INCREASING ENGAGEMENT BY INTEGRATING GAME MECHANICS INTO METHODOLOGY

Presented by: drBOB Appelman

Clinical Professor Emeritus
Indiana University School of Education
at AECT Convention, KCMO, 2018

LET'S GET INTO GAMES !!!

- How many of you play board or video games ?
- How many have kids that play either ?
- How many of you teach ?

GAME **MECHANICS** ARE MUCH LIKE TEACHING **TACTICS**

- FOOTBALL is a game that you are most likely familiar with …
- E.g. – The goal of **football** may be described as

  a team trying to move a ball down the field and across an end line

- What about "international football" (or what we call **SOCCER**)
- These are both games but the "MECHANICS" of GAMEPLAY are considerably different
- You use TEACHING TACTICS to implement your TEACHING METHODOLOGIES

WHAT IS A **GAME MECHANIC**?

- Anything one DOES in a game is called a MECHANIC
  (or FUNCTION)
- Although there are "Standard Conventions",
  all games have different Mechanics
- Fortunately most games begin with an "**Orientation**"
  where the player learns the basic mechanics of that game.

1ST PERSON SHOOTER GAMES

Ideal Game Mechanic for use DRILL & PRACTICE, and PROCEEDURAL type LEARNING

- Medal of Honor
  ORIENTATION USING A KEYBOARD
- Halo
  IN GAME-PLAY USING A CONTROLLER

STRATEGY AND SIMULATIONS

Ideal Game Mechanic for use for SUMMITIVE EVALUATION, PRACTICE, and EXPERIENTIAL LEARNING

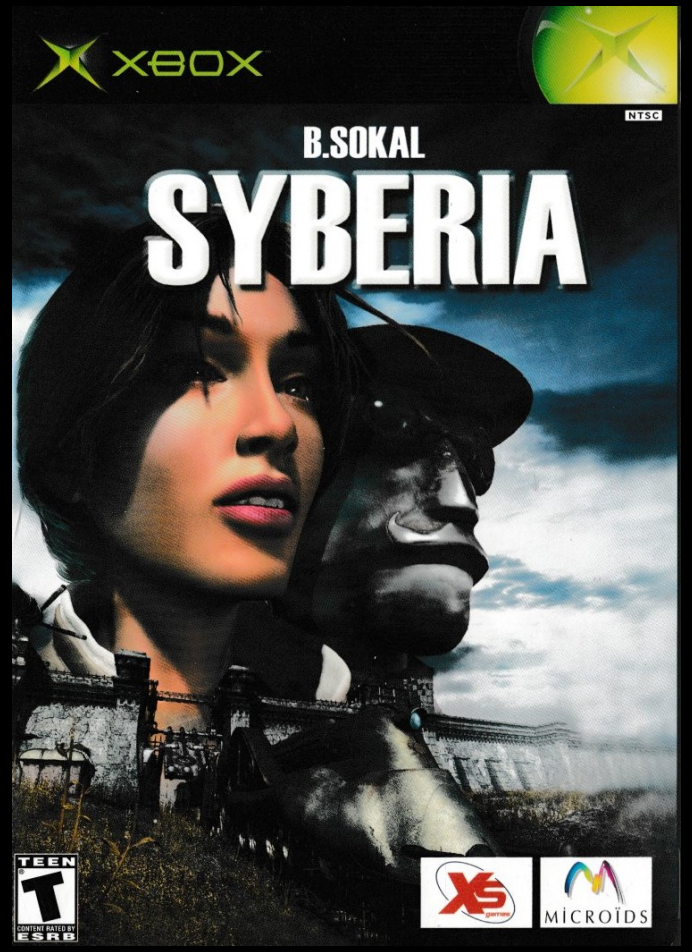
- ZOO TYCOON
  X-Box controller
- TENNIS
  Wii CONTROLLER

ROLE-PLAY ADVENTURE GAME (RPG)

Ideal Game Mechanic for use for DISCOVERY & PBL Learning

- SYBERIA
  X-Box controller

- CONTENT
- MAPS & LEVELS
- STORY LINE
- ORIENTATION
- BEGIN GAME-PLAY



LIVE –ACTION ROLE-PLAY (LARP)

Ideal Game Mechanic for use in a Classroom

- Harmony High School

Trial Run

- CONTENT & RESOURCES
- MAPS & LEVELS
- STORY LINE
- ORIENTATION
- BEGIN GAME-PLAY

IMPORTANT LEARNING GOALS

- WHY IS KNOWING WHAT IS DIRECTLY OVERHEAD (MY "ZENITH") SO IMPORTANT ?
- COMPARE RESPONSES FROM DIFFERENT GROUPS
- CAN YOU RELATE THE "FACTS ON THE CARDS" TO THE STORY ?
- HOW CAN YOU OBSERVE WHAT LATITUDE YOU ARE AT ?
- HOW CAN YOU OBSERVE WHAT LONGITUDE YOU ARE AT ?

MY "SUNDIAL" LESSON FLOW & TIMING

1. ORIENTATION
2. SIMPLIFIED TRIAL PLAY
3. BEGIN THE "STORY"
4. WORK THROUGH THE MAP
   (Gagne's Hierarchy & Dale's Cone of Experience)
5. Gather information to attack the primary BOSS QUESTION
   (How do you know WHERE you are & what TIME it is?)
6. Demonstrate the GLOBE/EARTH's REVOLUTION around the SUN
   (highlighting Equinoxes, Solstices, Shadows, Noon, etc.)
7. Describe parts of a SUNDIAL – both Static and Analemmic

REFLECTIONS

- The SCOPE of this content should cover 5 days
- The SEQUENCE could better be sub-divided into LEVELS for each day
- Homework would allow for elaboration by the students each day on what they researched beyond the information on the cards
- CHALLENGE QUESTIONS could be given to each group to “solve” amongst themselves before offering them to the class
- The GROUPS should be made up of students with specific skill strengths in either Science (Physics & Engineering), Geography (Life Sciences), or Astronomy
- As CARDS are “played” they should go into a box to identify points (score)

THANKS TO:

- HARMONY SCHOOL
  - Emily Prowls 5th & 6th Grade Science Class
- David Gudaitus, Director of Videography
- Alan Backler, Video Crew and Content Specialist

INCREASING ENGAGEMENT BY INTEGRATING GAME MECHANICS INTO METHODOLOGY

Resources Available at: http://www.appeldesign.com/ACADEMICS/

Presented by: drBOB Appelman

Clinical Professor Emeritus
Indiana University School of Education
at AECT Convention, KCMO, 2018