

Teachers at Work:



Beginning with Some **Low Prep** Examples

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Begin Slowly – Just Begin!

Low-Prep Differentiation

Choices of books
Homework options
Use of reading buddies
Varied journal Prompts
Orbitals
Varied pacing with anchor options
Student-teaching goal setting
Work alone / together
Whole-to-part and part-to-whole explorations
Flexible seating
Varied computer programs
Design-A-Day
Varied Supplementary materials
Options for varied modes of expression
Varying scaffolding on same organizer
Let's Make a Deal projects
Computer mentors
Think-Pair-Share by readiness, interest, learning profile
Use of collaboration, independence, and cooperation
Open-ended activities
Mini-workshops to reteach or extend skills
Jigsaw
Negotiated Criteria
Explorations by interests
Games to practice mastery of information
Multiple levels of questions



High-Prep Differentiation

Tiered activities and labs
Tiered products
Independent studies
Multiple texts
Alternative assessments
Learning contracts
4-MAT
Multiple-intelligence options
Compacting
Spelling by readiness
Entry Points
Varying organizers
Lectures coupled with graphic organizers
Community mentorships
Interest groups
Interest centers
Personal agendas
Literature Circles
Stations
Complex Instruction
Group Investigation
Tape-recorded materials
Teams, Games, and Tournaments
Choice Boards
Think-Tac-Toe
Simulations
Problem-Based Learning
Graduated Rubrics
Flexible reading formats
Student-centered writing formats



Low-Prep Examples

- Working with others sitting near you, review the examples assigned to you making sure that everyone understands how the strategy might address learner needs and also be easily accomplished by the teacher.
- Each group will be asked to briefly share their list highlighting impressions and/or experiences concerning the strategies.
- Be sure to note any concerns or issues you think might be of interest to others.



Low-Prep Differentiation



- Choices of books
- Homework options
- Use of reading buddies
- Varied journal Prompts
- Orbitals
- Varied pacing with anchor options
- Student-teacher goal setting
- Work alone / together
- Whole-to-part and part-to-whole explorations
- Flexible seating
- Varied computer programs
- Design-A-Day
- Varied Supplementary materials
- Options for varied modes of expression



- Varied scaffolding on same organizer
- Let's Make a Deal projects
- Computer mentors
- Think-Pair-Share by readiness, interest, learning profile
- Use of collaboration, independence, and cooperation
- Open-ended activities
- Mini-workshops to reteach or extend skills
- Jigsaw
- Negotiated Criteria
- Explorations by interests
- Games to practice mastery of information
- Multiple levels of questions



There are Many Low Prep Ways...

- | | |
|--|--|
| <ul style="list-style-type: none"> •Use small group instruction •Teach in multiple modes •Offer work alone/work with a friend options •Put key materials on tape •Offer Let's Make a Deal options •Provide mini-workshops •Regularly connect details to the big picture of meaning •Connect ideas to student interests •Ask student advice on class | <ul style="list-style-type: none"> •Offer varied ways of exploring and expressing ideas •Connect schoolwork with life beyond the classroom •Set personal criteria for student success •Encourage students to develop personal criteria for success •Use key reading strategies regularly (e.g. close reads think-alouds) Watch more, listen better |
|--|--|

...to Make a Difference

Tomlinson 08

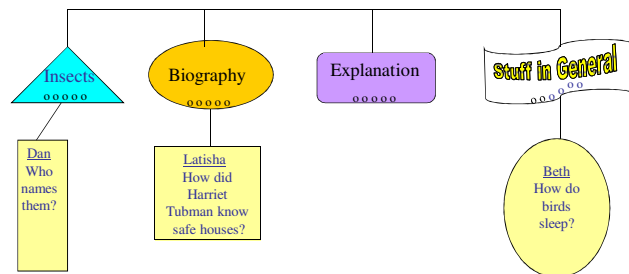
Some Simple Ways to Address Learning Profile

Work alone/work with a partner
Plan with an outline, a prose summary, a graphic organizer, or storyboards
Work at your desk, work on the floor
Praise the group/praise the individual
Mastery/utility

Earplugs for quiet
Carrels/"offices" for concentration
Read first/listen first
Choice of formats to demonstrate what you've learned
Prompts to allow reflection
Competition/collaboration

An Add-to Mobile
based on class topics
and general interests

Who Cares?



