# 4-H Science Checklist

A "Science Ready" 4-H experience is a program that is framed in Science concepts, based on Science standards and intentionally targets the development of science abilities and the outcome articulated by the 4-H Science Logic Model. Additionally, it integrates the Essential Elements and engages participants in experiential and inquiry based learning. In addition to the following criteria below, it's also recommended that science programs offer a sustained learning experience which offers youth the opportunity to be engaged in programs with relevant frequency and duration. Utilize the following checklist to self assess the program you deliver.

***To meet the needs of children, youth and the nation with high-quality science, engineering and technology programs...***

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| ☑ | **Are you providing science, engineering and technology programs based on National Science Education Standards -** Science education standards are criteria to judge quality: the quality of what young people know and are able to do; the quality of the science programs that provide the opportunity for children and youth to learn science; the quality of science teaching; the quality of the system that supports science leaders and programs; and the quality of assessment practices and policies. **http://www.nap.edu/readingroom/books/nses/** |
| ☑ | **Are you providing children and youth opportunities to improve their Science Abilities?**<br><br>Predict, Hypothesize, Evaluate, State a Problem, Research Problem, Test, Problem Solve Design Solutions, Measure, Collect Data, Draw/Design, Build/Construct, Use Tools, Observe, Communicate, Organize, Infer, Question, Plan Investigation, Summarize/Relate, Invent/Implement Solutions, Interpret/Analyze/Reason, Categorize/Order/Classify, Model/Graph/Use Numbers, Troubleshoot, Redesign, Optimize, Collaborate, Compare |
| ☑ | **Are you providing opportunities for youth to experience and improve in the Essential Elements of Positive Youth Development?**<br><br>Do youth get a chance at **mastery** – addressing and overcoming life challenges in your programs?<br>Do youth cultivate **independence** and have an opportunity to see oneself as an active participant in the future?<br>Do youth develop a sense of **belonging** within a positive group?<br>Do youth learn to share a spirit of **generosity** toward others? |

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|  | **Are learning experiences led by trained, caring adult staff and volunteers acting as mentors, coaches, facilitators and co-learners who operate from a perspective that youth are partners and resources in their own development?** |
|  | **Are activities led with an experiential approach to learning?** |
|  | **Are activities using inquiry to foster the natural creativity and curiosity of youth?** |
|  | **Does your program target one or more of the outcomes on the 4-H Science Logic Model and have you considered the frequency and duration necessary for youth to accomplish those outcomes?** |