

# HIGH SCHOOL SCIENCE CHECKLIST

## Goal 11

### Illinois Learning Standards A & B

#### Assessment Frameworks

PSAE test questions are derived from this list.

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#### SCIENTIFIC INQUIRY

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\_\_\_\_\_ Understand and follow procedures to do scientific investigations, including understanding the design and procedures used to test a hypothesis, organizing and analyzing data accurately and precisely, producing and interpreting data tables and graphs, applying statistical methods to the data, and being able to evaluate conclusions. Examples of specific ways this might be assessed: Recognize what a described experiment is testing; identify which experimental results best support a given hypothesis or which experimental results most definitively overthrow the given hypothesis. **AG**

\_\_\_\_\_ Distinguish among the following: observation, drawing a conclusion based on observation, forming a hypothesis, conducting an experiment, organizing data, comparing data. **AG**

\_\_\_\_\_ Identify possible sources of error in an experiment. **AG**

\_\_\_\_\_ Distinguish and define the following components of typical experiments: constants, variables, experimental group, control group (or control setup). **AG**

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#### TECHNOLOGICAL DESIGN

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\_\_\_\_\_ Identify a technological design problem inherent in a given product. **AG**

\_\_\_\_\_ Out of different lists of criteria, select the list of criteria outlining a successful design solution to a given problem. **AG**

\_\_\_\_\_ Given test results on different models, choose the model which best solves the design problem. **AG**

\_\_\_\_\_ Given a description of a test to be performed on a model, select from a list of options what are the possible sources of error in conducting the test. **AG**