

**4-H STEM Survey**

**Please tell us how much you agree or disagree that being in this 4-H program has changed how you think about STEM and use STEM.**  (Check one box [x]  in each row.)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | *Strongly Agree* | *Agree* | *Disagree* | ***Strongly Disagree*** |
| I liked doing the activities in this STEM program. |[ ] [ ] [ ] [ ]
| I want to learn more about STEM. |[ ] [ ] [ ] [ ]
| I like STEM. |[ ] [ ] [ ] [ ]
| I think STEM is useful in my everyday life. |[ ] [ ] [ ] [ ]
| I know more about (*insert STEM content*) now. |[ ] [ ] [ ] [ ]
| I know more about careers and jobs related to STEM. |[ ] [ ] [ ] [ ]
| I can … *insert STEM ability question(s)* |[ ] [ ] [ ] [ ]
| I can … *insert STEM ability question(s)* |[ ] [ ] [ ] [ ]
| I can … *insert 21st century skill question(s)* |[ ] [ ] [ ] [ ]
| I can … *insert 21st century skill question(s)* |[ ] [ ] [ ] [ ]
| I used something I learned in this program outside of 4-H. |[ ] [ ] [ ] [ ]
| What did you do? |

**STEM Ability Survey Questions**

Customize the end-of-program survey to the STEM Ability that your program focused on. Copy and paste the appropriate question(s) into the survey where indicated.

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| **STEM Ability** | **Survey Question** |
| **Build/Construct** | I can build something by putting materials together. |
| **Categorize/Order/Classify** | I can put objects or events in groups or classes. |
| **Collaborate** | I can work with others. |
| **Collect Data** | I can record information about objects and events in an organized way. |
| **Communicate/Demonstrate** | I can communicate information to another person. |
| **Compare/Contrast** | I can identify and describe similarities and differences. |
| **Design Solutions** | I can create a written plan that identifies a problem to be solved and the needs of the solution (time, money, tools, materials). |
| **Develop Solutions** | I can create an organized plan to develop many possible solutions to solve a problem. |
| **Draw/Design** | I can use graphics or images to represent a plan of action for a process or an idea for something tangible like a building.  |
| **Evaluate** | I can examine and judge data. |
| **Hypothesize** | I can make an educated guess about how things work. |
| **Invent/Implement Solutions** | I can create and apply a solution to solve a problem. |
| **Infer** | I can explain an observation based on my previous experience. |
| **Interpret/Analyze/Reason** | I can find a pattern within a collection of data.  |
| **Measure**  | I can use a measuring tool to find a numerical value (such as weight, height, length, volume). |
| **Model/Graph/Use Numbers** | I can create a graphic, diagram, or chart that will explain information to others.  |
| **Observe** | I can use my senses to get information about myself or the world around me.  |
| **Optimize** | I can make the best or most of a condition. |
| **Organize/Order/Classify** | I can gather objects or ideas and arrange them in a way that makes sense. |
| **Plan Investigations** | I can use the Scientific Method. |
| **Predict** | I can foresee future observations based on previously known information.  |
| **Problem Solve** | I can think through a problem and possible solutions to find the best way to handle it.  |
| **Question** | I can ask a question about something I observe that can be answered by collecting data.  |
| **Redesign** | I can revise a drawing, sketch or plan based on new information.  |
| **Research a Problem** | I can explore an issue to find and understanding its facts.  |
| **State a Problem** | I can assess a need in order to define the problem to be solved.  |
| **Summarize** | I can make a brief statement giving the main points or substance of a matter. |
| **Test** | I can conduct an experiment to find if a hypothesis can be supported.  |
| **Troubleshoot** | I can find the source of a problem so that it can be solved. |
| **Use Tools** | I can use instruments to understand science.  |

**21st Century Skills Survey Questions**

Customize the end-of-program survey to the 21st Century Skills that your program focused on. Copy and paste the appropriate question(s) into the survey where indicated.

|  |  |
| --- | --- |
| **21st Century Skill** | **Survey Question** |
| **Critical Thinking** (thinking deeply; thinking differently)Students analyze information, solve problems, and create new knowledge | Using technology, I can identify real issues for my school, community, or world and state real questions to explore. |
| Using technology, I can plan and manage activities for completing a project or solving a problem. |
| Using technology, I can collect and analyze data to accomplish a variety of tasks and to solve problems. |
| Using technology, I can explore an issue from many sides and suggest more than one possible solution. |
| **Collaboration** (working together, learning together)Students communicate and work collaboratively to support learning and contribute to the learning of others | I can work with others to develop technology-based presentations or exhibits.  |
| I can communicate information and ideas to others using a variety of formats. |
| I can use technology to interact with people from other cultures, communities, or countries. |
| I can contribute to a team project that explores and shares specific information. |
| **Invention** (creating solutions)Students assess real-world problems and invent new solutions. A focus on creativity is essential to prepare students for the future | I can use my knowledge to think of new ideas to solve challenges. |
| I can express myself in creative ways.  |
| I can use models to explain results. |
| I can see trends and make guesses about future results based on information I’ve gathered. |
| **Self Direction** (own your learning)Students set goals, organize their assignments and manage their academic time to develop a strong, balanced work ethic. | I use technology in safe, legal and responsible ways. |
| I can select and use technology to improve how I communicate, collaborate, be productive, and achieve goals. |
| I can describe how I select and use technology in my personal learning and for school projects. |
| I can identify and talk about the effects of technology on individuals, society, and the world. |
| **Information Literacy** (untangling the web)Students use tools to gather and evaluate information to determine validity and reliability. | I can plan the steps I will take to investigate a question.  |
| I can use technology to find and organize important and reliable information from a variety of sources. |
| I can compare and contrast the effectiveness of two or more information resources and select the best one to accomplish an assigned task. |
| I can use technology to process data and report results. |
| I can demonstrate that I understand and can use technology to complete learning tasks. |
| I can select and use appropriate technology applications for use in my learning. |
| I can troubleshoot common computer problems. |
| I can apply what I know about technology to new technologies and situations. |