All combined suggestions for Science PBI
Suggestions from *The High Performance Toolbox*, S. Rogers & S. Graham (2000)

Performance Based Ideas for Science

1. "Relate physical characteristics of organisms to habitat characteristics (e.g. long hair and fur color change for mammals living in cold climates.
2. Identify and describe applications of physics principles in everyday life.
3. Build "models" in the community that teach difficult to perceive subject matter to the public. For example, build a scale representation that shows distances within the solar system. Develop and present supporting information that explains and justifies what has been built.
4. Design, execute, document, and report on an experiment.
5. Have high school students teach middle school students about chemical reactions using information and examples that are relevant to early teens.
6. Develop a landscape plan for a member of the community. The plan must be based on the expressed tastes, needs, and resources of the person and on the environmental needs and conditions of the region.
7. Design an experiment to show at what angle a three foot ramp should be placed to cause a marble that rolls down it to then roll the greatest distance across the floor. Describe, conduct, and report on your efforts.
8. Create a life form (simulated) for a given environment. Justify your conclusion.
9. Acting in the role of a particular species (e.g. grizzly bear), publish a newsletter that reports regularly on different region s and the advantages and disadvantages to you of living in or visiting these places.

Incorporating Technology, Science, and Language Arts

1. Describe through example, how familiar technologies can have positive and negative impacts on the environment and on the way people live and work. Make recommendations based on the findings.

Incorporating Technology and Science PBI Ideas

1. Compile a case study of a technological development that has had a significant impact on the environment and report the findings to an appropriate audience.

2. Choose materials based upon their acoustic properties to make a set of wind chimes. Explain your design and material selection.
3. Build a model to test an hypothesis.

Incorporating Science, Language Arts, and Social Studies

1. Adopt an endangered species and develop and share an analysis of the advantages and disadvantages of protecting and not protecting it.
2. Investigate the effects of alterations on cultural and/ or physical landscapes (e.g., construction of a mall, changes in local traffic patterns, rezoning from residential to commercial, etc.) in order to develop recommendations for how to maximize benefits and minimize disadvantages.

Incorporating Science and Language Arts

1. Develop, through research, a proposal to test a hypothesis of a given concept. Submit the proposal to an appropriate panel of judges who will rate the proposal on clarity appropriateness, and feasibility.
2. Research a planet and create an imaginary life form that could exist in that environment. Interview the "creature" about life on the planet and write an article for the human interest section of the Sunday paper.

Incorporating Math, Social Studies, and Science

1. Use sampling to determine, track, and predict the population of a targeted entity within an environment.

Incorporating Math, Science, and Technology

1. Find places in our community where the concepts we have been studying are being used or exist. Determine why each of the concepts was used the way it was or why each is an example of the concept. Put together a picture/ drawing album showing the application and the reason why it is an application. Use your album to teach younger students the reasons why what we're learning is important.
2. Given trends or sample data, make and justify predictions.

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Incorporating Math, Science, Technology, and Social Studies

1. Given multiple or competing interpretations of given data, justify each interpretation.
2. Make predictions based on the identification and analysis or trends.

Incorporating Math and Science

1. Many people believe J.F. Kennedy was shot by someone on the "grassy knoll". Prove or disprove the "shot fro the grassy knoll" theory using physics, mathematics, and publicly available archives.
2. Make a record of reported earthquakes and volcanoes during the past 20 years. Identify and interpret the pattern formed worldwide. Report your findings and interpretations through the use of appropriate graphics. Make predictions based on observed trends.

Major Interdisciplinary Performances Ideas

1. Collect news reports from overseas, and in groups work to produce an international newspaper that reflects the perspectives in foreign countries with those in the United States.
2. Produce a well supported recommendation to consumers based on a study of "truth in advertising."
3. Write and share or perform stories/ plays around real-world problems and solutions.
4. Based on a survey of at least 20 students and 10 parents of children between the ages of 5 and 10, determine the predominant position in hour sample toward regulating violence in cartoons on Saturday mornings. Develop and present a position paper to be presented to your local television station that represents this predominant position and supports it using the constitution and recent court rulings.
5. Create and operate a micro-society.