Tomlinson • 01



Thinking About Student Interest

- 1) Personal Word Lists
- 2) Sustained Silent Reading
Students identify interest areas
Students select reading materials
Teachers provide regular SSR time
Students reflect on what they learned
Reading logs, Structured response, Varied representations
- 3) Orbitals
- 4) Web Inquiry
- 5) Interest Centers
- 6) Expert Groups
- 7) Independent Studies
- 8) Biographical Inquiry
- 9) Mode of Expression Options
- 10) Design A Day
- 11) Group Investigation
- 12) Let's Make a Deal

Tomlinson '04

Orbitals

Background:

Chris Stevenson (1992, 1997) suggests "orbital studies" as an ideal way to address both commonalities and differences among middle-level learners. Indeed the strategy appears easily adapted to learners at all levels.

(Tomlinson, 1999, p. 71)



Description:

1. An orbital study focuses on a topic of student interest related to some facet of the curriculum.
2. A student may work on an orbital study for three to six weeks.
3. Teachers help students develop clear questions for study, a plan for research, a method of presentation, and criteria for quality.
4. Successfully completing an orbital includes keeping a log of time spent on the study, resources used, and ideas and skills gained.

(Tomlinson, C.A., 1999, *The Differentiated Classroom: Responding to the Needs of All Learners*, p. 72)

Orbitals

Background:

An instructional approach designed to foster/support student interests and teach skills of inquiry and independence.



Steps:

1. Students are asked to complete out-of-class investigations to answer questions or learn about topics of interest to them. The topics/questions do not have to relate to class content.
2. The teacher guides students from their particular points of readiness to pose good questions, find resources, abstract viable information, keep records, determine answers, share work, raise subsequent questions, etc.
3. Students share findings in appropriate formats with peer audiences
4. Lengths, conditions of orbitals will vary with student readiness, interest, mode of learning

Some Other Ways to Build Capacity in Struggling Readers & Writers

READING

Books/Selections on tape
Scaffolded reading w/ teacher
Text preview
Think-Alouds
Echo Reading
Tutoring younger students
Interest-based reading
Excerpted reading
Materials kids can read
Materials kids want to read
Materials with substantive ideas

WRITING

Experiential writing
Dictation Pairs
Personalized vocabulary
Models of student writing
Scaffolded writing
Personal journals
Draw first, then write
Small group writing instruction



A Variety of Texts for a Variety of Purposes



What kids really need is more assistance in *understanding hard concepts*. Instead of a constant stream of super-hard texts, students need a mix of materials, ranging from easy to hard. We already have textbooks in the classrooms; what we need to add, in all content areas, is more material that's relatively easy, so students can concentrate on absorbing challenging content. This may sound counterintuitive, but evidence shows that students, including struggling readers, progress faster when given opportunities to read books that make sense to them (Allington 2002). We probably shouldn't need research to convince us of this simple reality: when kids read stuff they *can read*, they make more sense of what they *do read*. Just as important, Allington reports that when given interesting materials that they can read without too much difficulty, students *will* read. If we believe that our job is to help students enter the subject fields, dig into the big ideas, and grapple with increasingly complex concepts, then we must add accessible books to the reading mix.

Teaching The Best Practice Way by Daniels and Bizar • Stenhouse Pub. • p. 44

(1 of 3)

A Variety of Texts for a Variety of Purposes



In her kindergarten classroom in San Diego, Linda Hamilton has assembled a collection of book baskets, each one filled with six to ten books on a particular subject: whales, dinosaurs, insects, holidays, and more. Some contain mostly pictures while others have plenty of text; the publishers would probably say each basket runs from pre-school to third-grade level or higher. Part of every day's routine, pairs of children select a basket that interests them, sit down together on the rug, and go through a "text set," looking at the similarities among the books. Then they pick one book to "read" together, which means they page through the book. Talking about the pictures as they go, along with any text they can decipher.

Teaching The Best Practice Way by Daniels and Bizar • Stenhouse Pub. • p. 44

(2 of 3)

A Variety of Texts for a Variety of Purposes



At Andrew High School in Tinley Park, Illinois, Jeff Janes' science students are reading selections from the current adult nonfiction title *E=MC2: A Biography of the world's Most Famous Equation* by David Bodanis, which explains Einstein's famous equation by sharing the biographies of a dozen people, including several as yet unsung women, who contributed key ideas over several centuries. Why has Jeff assigned the book, which is far longer and more detailed than the related sections in the physics textbook? Simple, Jeff explains: "It is written at an easier reading level, it's much more interesting, and it does a much better job of explaining the equation than our physics textbook. I think kids who read this book will really understand the concepts."

