that level but the present curriculum and population limits the opportunities to offer rigorous content. We hope to attract students who may not have previously seen the benefit of Technology Education classes but now understand how it can help their education and career options.

Target Audience:

Eighth grade students who are interested in technology and engineering and are at grade level or above in math and science.

Anticipated Enrollment:

At least two classes of 20-25 students per semester. There could be more sections added if demand warrants it.

Credit:

One middle school quarter credit

Budget:

Approximately \$55,000 - \$25,000 will come from the PLTW grant, \$30,000 will come from IT for the computer lab. The lab has already been approved by Marc Gabrysiak.

Additional Staff:

None

Instructional Materials:

To be provided by the PLTW foundation

Space:

These courses would be taught in a presently under-utilized area of D-1, the large technology education room at Kennedy Middle School.

Equipment:

The individual pieces of equipment needed are too numerous to list here but the most important components are Fisher Technique Robotic Kits, Inventor software and a computer lab.

Building Principal Signature:

Date:

GTT Detailed Outline

Unit 1: Design and Modeling

Time: 45 Days

Lesson 1.1 What is Engineering? (7 days)

Concepts

1. Science is the study of the natural world, while technology is the study of how humans develop new products to meet needs and wants.
2. Teams of people can accomplish more than one individual working alone.
3. Technological change is seen through inventions, innovations, and the evolution of technological artifacts, processes, and systems.
4. Technology can have positive and negative social, cultural, economical, political, and environmental consequences.
5. Engineers, designers, and engineering technologists are needed in high demand for the development of future technology to meet societal needs and wants.
6. An engineering notebook is used to record original ideas or designs.
7. A portfolio is an organized collection of best works.

Performance Objectives

It is expected that students will:

- Explain the relationship between science, technology, engineering and math.
- Describe engineering and explain how engineers participate in or contribute to the invention and innovation of products.
- Describe impacts that technology has had on society.
- Distinguish between invention and innovation.
- Assemble an engineering notebook and a portfolio.

Lesson 1.2 Design Process (5 days)

Concepts

1. Many different design processes are used to guide people in developing solutions to problems.
2. Design teams use brainstorming techniques to generate large numbers of ideas in a short amount of time, striving for quantity, not quality.
3. The design brief is a tool for defining the problem; it is an agreement between the engineer and client.

4. Engineers use design briefs to explain the problem, identify solution expectations, and establish project constraints.
5. A decision matrix is a tool used to compare solution ideas to the criteria so that you can select the best solution.

Performance Objectives

It is expected that students will:

- Describe the design process and how it is used to aid in problem solving.
- Use the design process to solve a technical problem.
- Recognize design criteria and constraints.
- Describe the purpose and importance of working in a team.
- Explain a design brief and apply the concept when using the design process.
- Describe the elements of design and apply this concept to the design process.
- Use a decision matrix to select the best solution to a design problem.

Lesson 1.3 Measurement (5 days)

Concepts

1. In the United States, we use both English and Metric systems of measurement.
2. Being able to measure accurately is important at school and at home, at work and when pursuing hobbies.
3. Precision measuring tools are needed for accuracy, but tools must be used correctly to ensure accurate measurements are taken.
4. Quality workmanship and accurate measurements with precise instruments are necessary to successfully solve problems.

Performance Objectives

It is expected that students will:

- Demonstrate the ability to measure accurately with different devices and scales.
- Explain how to measure in different contexts.
- Measure using both the English and Metric systems.

Lesson 1.4 Sketching and Dimensioning Techniques (6 days)

Concepts

1. The ability to create a rapid, accurate sketch is an important skill to communicate ideas.
2. Orthographic drawings of an object are used to provide information that a perspective drawing may not be able to show.
3. Engineers apply dimensions to drawings to communicate size information.

Performance Objectives

It is expected that students will:

- Summarize the reasoning for using sketching as a communication tool.
- Use visualization, spatial reasoning, and geometric shapes to sketch two and three dimensional shapes.

- Recognize and create thumbnail, perspective, isometric, and orthographic sketches.
- Recognize and accurately interpret one and two point perspective drawings.
- Communicate ideas for a design using various sketching methods, notes, and drafting views.
- Dimension an orthographic sketch following the guidelines of dimensioning.

Lesson 1.5 Designing For Production (22 days)

Concepts

1. Simple geometric shapes are combined and joined to create a representation of an object.
2. Engineers use computer-aided design (CAD) modeling systems to quickly generate and annotate working drawings.
3. Three-dimensional computer modeling uses descriptive geometry, geometric relationships, and dimensions to communicate an idea or solution to a technological problem.
4. As individual objects are assembled together, their degrees of freedom are systematically removed.
5. Engineers use a design process to create solutions to existing problems.
6. Teamwork requires constant communication to achieve the goal at hand.
7. The fabrication of a prototype is the opportunity for the designer to see the product as a three-dimensional object.

Performance Objectives

It is expected that students will:

- Create a three-dimensional (3D) model of an object.
- Apply geometric and dimension constraints to design CAD-modeled parts.
- Assemble the product using the CAD modeling program.
- Demonstrate the ability to produce various annotated working drawings of a 3D model.
- Identify the difference between a prototype, a model and a mock-up and analyze what circumstances call for the use of each.
- Explain why teams of people are used to solve problems.
- Brainstorm and sketch possible solutions to an existing design problem.
- Create a decision-making matrix.
- Select an approach that meets or satisfies the constraints given in a design brief.

