



## Curriculum Descriptions

WINTER TRIMESTER  
**2010**

(CORE CLASSES ONLY)

# 6-7<sup>th</sup> Gr **MATH** Winter/Spring 2010

## **Summary: Number & Operations**

Comfort with numbers serves as the foundation for almost everything else that students do in mathematics – and for many things that they do in life. Students will deepen their understanding of numbers and relationships among numbers through practice, investigations, games and POWs.

Early curriculum will reinforce integer concepts of divisibility, factors and multiples, prime numbers, and perfect squares.

Later, students will deepen their conceptual understanding of fractions, with practice comparing and ordering fractions, identifying equivalent fractions, simplifying fractions, and writing fractions as mixed numbers, percents and decimals.

Toward the end of the school year, we will practice operations and computations with fractions including adding, subtracting, multiplying and dividing.

**Students will compile a portfolio of evidence that they are meeting the following learning targets.**

## **Learning Targets that Remain Consistent from Trimester to Trimester**

I can...

- 1) Use precise mathematical vocabulary.
- 2) Explain my thinking. This may include solving problems in more than one way.
- 3) Work cooperatively. This means that during group/partner work, I share my ideas, listen to others' ideas, and compromise.
- 4) Complete my work and turn it in on time.

## **Learning Targets Specific to the Number & Operations Strand**

I can...

- 5) Understand numbers, ways of representing numbers, relationships among numbers, and number systems
- 6) Understand meanings of operations and how they relate to one another
- 7) Compute fluently and make reasonable estimates.

## **Major Projects/Products**

Problems-of-the-Week, Individual, Group, and Family

Number Line Zoom

Students will “zoom” in on the number line between 0 and 1 and place all fractions with denominators between 2 and 8.

“A Week at REALMS” Pie Chart

Students will determine what fraction of their school week is spent in each class, lunch and passing periods and create a pie chart. This will involve converting fractions to degrees of a circle and measuring angles.

Classroom Games

Students will play a lot of games during class reinforcing concepts of factors, multiples, prime numbers, divisibility, perfect squares. We will play games with pizza (cardboard) to reinforce fraction concepts.

## **Anchor Texts & Resources**

*Navigating through Number & Operations in Grades 6-8, NCTM  
Mathematics: Applications and Connections, Glencoe McGraw-Hill  
Number Games from the Oregon Mathematics Leadership Institute*

# 6<sup>th</sup>/7<sup>th</sup> MATH INTERVENTION 2010

## Summary

The goal of math intervention class is to help students improve their understanding of math concepts and content, and improve their skills (with a focus on problem solving and computational fluency) in order to reach proficiency or better on their math class learning targets. An important supplemental goal is for students to target and improve their Habits of Work (HOW's) to bolster their abilities to meet academic learning targets.

Students will be able to:

- Identify their own skills and content "holes," set academic goals and steps to build understanding
- Identify HOW's they can improve upon and specific goals for participation, responsibility and determination
- Use on-line and other independent study resources to improve their computational fluency
- Apply what they are learning in Math Intervention class to their regular Math class
- Advocate for their own learning by communicating goals and progress with their math teacher
- Use assessment results to measure their progress meeting individual goals, set new goals.
- Learn test-taking strategies to help improve their performance on quizzes, state test

## Learning Targets

I can...

- 8) Identify the areas in math I don't understand and set goals for how I will learn what I need to know.
- 9) Use on-line and other independent study resources to improve my ability to compute math problems.
- 10) Monitor my progress: How am I doing and what should I be focusing on in Intervention to do better in Math?
- 11) Identify habits of work I can improve upon and set specific goals for participation, responsibility and determination.

During Intervention class, I will:

- 12) Show Habits of Work (HOW) for Participation: I show good attending skills to participate fully in whole-class, group/partner, and private work time. I respond to questions appropriately, share my ideas, listen to others' ideas, and compromise.
- 13) Show HOW for Responsibility: I advocate for what I need to learn. I complete my work on time and turn it in.
- 14) Show HOW for Determination: I accomplish high quality work and challenge myself to embrace adversity and uncertainty in order to reach proficiency or better on my learning targets.