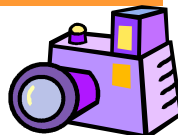
Teaching The Best Practice Way by Daniels and Bizar • Stenhouse. • p. 45

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A Close Read

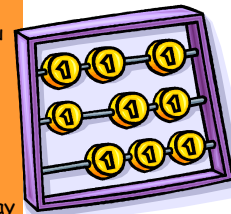
Asks students to slow down, read deeply, converse with the material, to establish understanding.

It asks them to become cameras and zoom in on what's in the material that can help them read intelligently.



A Fifth Grade Teacher's Approach To Close Reading a Math Problem

- Read the problem 2-3 times
- State what it asks you to solve
- Select the information you'll need to help you solve the problem
- Decide if there's a formula you need to use
- Decide if you need to set up an equation
- Draw a picture to help you see the problem and data
- Substitute small whole numbers if necessary and see if your solution works that way
- Write in words what you understand about the problem
- Ask, "Does my answer make sense?"



Teaching Reading in Social Studies, Science, & Math by Laura Robb, New York: Scholastic, 2003, pp. 147-148

Close Reading a Graphic

- Look at the graphic
- Read its title
- Think about the meaning of the title and how it relates to the graphic
- Ask yourself how the title & graphic relate to the chapter or article
- Ask yourself, "What's important here?"
- Make sure you understand the words
- Connect the important information to your life, your world, or something you already know.



Teaching Reading in Social Studies, Science, & Math by Laura Robb, New York: Scholastic, 2003

Close Reading a Poem

- Read the poem aloud
- Use the dictionary to figure out the meaning of unfamiliar words
- Explore the connotations of words
- Explore the meaning of figurative language
- Look for help from titles and graphics
- Look for "loaded words" (words with double meanings, that link to titles, that are repeated)



Word Jars

Words that tickle my ears!



Words that warm my heart!



Words that make me wonder!



Words that make me feel smart!



Words that I've heard someone say!



Words that can calm my ears!



Janet Allen (1999) *Words, Words, Words*. • Stenhouse • p. 146

Personal Skills Log Writing and Reading

For _____ Dates _____

I can read these new words:

I can write these new words:

I can say these rhymes:

I can use these describing words correctly:

Here's something else I can do:





Teaching Vocabulary for Success

- ✓ Front load vocabulary instruction
- ✓ Encourage descriptions vs. definitions
- ✓ Use both linguistic and non-linguistic tools
- ✓ Teach key word parts
- ✓ Use games
- ✓ Have students interact about words they are learning
- ✓ Use words that are important in academic subjects
- ✓ Pre-assess and use formative assessment to match words and instruction to learner needs

Tomlinson '04 - Modified from Marzano '04

So...What Words Should I Front Load?



Ones that are essential for understanding how the information makes sense,

Ones I know the students will struggle with,

Ones that lack adequate support for making meaning in the text.

HOW MANY SHOULD I TEACH UP FRONT??

About 3-4 for the lower grades

Teaching Reading in Social Studies, Science, & Math by Laura Robb (2003) Scholastic, p. 197

About 5-6 for the upper grades

When You Front Load Vocabulary, Be Sure:

Students have a context for the word

Or that you establish a context

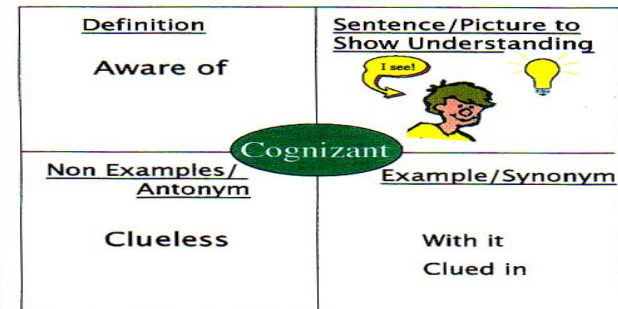
To show students how to use root words to make meaning

You maintain a focus on the words throughout the chapter

That you hold up the words in subsequent chapters as prior knowledge



WORD MAP



Useful to help many students explore, process, and retain new words.

