Technology Integration Ideas

TechnoQuestionnaire integrates into mathematics or science curriculum. There are eight steps to conducting a survey questionnaire. Students complete each step in the research process:

1. *Set the Purpose* – Determine the reason or goal of the survey.
2. *Pick Sample* – Select the group of people that will take the survey.
3. *Choose Survey Method* – Decide on the technique used to collect data.
4. *Create Questionnaire* – Design questions to measure behavior, opinions or beliefs.
5. *Pre-test* – Take the survey to find errors and make improvements to the survey.
6. *Conduct Survey* – Gather data by emailing a form or sharing a link to the survey.
7. *Analyze Results* – Study the data in a spreadsheet and as graphs.
8. *Report Findings* - Explain research findings in an oral presentation.

Survey Questionnaire Suggestions:

✓ *Brainstorm to Generate a Research Question:* Picking a research question can be quite difficult. A great way to have your students determine what they would like to study is to complete the *Extension Activity 1 Brainstorm Survey Ideas*. If time is an issue, you may want to select several ideas and allow students to pick from your list.

✓ *Pose Relevant Research Question*: It is a good idea to have students select a meaningful research question whose results can be used to describe or improve a situation related to themselves. This gives the activity a greater purpose. For example students could investigate new materials for the library; clubs offered to students; or ways to increase involvement in the school play.

✓ *Form Research Teams:* Developing a survey questionnaire requires a high-level of critical thinking to generate meaningful, relevant questions. Form pair groups. This will allow students to discuss their ideas together.

✓ *Pick a Population and Sample Group that is Easy to Access:* Consider having students select their sample from a population that they can research while at school. For example, they could select a particular class, grade, club, age, or group such as teachers, parents, students, or teenagers.

✓ *Plan Ahead to Survey the Sample Group:*

   o *Mobile Survey* – Will students give participants the survey using a mobile device such as a phone or tablet? This method will require devices and WIFI.

   o *Email Survey* – Will students email the survey to participants? This method will require students to compile a list of email addresses ahead of time.

   o *Web-based Survey* – Will students provide a link to the survey on a piece of paper, or digitally using a web page or bookmark? This method will require students to post the link ahead of time.

   o *Survey Document* – Do you need an easy solution for giving many surveys to other classes? Create a document that includes a numbered list of Survey Titles. Create a hyperlink from each Survey Title to its survey. Provide participants access to the document and the survey number they should take.

▷ *Managing the Logistics of Data Collection:* If you have one or more classes completing this project you have MANY students needing to collect data.

  o *Participants are from the Same Class:* Assign each student in a class 10 surveys they must complete so that everyone has enough data to analyze.

  o *Participants are from Specific Grades or Classes:* Request permission from other classroom teachers for their students to take surveys. Create a *Survey Document* (as described previously) to give a large group of participants access to surveys.

  o *Participants are from a Range of Grades, Classes, or Clubs:* Open the survey on a mobile device. Set up the device in the hallway, library, foyer, or other location. Invite participants to complete the survey.

▷ *Delve Deeper into Research Design:* Depending on the age of your students you may want to focus on concepts such as sample bias or question bias. If these areas are important to you complete *Extension Activities 1 and 2*.

▷ *Assessment and Evaluation:* Several tools are provided to assess and evaluate the questionnaire and presentation of findings. These documents are customizable and are located in the *Assessment Tools* folder.

Note: Your curriculum documents may list teaching mean, medium, and mode as part of a survey project. This requires qualitative or "numbered" data. Since the majority of questions in the survey questionnaire provide categorical data or "text" data, those concepts are not taught.