## Assessments

Formative assessments  
(from classroom work)

Weekly probe data  
(track targeted Intervention)

Online math practice tests  
Word problem warm-ups

## Resources

Sarah Joyce, Special Education teacher & Lynda Beauchamp, Math teacher

*Pre-Referral Intervention Manual*

Glencoe's *Mathematics: Applications & Connections* Courses 1 & 2

*Math On Call* and other illustrated math dictionaries/references

On-line math resources (ALEKS, math-play.com, others)

# 6<sup>th</sup> - 7<sup>th</sup> Grade Science: ASTRONOMY

## WINTER 2010

### **Guiding Questions**

1. How old is the universe? How big is the universe? What is the structure of the universe?
2. What is the universe made of and how does it work - what laws and processes are involved?
3. How do we measure and classify objects in the universe?

### **Anchor Text & Resources**

**Literature:** Bulletin, Discover magazine, A Brief History of Time, by Steven Hawking

**Text Book:** "Astronomy"

**Technology:** computer simulation models, interactive web sites and videos

### **Summary of Expedition**

Within the astronomy expedition, we study space - from the beginning of the universe to the present moment. Students will learn how stars act as the creators of all of the naturally occurring elements (except for Hydrogen) in the universe. As a part of this investigation, they will learn the basics of the periodic table of elements and atomic structure. Our examination of our own solar system does not focus on factoids about the planets. Instead, students act as scientists, organizing and interpreting real data about the planets and classifying planets. We end the term looking at phenomena experienced on Earth - day and night, seasons, and phases of the moon. Throughout the trimester, we will continue our study of the process of science by making our own measurements and observations, and by examining how scientists measure, observe, and know what they know about the universe. Students will also gain skills interpreting scientific tables and charts.

### **Classroom Learning Content**

- History, size, and age of the universe
- Life Cycles of stars and the creation of elements
- Understanding the Periodic Table of Elements
- Organizing and understanding the scale of our solar system
- Astronomy on Earth - constellations, days, seasons, and phases of the moon
- Being an astronomer - observing and measuring, recording and organizing data, interpreting charts

### **Fieldwork Learning Experiences**

- Guest speaker from Sunriver Observatory
- Possible Fieldwork to Sunriver Observatory
- Moon Journal

# 6th TECHNOLOGY 2009-2010

## Summary:

Use technology to enhance literacy development and purposeful learning experiences across the curriculum. Build technology literacy by acquiring knowledge and communicating ideas using a variety of applications and publishing media.

Students will be able to:

- Identify personal strengths and multiple intelligences learning styles
- Improve typing speed and accuracy
- Become familiar with a variety of applications to communicate my thoughts, including:  
Kidspiration, PowerPoint/Keynote, Word, Excel, iMovie, iPhoto, GarageBand
- Research primary sources accessing a variety of databases and search engines
- Support learning experiences in humanities, science, and math using technology
- Enhance literacy skills by creating, editing and publishing work using electronic media

**Students will compile a portfolio of evidence that they are meeting the following learning targets.**

## **Learning Targets that Remain Consistent from Trimester to Trimester**

I can...

- 15) Improve my literacy development by accessing and evaluating information sources using a variety of technologies.
- 16) Create and publish ideas and opinions using a variety of technologies and formats, following safe internet communications protocols.
- 17) Improve my typing skills to enhance the speed and accuracy with which I communicate ideas.
- 18) Work cooperatively. This means that during group/partner work, I share my ideas, listen to others' ideas, and compromise in order to complete projects.
- 19) Complete and turn in my work on time.

Learning Targets and content areas are aligned with Oregon Dept. of Education standards which emphasize that technology literate students access and acquire knowledge, exchange ideas and opinions, solve problems and create, innovate and express themselves through the skillful use of a variety of technologies.

### **Major Projects/Products**

Community Ideals  
Typing skills  
Research data project  
Special interest project

### **Resources**

Mac Desktops & Dell Laptops  
Applications, tutorials, websites, databases  
Deschutes County Public Library and OSLIS database sources  
*Computer Projects for Middle Schools*, Teacher Created Resources (2000).