Can address:

Readiness (vary the words) Interest
Learning Profile Second Language
Exceptionalities including second language, reading, LD, cognitive disability

Tomlinson • (04)

Ways To Differentiate Content

- Reading partners/ Reading Buddies
 - Read/Summarize
 - Read/Question/Answer
 - Visual Organizer/Summarizer
 - Parallel Reading with Teacher Prompt
- Choral Reading/Antiphonal Reading
- Flip books
- Split Journals (Double Entry - Triple Entry)
- Books on Tape
- Highlights on Tape
- ▶ Digests/"Cliff Notes"
- Notetaking Organizers
- Varied Texts
- ▶ Varied Supplementary Materials
- Highlighted Texts
- Think-Pair-Share/Preview-Midview-Postview



Electricity

<p>Description</p> <p>Electricity is one kind of energy</p>	<p>Kinds of Electricity</p> <p>There are two kinds of electricity, static and current. Static electricity is on electric charge that does not move. Current electricity is the movement of electrons.</p>
<p>Electric Circuits</p> <p>There are two kinds of electric circuits A series circuit is one in which current can follow only one path A parallel circuit is one in which current can follow more than one path.</p>	<p>Producing Electricity</p> <p>A generator is a machine that changes mechanical energy into electrical energy. A dry cell uses a chemical paste, carbon rod, and zinc to produce a flow of electrons. A wet cell uses acid and water, which reacts with metal plates, to produce a flow of electrons.</p>
<p>Using Electricity</p> <p>Electricity is an important source of light and heat. Electrical energy can be changed to mechanical energy. Fuses and circuit breakers are safety devices designed to help use electricity safely.</p>	<p>Measuring Electricity</p> <p>The amount of electricity used is measured in kilowatt-hours.</p> <p><small>Note: Basic format "Perceptions and Strategies," by M.W.Olson and T.C. Gee, 1991. <i>The Reading Teacher</i>, 45(4), 298-307 Copyright 1991 by the International Reading Association. <i>Teaching Reading in Science</i> by Barton and Jordan</small></p>

A Simple & Important Example

Varied Homework

Why'd we ever think the same homework for everyone made sense anyhow??

Sure you can check homework when kids do varied tasks!!

Homework Checkers



Homework Checkers



Background:

This is a process for checking multiple homework assignments simultaneously in a classroom so that the teacher feels free to differentiate homework as necessary to address particular student learning needs.

Steps:

1. The teacher checks to make sure each student has completed assigned homework
2. Students who have not completed the assignment work in a designated area of the room to complete the assignment (teacher floats to provide guidance/feedback)
3. Students who completed the HW work in groups of 4 to check all 4 sets for agreement/disagreement
4. All students mark each answer for agreement/disagreement as well as explanations of why an answer is wrong and how to make it right
5. Students sign indicating agreement, staple set of 4 together, turn in
6. Teacher spot checks, "grades" one per set

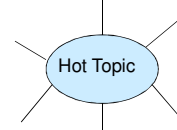
When Does it Make Sense to...

Give everyone the same homework assignment?
Why do you say so?

Use different homework assignments?
Why do you say so?

What problems might it create if you sometimes
used different homework assignments?

Think about it...

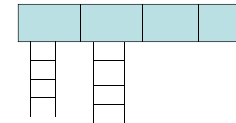


Writing



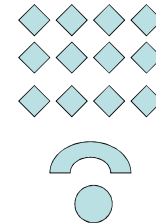
Group 1

- Meet with teacher
- Brainstorm for hot topics
- Web ideas for possible inclusion
- Develop a word bank
- Storyboard a sequence of ideas
- Make support ladders
- Begin writing



Group 2

- Alone or in pairs, develop a topic
- Make a bank of power ideas
- Web or storyboard the sequence and support
- Meet with teacher to "ratchet"
- Begin writing
- Paired revision
- Paired editing



Sedimentary	Igneous	Metamorphic

Rock Log
Sort your samples. Draw each sample in the correct column. Write a description that tells color, texture and other characteristics about the rock.

Sedimentary	Igneous	Metamorphic
Look at Sample # ____ You may see small particles of rock and other materials. The particles may look rounded. You may see layers in some rocks.	Look at Sample # ____ You may see large crystals in some of these rocks. Others will not have crystals, but you will see air holes. Some may look changed by heat and pressure. There are no layers.	Look at Sample # ____ These rocks may have crystals or layers. They are formed from other rocks that have been changed by heat and pressure.

