Launchball

1. Basic game info
   - Number of players
     1
   - Time to play
     3 - 30 minutes to get passed the levels depending on difficulty
     20 minutes or more for each extra level you design
   - Suggested ages
     9 and up
   - Description (goal and core mechanic in first line)

   Game : For each level, you are given a limited set of movable blocks. The goal is to make the ball reach the goal by placing these movable blocks on already existing immovable blocks that exist on every level. Besides the standard ramps and springs, there are many different types of blocks for your benefit (or detriment as the case may be). For example, there are fans and electromagnets to help get your ball moving. However, these require electricity, which may come from a number of different sources, including battery power, wind power, solar power, and geothermal power. And of course, the electricity has to get to these devices somehow. That's where the copper blocks come in. Copper also conducts heat. Finally there are battery blocks.

   Level editor: For each level, players start only with a ball and a goal and add all other types of blocks. As players progress in the game and add more levels, the types of blocks that you can add may increase.

   - Genre/ Platform
      Puzzle
   - Links to forums, reviews, pictures
   http://www.sciencemuseum.org.uk/launchpad/launchball/

2. What is the core learning activity of the game?
   The game teaches the basic concepts of electromagnetism in physics, but also helps children recognize and construct patterns as parts of a system.
   (i.e. how the space in relation to the blocks affects the movement of the ball)

3. What integrated domains does this game align with? What pedagogy does it suggest?

Integrated domain – 'The Way things Work'
Pedagogy – 'Designing Play', 'Systems Thinking',

4. Does this game have a level editor?
Yes

5. What kinds of social interaction does this game create? What are the qualities of that interaction?
There is no social interaction created by the game itself, as this is a single player game. However children may upload their games online and share them with their friends.

6. What are the 6th grade math curriculum standards that this game aligns with? (include full path)

1) Problem Solving

interpret information-identify the problem-generate strategies (procedure)
model problems with pictures , diagrams etc. (representation of action, of strategy)
trial and error method and the process of elimination to solve problems

2) Reasoning and proof

understand that : there are many strategies to solve the same problem
explain a rationale for strategy
make conjectures
verify claims
recognize patterns

3) Data statistics and probability

if/then statements
sets

4) Geometry

symmetry and transformations
measurement

7. Is the game simulating or modeling something? (real scenario, imagined scenario, predictive scenario, system)

The game models a spatial puzzle system.

8. What are the data sets that can be gathered through play of this game?
   - Students may collect data that reflects the moves they followed in order for them to solve the puzzle.
   (i.e. Students make schematics with the strategies they followed to solve the puzzle, how they had to move one type of blocks to position x and how that affected types of blocks in a position y)
9. How can these data sets be analyzed and manipulated?
   Experiment Quest: goal is to find out the results of a scientific experiment.
   Spy or Scout Quest: goal is to gather information and report back
10. Tags
   electromagnetism physics, geometry , patterns, puzzle