Oregon Game Programming Project Challenge

2008 Winning Team PHRED from Philomath
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Today’s Goals

- Focus on being a coach or mentor
- I hope you leave:
  - Feeling more comfortable about your role
  - Having some more tools in your bag of tricks
  - Understanding better what it takes to solve a challenge.
  - Having gotten your questions answered
- Have some fun!!
Agenda

- Review our Mission
- Forming your team
- Registering your team
- Equipping your team
- Managing your team
Our Mission

- OGPC not just about programming a game and competing in tournaments
  - Teach Specific Technical skills
    - Program Planning, Design, Coding, Testing, Creating Sprites, Sounds, Documentation
  - Teach General life skills
    - Teamwork, Time Management, Cooperation, Communication, Responsibility
  - Show that team projects can be fun
  - The team members do the work
  - Expose kids to the possibility of technical careers
Questions You May Have

- Exactly what is the role of the coach?
- How much time does it take?
- What resources do you need?
- What do the team members get out of it?
- What knowledge and skills do you need?
- Oh, yeah, and what’s the score of the Duck’s or Beav’s game today?
OGPC 2.0 Season Overview

- Details of theme and project challenge announced.
- Registration Opens: Feb. xx, 2009
  - Web address:  http://techstart.org/ogpc.html
  - Registration fee: $50
- Registration Closes: Mar. xx, 2009
- Game Concept Document: Apr. xx, 2009
- Tournament: May 16, 2009
Forming Your Team
Where Teams Come From

- School Based
  - In class: Perhaps 45 minutes a day
  - After school: Perhaps 1.5 hours; 2 to 4 times a week
  - Special block: Several hours once a week

- Club Based
  - Probably after school or evening

- Independent team
  - After school, evenings, or weekends

We encourage you to find and include youngsters that normally would not have this exposure
Where to Meet

- Large enough space to handle the number of youngsters on the team
- Access to one or more computers
  - Some students can code a game while others create sprites or sounds, test previous modules
Team size

- High initial interest may fade
- Sub-teams of 2-3 can work in parallel
  - Research the theme
  - Learn programming techniques
  - Develop graphics
  - Prototype a game
  - Work on the presentation
- Eventually team must stabilize at 3 to 7 team members
- 4 students may be the “ideal”
You Need Adults, Too!

- **Coach** – The person in charge
  - Organizes the team
  - Does not need to be a techie
- **Mentor** – The technical guru
  - Provides technical advice
  - Provides the technical basics
- One person can play both roles
Coach – The Person in Charge

- Single point of contact for team
- Understands the OGPC program
- Management expertise more important than technical expertise
  - Recruits the team
  - Registers the team
  - Arranges for equipment
  - Schedules meetings
  - Sets the philosophy and instills team spirit
  - Is a good role model
Mentor – The Technical Guru

- Technical Advisor to assist the coach
- Teaches game programming design
- Helps set achievable goals
- Encourages structured problem solving
  - Follow typical engineering project models
  - Experiment with one variable at a time
Mentor could be…

- You
- Another colleague
- A parent
- A high school or college student
- An occasional visitor
General Advice to All Adults

- This is the students’ project, not yours
- Be a good role model
- Keep a positive attitude
- Encourage teamwork and insist on mutual respect
- Don’t over emphasize “winning” – demonstrating a solution at a tournament is success
- Help kids keep project in scope of the short season – they will have more ideas than time!
- Have fun
Team Ethics

- We are a team.
- We do the work to find the solutions with guidance from our coaches and mentors.
- We honor the spirit of friendly competition.
- What we discover is more important than what we win.
- We share our experiences with others.
- We display gracious professionalism in everything we do.
- We have fun.
Registering Your Team
Team Registration

- Opens: February xx, 2009
- Closes: March xx, 2009
- Web address: [http://techstart.org/ogpc.html](http://techstart.org/ogpc.html)
- $50 registration fee
- First-Come-First-Served, so REGISTER EARLY!!
Equipping Your Team
Minimum Resources to Start

- A copy of Game Maker – Lite Edition or Pro Edition
- A computer with Windows XP or Vista
- A place to meet and practice
  - Classroom
  - Family room
  - Garage
  - Community Room
Software Warnings

- School security may not allow GameMaker to be installed or run
  - Consider using personal laptops
  - GameMaker runs nicely from a Flash drive
- Provide a way to share work
  - Flash drives, email
- Teach kids to save versions as they go
Example Team Budget

- Registration Fee: $50
- Game Maker: $0 (Lite) or $20 (Pro)
- Transportation:
- Total:
- Extras: team shirts, snacks, etc
Possible Sources of team funding

- Fundraising Activities
- Team Sponsors
- TechStart Scholarship
- Team Member Dues