The class does the same activity, but more guidance is given for those who may need it.



Created by Meri-Lyn Stark
Elementary Science Coordinator
Park City School District

DOUBLE ENTRY JOURNAL

(Basic)

As You Read, Note:

- Key phrases
- Important words
- Main ideas
- Puzzling passages
- Summaries
- Powerful passages
- Key parts
- Important graphics
- Etc.

After You Read, Explain:

- How to use ideas
- Why an idea is important
- Questions
- Meaning of key words, passages
- Predictions
- Reactions
- Comments on style
- Interpretation of graphics
- Etc.

DOUBLE ENTRY JOURNAL

(Advanced)

As You Read

As/After You Read

After You Read

- Key passages
- Key vocabulary
- Organizing concepts
- Key principles
- Key patterns
- Links between text & graphics

- Why ideas are important
- Author's development of elements
- How parts and whole relate
- Assumptions of author
- Key questions

- Teacher
- Author
- Expert in field
- Character
- Satirist
- Political cartoonist
- Etc.

DOUBLE ENTRY JOURNAL

(Basic)

WHAT I SAW OR HEARD

WHAT I THINK...



DOUBLE ENTRY JOURNAL

(Advanced)

WHAT I SAW /
HEARD

WHAT I THINK

WHAT -----
WOULD THINK



Play Around with the Ideas....



How can you use some of these strategies in your classroom to teach varied learners more effectively?

Learning Contracts

Contracts take a number of forms that begin with an agreement between student and teacher.

The teacher grants certain freedoms and choices about how a student will complete tasks, and the student agrees to use the freedoms appropriately in designing and completing work according to specifications

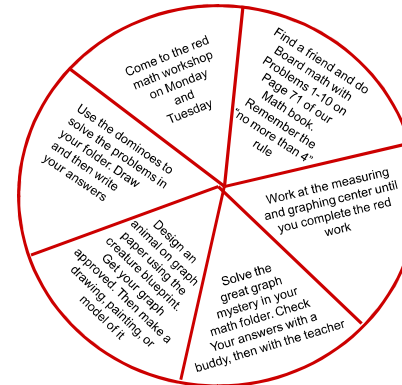
Strategy: Learning Contracts

The Red Contract

Key Skills: Graphing and Measuring

Key Concepts: Relative Sizes

Note to User: This is a Grade 3 math contract for students below grade level in these skills



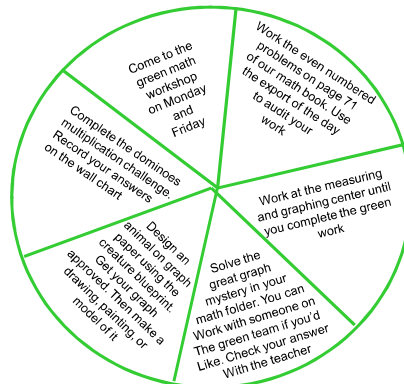
Read	Apply	Extend
How big is a foot?	Work with a friend to graph the size of at least 6 things on the list of "10 terrific things." Label each thing with how you know the size	Make a group story or one of your own – that uses measurement and at least one graph. Turn it into a book at the author center

The Green Contract

Key Skills: Graphing and Measuring

Key Concepts: Relative Sizes

Note to User: This is a Grade 3 math contract for students at or near grade level in these skills



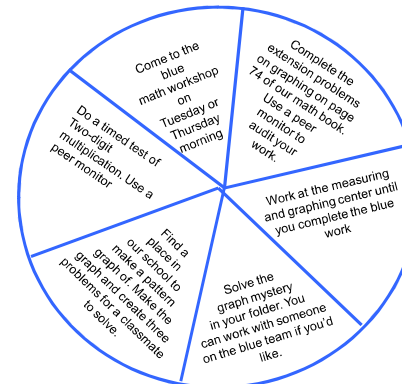
Read	Apply	Extend
Alexander Who Used to be Rich Last Sunday or Ten Kids, No Pets	Complete the math madness book that goes with the story you read.	Now, make a math madness book based on your story about kids and pets or money that comes and goes. Directions are at the author center