# 6<sup>th</sup> GRADE

## Life, Liberty and the Pursuit of Sustainability

### Guiding Questions

- How do the methods we use to produce food affect our earth and its inhabitants?
- How are the resources available to people relative to where they live?
- Why do we need to be aware about how we use our resources?
- Do students have a personal responsibility when it comes to sustainability?

### Anchor Texts & Resources

*Seedflocks* by Paul Fleisman  
*Ishmael* by Daniel Quinn  
*Project Wild*  
*Project Wild Aquatic*  
U.S. Census Bureau

### Summary of Expedition

6<sup>th</sup> grade students will begin to build background knowledge about how the current population of the world and the United States is impacting our global resources. The in-depth investigations students pursue will focus on water and food resources both locally and globally. Equity, environment and economy are three important factors that students will consider about the issues surrounding the use of the resources that we rely on to sustain life on this planet.

### Classroom Learning Content

Students will be able to develop, focus, and explain questions that help them learn about the environment and do environmental investigations.

Students will be able to locate and collect reliable information about the environment or environmental topics using a variety of methods and sources.

Students will be able to classify and order data, and to organize and display information in ways that help analysis and interpretation.

Students will become familiar with ways in which the world's environmental, social, economic, cultural, and political systems are linked.

### Key Skills

- Reading with understanding
- Organize and express opinions
- Writing to learn
- Writing to communicate (first person narrative)
- Considering multiple perspectives and recognizing bias
- Investigative skills
- Public speaking
- Use primary and secondary sources of information.
- Identify and develop action strategies for addressing particular issues.

**Major Projects/Products** - Students will create action plans that link a particular issue with water or food sources and apply it to their community.

**Fieldwork Experiences** - Visit Bend water sources and treatment facilities, visit local farms and food production facilities and culminate with a trip to Salem or Portland to visit facilities that promote sustainability for our water and food sources.

## 7<sup>th</sup> Grade Humanities

### Winter/Spring 2010: "Agents of Change"

<p style="text-align: center;"><b>Guiding Questions</b></p> <ul style="list-style-type: none"><li>• What are the factors that have created large scale societal problems?</li><li>• Do individuals have an obligation to try to help with these problems?</li><li>• How have individuals attempted to alleviate society's problems?</li><li>• How can I affect change in the world?</li></ul>	<p style="text-align: center;"><b>Specific Disciplines</b></p> <ul style="list-style-type: none"><li>• History/Economics/Civics</li><li>• L.A.-Reading, Writing, Critical Thinking</li><li>• Art</li></ul>
<p style="text-align: center;"><b>Expedition Summary</b></p> <p>This unit of study has two primary components:</p> <p>First, students will examine the root causes of large scale problems that occur in society. Our study will begin by discussing global issues and eventually narrowing our focus on problems that are specific to our own region. We will investigate these issues through the lenses of justice, equality and the role of each individual in society. Throughout the expedition, we will continue to identify those that have recognized problems and tried to actively solve them as "Agents of Change". One goal of this foray is to empower each student to believe that they can become change agents also.</p> <p>Next, Students will have an opportunity to become agents of change in Bend. We will analyze the needs of our local community and research non-profit organizations that try to alleviate those needs. Through a grant from the Oregon Community Foundation, our class will become charitable donors to worthy causes in our area. We will invite non-profits to apply for our grant money and then we will distribute funds based on criteria determined by the students.</p>	
<p style="text-align: center;"><b>Anchor Texts</b></p> <p>Three Cups of Tea; The Boy who Harnessed the Wind; Half of the Sky; Ishmael; Under the Overpass</p> <p><u>Periodicals</u>: Bend Bulletin, New York Times</p> <p><u>Web</u>: TED</p>	<p style="text-align: center;"><b>Concepts</b></p> <ul style="list-style-type: none"><li>• Economic, social, environmental factors of societal problems</li><li>• Social justice</li><li>• Civic duty</li></ul> <p style="text-align: center;"><b>Literacy</b></p> <p>Persuasive, expository, reflective writing</p>