

## **4<sup>th</sup> Grade PBL: Amusement Parks**

### **PROGRAM SUMMARY:**

Fourth grade embarks on an interdisciplinary integrated PBL on amusement parks. The students gain real world experience by participating in a program to increase their understanding of economics and money systems and applied their knowledge about supply and demand as well as profit and loss and related it to the project. In all the different subject areas students experience and participate in different lessons all related to the amusement park. The project presents an opportunity to build and enhance our students' cooperative learning skills.

### **ESSENTIAL QUESTIONS:**

- How does an amusement park work?
- How is it built?

### **KICKOFF:**

- Students will participate in a virtual rollercoaster on the SMARTboard.
- From the students' perspective and with their input, they will make a web (brainstorm) of all the different facets of an amusement park.

### **PROGRAM INTEGRATION:**

#### **STEM:**

- Students will build amusement park rides from kits (Legos, Kinnex)
- Students will build roller coaster and amusement park rides from many different materials with no directions only using prior knowledge.

#### **Language Arts:**

- Students will research and write a five paragraph essay on an assigned amusement park somewhere in the world.
- Students will write a creative writing piece with the prompt "I am trapped in an amusement park."
- Students will listen to a read aloud by Carol Marsh "The Mystery at Walt Disney World" or the "Mystery at Hershey Park."
- Students will read informational text on different amusement park rides and analyze the text through vocabulary, comprehension questions.

**Social Studies:**

- Students will make a timeline of all the different amusement park rides creation dates, beginning as early as the 1800's- present.

**Technology:**

- Students will make a Popplet ( a webbing program to summarize facts about their amusement park).

**Hebrew:**

- Students will write a story in Hebrew about an amusement park.
- Students will create an advertisement for the amusement park in Hebrew.

**Science:**

- With teacher's assistance, students will carry out electricity-related experiments to help them understand how the rides work.

**Math:**

- Students will hone their measurement skills and will build carnival games using these skills.
- Students will use creative problem solving when building the games and the roller coasters.

**Music**

- Students will create a carnival jingle to be played in the park and by the games.

**Art:**

- The students will make souvenir coins with the logo to give out to guests who will attend their final program.

**ADDITIONAL STUDENT RESPONSIBILITIES:**

- Name their ride, including providing rationale for the name.
- Using their public speaking skills to present on their findings.
- Reflect on all parts of process

**CULMINATING ACTIVITY:**

Students will participate in a field trip to Cedar Point where they will enjoy the rides but also engage in a scavenger hunt to learn more about the park and the engineers who operate the various rides.

**COMMUNITY SERVICE:**

Students will donate carnival games to the Early Childhood classes.

**LESSON PLAN:****Week One**

- Kickoff and webbing
- Non-fiction article and informational read- continues through entire PBL
- Name the amusement park
- Math creative problem solving activities to help prepare for the building of the rides

**Week Two**

- Begin building the amusement park kit rides
- Assign an amusement park to research
- Teach how to do research
- Begin reading the read aloud- continues through entire PBL
- Begin unit in science on electricity
- Math begins measurement unit

**Week 3**

- Begin to write the creative writing story
- Continue with research

**Week 4**

- Begin writing the research paper with lessons on the process
- Begin planning and building the carnival games
- Students will reflect on the work and projects

**Week 5**

- Finish writing the paper and begin the Popplet in technology
- Begin the Hebrew story writing
- Begin writing the jingle in music

**Week 6**

- Make the advertisements for the park
- Begin building the roller coasters out of different materials

**Week 7**

- Make the timeline of all the amusement parks using a program on the computer
- Finish all other projects
- Begin making souvenir coins

## **Week 8**

- Prepare for the presentation
- Work on public speaking skills
- Make decorations for the amusement park
- Students reflect on projects and process

## **After Program**

- Donate games to early childhood
- Trip to Cedar Point.
- Overall reflection on entire PBL including presentation

## **PROGRAM IMPACT:**

- Offers opportunity for real collaboration among peers.
- Students learn to share ideas.
- Program strengthens students' problem solving skills and critical thinking.
- Through the program, students have been forced to think about the larger world around them (i.e., amusement and water parks and zoos) and how they actually work, behind the scenes and not just from the visitors' perspective. They are not in a better position to extrapolate to other entities.
- Students are now in a position to make real world connections (i.e., places have budgets, staffing and other needs). Businesses don't just run themselves and people work hard, behind the scenes, to make everything run well, efficiently and to ensure the public's enjoyment.

## **ASPECTS OF THE PROGRAM THAT WORK:**

- Engaging
- Fun
- Something to which the children can relate
- Allows for group and individual work.
- Hands-on experiences (being able to build things)
- Builds on prior knowledge of something they know
- Allows them to take fieldtrips (virtually and actually)
- STEM opportunities
- Public speaking opportunities
- Creativity
- Great opportunity for integration and PBL.

**ASPECTS OF THE PROGRAM THAT POSE A CHALLENGE:**

- The entire program is extremely time-consuming.
- Lack of resources of non-fiction reading on the topic at hand, at their reading levels
- Young students have a difficult time accepting failure and the roller coasters do not always work (tangentially, this is something that is actually valued by the teachers and provides a great learning opportunity).

**PHOTOS:** See PowerPoint