The Blue Contract

Key Skills: Graphing and Measuring

Key Concepts: Relative Sizes

Note to User: This is a Grade 3 math contract for students advanced in these skills



Read	Apply	Extend
Dinosaur Before Dark or Airport Control	Research a kind of dinosaur or airplane. Figure out how big it is. Graph its size on graph paper or on the blacktop outside our room. Label it by name and size	Make a book in which you combine math and dinosaurs or airplanes, or something else big. It can be a number fact book, a counting book, or a problem book. Instructions are at the author center

Learning Contract----Think Tac Toe Ancient Civilizations – Grade 6

GEOGRAPHY IMPORTANT PEOPLE CONTRIBUTIONS	As an ancient mapmaker, you are commissioned to create a map of your land including all natural land forms, a compass rose and a scale. Also find examples of each land form in a modern civilization.	Imagine that you are an ancient citizen who awakens to discover that all water has evaporated. Explain in detail how this would alter your way of life. Also, do this for the town where you live.	Assume you are persuading others to visit your ancient civilization. Design a descriptive, accurate travel brochure. Include both natural and man-made elements that would attract tourists.
	You are an ancient scribe. Write and illustrate a thorough description of a famous character from each time period being studied. Profile yourself also.	Assume the identity of a famous person from the given time period. Create a journal entry reflecting the ideas, values, and components of daily life for that person & you.	You are a famous sculptor. Create a 3D representation of a well-known leader, god, goddess, or common citizen. Include a museum exhibit card.
	Written language is an essential part of everyday life. Your task is to create an alphabet. Include a translation into modern English, a written description of the language development & a 3D artifact of the new language.	Recreate in 3D form a famous work of architecture from your time period. Compare and contrast this piece to one piece of modern day architecture. Find one example of this architecture's presence in modern day society.	Find a way to explain and show the importance of music and the arts to your culture. Also show at least 2 examples with roots in our time.

Charles Kyle & Kathy Reed * Illinois

A Planet "Show & Tell"

(Each student must pick one square from each horizontal row and use the two together)

Create One Pick a Way to Explain	Use the computer to make a drawing that shows how the rotation and revolution of the Earth works to create day and night and seasons.	Paint a picture that shows how the rotation and revolution of the Earth works to create day and night and seasons.	Construct a model that shows how the rotation and revolution of the Earth works to create day and night and seasons.	Create a book or puppet show that shows how the rotation and revolution of the Earth works.
	Make labels for the sun, Earth, day, night, orbit to attach to or use with your creation. Be ready to explain orally.	Write sentences* that identify and explain each part of your drawing or model and how each part works.	Write a story that explains the Earth's rotation, revolution, day and night, and seasons.	Write a poem that explains the Earth's rotation, revolution, day and night and seasons.

This differentiated review/synthesis task is based on Va. SOLS for science:

1.6 The student will investigate & understand the basic relationships between the Earth and sun, including "the sun is the source of heat & light." 1.7 The student will investigate and understand the relationship of seasonal change (light and temperature) to the activities & life processes of plants and animals.

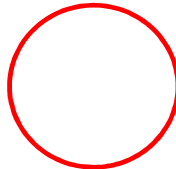
Based on Unit by Bette Wood, Charlottesville, Virginia City Schools.

Friendships Shape Up!

Reading Contract

Choose an activity from each shape group. Cut out your three choices and glue them below. You are responsible for finishing these activities by _____.

Have fun!



This contract belongs to _____.

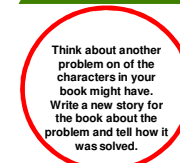
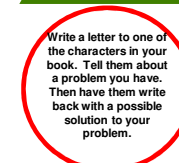
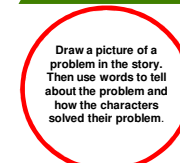
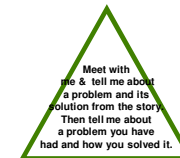
Brenda Spurgeon, 2nd Grade, Riverside Elementary School, Boise, ID

Friendships Shape Up! Cont'd

Make a poster advertising yourself as a good friend. Use words and pictures to help make people want to be your friend. Make sure your name is an important part of the poster.

Make a two sided circle-rama. Use it to tell people what makes you a good friend. Use pictures and words and make sure your name is an important part of the display.

Make a mobile that shows what makes you a good friend. Use pictures and words to hang on your mobile. Write your name on the top of the mobile in beautiful letters.