Unit 2: Automation and Robotics

Time: 45 Days

Lesson 2.1 What is Automation and Robotics? (7 days)

Concepts

1. Automation is the use of technology to ease human labor or to extend the mental or physical capabilities of humans.
2. Robotics is the specialized field of engineering and computer science that deals with the design, construction, and application of robots.
3. The use of automation and robotics affects humans in various ways, both positively and negatively, including their safety, comfort, choices, and attitudes about a technology's development and use.
4. Automation and robotics have had an influence on society in the past and present and will influence society in the future.
5. Engineers, designers, and engineering technologists are needed in high demand for the development of future technology to meet societal needs and wants.

Performance Objectives

It is expected that students will:

- Describe the purpose of automation and robotics and its effect on society.
- Summarize ways that robots are used in today's world and the impact of their use on society.
- Describe positive and negative effects of automation and robotics on humans in terms of safety and economics.
- Investigate a career related to automation and robotics and determine the requirements for entering the field.

Lesson 2.2 Mechanical Systems (12 days)

Concepts

1. Energy is the capacity to do work.
2. Engineers and technologists design mechanisms to change energy by transferring direction, speed, type of movement, and force or torque.
3. Mechanisms can be used individually, in pairs, or in systems.

Performance Objectives

It is expected that students will:

- Investigate and understand various mechanisms to determine their purpose and applications.
- Be able to apply their knowledge of mechanisms to solve a unique problem.

Lesson 2.3 Automated Systems (26 days)

Concepts

1. Automated systems require minimal human intervention.
2. An open-loop system has no feedback path and requires human intervention, while a closed-loop system uses feedback.
3. Troubleshooting is a problem-solving method used to identify the cause of a malfunction in a technological system.
4. Invention is a process of turning ideas and imagination into devices and systems.
5. Some technological problems are best solved through experimentation.
6. Fluid power systems are categorized as either pneumatic, which uses gas, or hydraulic, which uses liquids.
7. Automated systems can be powered by alternative energy sources like solar and fuel cells.

Performance Objectives

It is expected that students will:

- Design, build, wire, and program both open and closed loop systems.
- Troubleshoot a malfunctioning system using a methodical approach.
- Experience fluid power by creating and troubleshooting a pneumatic device.
- Design, build, wire and program a system operated by alternative energy.

Project Lead The Way (PLTW) Course Proposal

1. General Scope of PLTW at Kennedy Middle School

- Science, Technology, Engineering, and Mathematics (STEM) – These are courses that apply math and science concepts to technology education.
- Part of the creation of an “engineering track” in the Germantown School District and in public schools across America.
- Gateway to Technology (GTT) is the middle school curriculum of PLTW and will prepare students for the high school courses.
- GTT will replace Enterprise and Transportation B.

2. Implementation Targets

- Apply for GTT grant (completed 11/5/10)
- Seek IIC endorsement
- Pending IIC endorsement, seek board approval
- Prepare for scheduling upon board approval and reception of grant (notification on 1/28/11)

3. Request from IIC

- Any questions from members
- That the members understand the benefits of GTT at Kennedy Middle School.
- Approval from the Council

GERMANTOWN SCHOOL DISTRICT

Course Proposal

Please check one of the following:

- New Course Proposal Revised Course Proposal Course Deletion Proposal Title Change

Date/Time Field	Nov 3, 2020	Department	Technology Education	School	Kennedy Middle School
Person Initiating Proposal	John Parrish				
Department Chair	House Leader - David Kliss				
Course Title	Gateway to Technology				
Certification Required to Teach The Course	220 Technology Education				

Reason for Deletion (If Appropriate):

Course Description:

Gateway to Technology (GTT) is the middle school curriculum of Project Lead The Way (PLTW). It is a series of courses of which two will be implemented if the grant is received. The first course is Design and Modeling. The second course will be Automation and Robotics.

Necessary Prerequisites:

These classes are intended to be more challenging and make use of age appropriate math and science. There is no Technology Education prerequisite beyond the required 6th grade course. A successful student, however, would likely be at or grade level or above in math, science and computer skills.

Course Objectives:

The primary objective of this course is to create a middle school "engineering track" that will send learners to the high school ready to be successful in Project Lead The Way. PLTW is an unprecedented combination of Math, Science, and Technology Education in the public education system that intends help fuel the next wave of American innovation by preparing students for that type of career earlier and better.

Course Content / Outline: (Please attach to the form if more space is needed)

See the attached an outline of the class.

Course Evaluation:

Because this is a proprietary curriculum, information is scarce on the details of evaluation. It is likely that students will be assessed on planning and execution of a number of projects.

Identify the Student Need:

These classes are designed to bring a more "academic" style challenge to Technology Education and attract that type of student. We already see many students who can work to that level but the present population limits the opportunities to offer rigorous content. We hope to attract students who may not have previously seen the benefit of Technology Education classes but now understand how the experience can enhance their education and career options.

Target Audience:

Eighth grade students who are interested in and show an aptitude in technology and engineering and are at grade level or above in math and science.

Anticipated Enrollment:

At least two classes of 20-25 students per semester. There could be more sections added if demand warrants it.

Credit:

One middle school quarter credit.

Budget:

See attached document.

Additional Staff:

None

Instructional Materials:

A list of Instructional Materials and Equipment is attached.

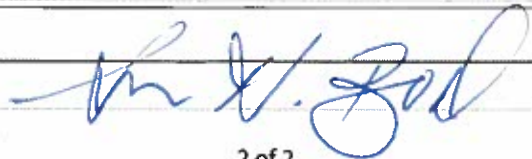
Space:

This course would be taught in a presently under utilized area of D-1, the large technology education room at Kennedy Middle School.

Equipment:

A list of Instructional Materials and Equipment is attached.

Building Principal Signature:



Date:

11/3/10