Having some portion of costs picked up by team members gives a sense of commitment.
Managing Your Team
Meeting Organization

- How often and how long to meet
  - Most teams meet 2-3 times per week
  - After school, evenings, weekends as team desires
  - Some add extra time as get closer to end
    - > 1 hr (set up and take down)
    - < 3 hrs (attention span)

- At least 2 adults present during meetings – can use parents who take turns

- Set ground rules -- E.g. don’t turn kids loose to walk home by themselves after dark

- Refreshments / snacks
Team Kick-off Meeting

- Consider inviting parents
- Set expectations with both
  - Goals
  - Season
  - Milestones
- Explain the real situation to the parents
Parent Involvement

- Explain program/philosophy
- Explain team rules
- Discuss participation commitment for team members
- Review costs and funding sources
- Communicate about tournament
- Solicit help – Roles for parents
  - Car Pooling
  - Snacks
  - Coordinate Fund Raising
  - Publicity
  - End of Season Party
**Getting Started with the Team Members**

- Set Team Goals
- Decide responsibilities
  - Can rotate, especially near beginning
  - Usually will want to be fixed as near tournament
  - Need backup roles due to absences
- Set milestones – use project management analogy
  - Set dates for each phase of project to keep on track
  - Include design, build, test, REWORK
- Encourage participation in a team environment
**Learning Opportunities**

- Encourage risk taking
  - “If you never fail, you never tried anything new.”
  - Albert Einstein
  - Key is to manage the risk
- Encourage experimentation
- Expect failure – focus on what is learned as a result
- Problem solving takes time – Edison’s experience with light bulb filament
**Facilitate Structured Problem Solving**

- Defining problem
- Brainstorming
- Evaluating alternatives
- Choosing alternative
- Implementing
- Evaluating & testing
Hard vs. Soft Skills

**Hard Skills**
- Mechanical Design
- Programming
- Software Design
- Analysis
- Problem Solving
- Experimentation
- Documentation
- Computer Graphics
- Testing
- Human Interface

**Soft Skills**
- Timeliness
- Teamwork
- Tact and Compromise
- Confidence
- Courtesy
- Perseverance
- Planning
- Positive Attitude

**Turn these youths into engineers**
Build a Foundation

- Introduce techniques and concepts
  - Build or bring demos
  - Discuss advantages and disadvantages
  - Let kids figure out how to apply concept to Challenge

- If meetings start before Challenge is announced, can use mini-challenges to introduce concepts

- One approach: use 5-10 minutes at start of each meeting to introduce concepts
Skill Builders

- Templates
- Simple Games to focus on a Concept
  - Examples found in free on-line tutorials
- Learning Exercises
  - Motion Control
  - Collisions
  - Game Flow
  - Levels of Difficulty
Sample Concepts

- Use of a theme
- Game Flow
- Consistency and Variation
- Scoring System
- Use of Animations
- Graphics
- Testing
- Documentation
Divide and conquer- Examples

- Game Designer
- Graphics & sounds
- Testing
- Marketing (Presentations)
- Rooms
- Levels
- Scoring
- Research
With All the Focus on the creating a game...

Don’t Forget the Judging
Technical Judging Interview

Programming
Game Research & Development
Game Experience

Panel of “experts” interviews teams

Prepare the team by:

- Encourage ALL members to participate in presentation responsibilities.
- Practice speaking in front of a group
- Learn how to listen to “judges” questions and respond or pass them off to a team-mate.
- Focus the presentation on how the game meets the requirements of the challenge
- Personalize the presentation
Team Performance Judging Interview

Presentation & Teamwork

- Another good learning opportunity

- Engineering requires Research skills and presentation skills
  - (remember the marketing kid? 😊)

“The Bizness”

2nd Place Teamwork Award
Many Awards your Team can win!!

Champion
Game Experience
Game R&D
Presentation
Programming
Teamwork
Our Mailing Lists

- ogpc-interest
  - All volunteers – you can opt out
  - One way from OGPC to our volunteers
  - We add you when you express interest

- ogpc-coaches-2
  - Coaches and mentors are added when you register your team
  - Communication from OGPC to registered coaches – very important channel
Next Steps

- Get on the OGPC interest list
- Register your team during Winter 2009
- Start recruiting your team
- GameMaker workshop is coming for coaches to learn details of using GameMaker software
  - Date and venue are TBA
- Download the free version from http://www.yoyogames.com
  - Start playing with tutorials from that site
Contact Us –
at the TechStart Foundation

Web site:  http://www.techstart.org/ogpc
Email:  ogpc@techstart.org
Phone:  503-802-5211

Students Evaluating Games in Arcade Room
Everybody leaves a winner!!