Writing Bingo

Try for one or more BINGOs this month. Remember, you must have a real reason for the writing experience! If you mail or email your product, get me to read it first and initial your box! Be sure to use your writing goals and our class rubric to guide your work.

Recipe	Thank you note	Letter to the editor	Directions to one place to another	Rules for a game
Invitation	Email request for information	Letter to a pen pal, friend, or relative	Skit or scene	Interview
Newspaper article	Short story	FREE Your choice	Grocery or shopping list	Schedule for your work
Advertisement	Cartoon strip	Poem	Instructions	Greeting card
Letter to your teacher	Proposal to improve something	Journal for a week	Design for a web page	Book Think Aloud

Math Ticket

Graphics Tangrams Ex. (p.14 #1) Tangrams Ex. (p.11, #9) Geoboard Pentagon Geoboard Heptagon Design	Problem of the Day Complete the odd # problem from the POD Board. Evens for bonus.	Computer Task Card (2 Yellow/2 Greens)
Math Writing •Explain in a clear step-by-step how you: •Solved your problem of the day or •Solved your Tangram or Geoboard Challenge. •Use pictures and words to teach someone how to do one of your five math tasks. •Develop a story or scenario in which one student clarifies how to do word problems for a confused friend.	Math with Legs •Develop a real problem someone might have which graphing would help them solve. Show how that would work, including graphs and explanations. You may use any kind of graph you know about as long as it fits the problem.	Teacher Feature When called 

MENU PLANNER

Menu for: _____ Due: _____

All items in the main dish and the specified number of side dishes must be complete by the due date. You may select among the side dishes and you may decide to do some of the desserts items, as well.



Main Dishes (complete all)

- 1
- 2
- 3
- 4



Side Dishes (Select 2)

- 1
- 2
- 3
- 4



Desserts (Optional)

- 1
- 2
- 3

MENU PLANNER

Menu for: Algebra 1 – "Probability" Due: _____

All items in the main dish and the specified number of side dishes must be complete by the due date. You may select among the side dishes and you may decide to do some of the desserts items, as well.



Main Dishes (complete all)

- 1 Complete the "meteorology simulation" on p. 88-89 of your textbook.
- 2 Create a list of 10 pairs of events. 5 pairs should contain events that are *dependent*; 5 pairs should contain events that are *independent*. Explain each classification.
- 3 Complete the "frequency table" assignment on p. 506-507 of your textbook.
- 4 Examine the attached list of functions and determine which functions represent probability distributions.



Side Dishes (Select 2)

- 1 Work with a partner to analyze the game of "Primarily Odd." See your teacher for game cubes and further instructions.
- 2 Design a "game spinner" that has this probability distribution: $P(\text{red}) = 0.1$; $P(\text{green}) = 0.2$; $P(\text{blue}) = 0.3$; $P(\text{yellow}) = 0.4$.
- 3 Suppose a dart lands on a dartboard made up of four concentric circles. For the center of the board (the "bull's eye"), $r = 1.5$; the remaining rings have widths of 1.5. Use your understanding of area and probability to determine the probability of 1) hitting a "bull's eye" and 2) landing in the outermost ring.



Desserts (Optional)

- 1 Figure the probability of "Murphy's Law" and make a case for whether or not it should indeed be a "law."
- 2 Use a frequency table to chart the colors that your classmates wear for a week. Then, use probability to predict how many students will wear a certain color on a given day.

Poetry Matters Book Project



Main Dish: You must complete all of these tasks.

1. Create a cover for your poetry book that represents the big ideas of this study as well as your own vision.
2. Include at least 3 samples of your own poetry that demonstrate a variety of formats and use of figurative language.
3. Include poems from at least 3 different authors you think are excellent examples of inner (heart map) and/or outer vision (imagery, similes, metaphors). They should be different forms and/or styles.
4. Find a way to share at least one poem (your own or another author) and explain how the poet communicated a vision or message.
5. Include your heart map.
6. Create a list of wild, wonderful, and/or wacky words you have discovered to effectively use in writing. Put at least 2 on our word wall and place the list in your book.

Judy Rex, 2006

Side Dishes: Select at least 2 tasks from the following list.

1. Illustrate at least one of the poems in your collection.
2. Use musical instruments to accompany a poem while sharing it.
3. Do a dramatic interpretation of a poem.
4. Write, revise, edit and illustrate at least 2 haiku poems.
5. Write, revise, edit and illustrate at least 2 cinquian poems.
6. Write, revise, edit and illustrate an alliterative poem.
7. Write, revise, edit and illustrate or musically accompany a poem using onomatopoeia.
8. Create a list of poetic phrases from a variety of books. Note what book each one was selected from and why you chose it.



Dessert: Choose as many as these as you would like to be an X Factor Learner!

1. Type your poems and import pictures to illustrate them.
2. Use a variety of ways to illustrate all of your poems.
3. Collect metaphors and similes and create a way to display them.
4. Research a known poet. Tell us about his/her life and style of writing. Also, let us know why you find this poet interesting.
5. Learn about narrative poems and write at least one.
6. Create a shape poem. Use color and illustration to present it.
7. Create a Table of Contents for your book.
8. Create a Poetry Glossary for your book.
9. Create a poem for 2 voices and perform it.
10. Choose 2 different poems to compare and contrast. Explain how they are similar and different.



Science Agenda on Chemical Problems in the Environment

IMPERATIVES (You *must* do these...)

- 1) Select a chemical problem in the environment and
 - Define and describe the difficulties it presents
 - Be sure to discuss why, where, and to whom/what

Your choices are:

- Global Warming/Greenhouse Effect
- Ozone Depletion
- Acid Rain
- Air Pollution
- Water Pollution (including thermal pollution and land/ground pollution)

- 2) Complete a map showing where the problem exists, what/who is affected by it, and the degree of impact

- 3) Develop a talking paper that describes present and future solutions, as well as your recommendations.

NEGOTIABLES (You must do at least one of these...)

- 1) Determine the approximate costs of the problem of one badly affected region and develop a graphic that shows total costs and what makes the costs (for example: Health costs, clean-up costs, lost revenues from land, etc.)
- 2) Develop a timeline of the evolution of the problem over the last 100 years, including significant dates, and factors that contributed to the change. Take the timeline into the future based on your current understanding of trends associated with the problem.

OPTIONS (You may do one or more of these...)

- 1) Create a Gary Larson-type cartoon or an editorial cartoon that makes a commentary on the problem.
- 2) Prepare a fictionalized account, but based on scientific fact, of a person who lives in a badly affected area. Your goal is to put a human face on the problem.
- 3) Develop a 60-second public service announcement (taped) to raise audience awareness of the problem and introduce positive actions citizens might take to improve the prognosis for the future.



Microorganism Menu

Name:
Class:

- Appetizers:
Can always work on
- Soups/Salads:
Homework
- Main Course:
Required
- Desserts:
Challenges

Created by Meri-Lyn Stark
Elementary Science Coordinator
Park City School District

Appetizers



- Something I can always be working on.
- These are assignments that will reinforce concepts.
- Vocabulary Words/Definitions
 - Word Searches
 - Idea Maps
 - Matching Worksheets
 - Label the Microorganism/Cell

Soups/Salads



- Homework Assignments
- All homework must be completed and turned in for a grade.
- Transparency #13
 - Transparency #16
 - Study Guide 8.1
 - Study Guide 8.2
 - Study Guide 8.3

Main Course



- Required
- These labs must be completed and turned in for credit.
- Enormous E
 - Focus on Scopes
 - Pond Water Culture
 - Your Choice
 - Chapter 8 Test

Desserts



- Things I can do to challenge myself.
- These are not required unless you have been given specific instructions.
- Movie Notes
 - Make a Slide
 - Guess the Disease
 - Write a Letter
 - Microbe Mysteries
 - <http://www.microbeworld.org>

Tic-Tac-Toe

designed to help students make connections *between* science standards
(4th Grade Rock, Soil, and Fossils Activity)

Create a game for others to play to learn how fossils are formed and found	Teach the class a lesson about dinosaur extinction	Compare Utah locations with examples of weathering and erosion, show examples
Draw and label a soil profile showing how the layers differ	Graph types of fossils found in Utah and create simple fossil map	Demonstrate plant growth in 2 or more different soil types, share in class
Survey everyone in class for their theory about dinosaur extinction, share results	Design a display of different rocks and minerals, label and prepare descriptions	Develop a timeline of prehistoric life in Utah

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Up & At 'EM

Please tell someone near you what you see as potential positives and negatives of learning contracts for your students.

AND, please stand as you share your ideas.

