

# Console Gaming

## Telecommunications Lesson Plan for Collecting and Displaying Data

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**Title:** Console Gaming

**Grade Level:** 6<sup>th</sup>

**Subject Area(s):** Math, Language Arts, Computer Technology

**Objectives/SOL's:**

- The student will be able to collect, organize, and display real-world data in a variety of graphs including circle graphs.
  - *Mathematics SOL 6.14* The student, given a problem situation, will construct circle graphs.
- The student will be able to make inferences using a variety of graphs including circle graphs.
  - ⊖ *Mathematics SOL 6.14* The student, given a problem situation, will draw conclusions and make predictions, using circle graphs.
- The student will be able to write a narrative description of data used in graphs.
  - *English SOL 6.6* The student will write narratives, descriptions, and explanations.
- The student will be able to create an online survey and computer-generated graphs as a solution to a real-world problem.
  - *Computer Technology 6-8.8* The student will use technology resources for solving problems and making informed decisions.
    - a) Employ technology in the development of strategies for solving problems.
    - b) Use a variety of technologies to identify and provide possible solutions to real-world problems.

**Overall Description:** Students have seen and interpreted bar, line, and circle graphs. They have determined the essential components of all graphs (i.e. title, labels, key and appropriate scale). Students can also make decisions about which type of graph to use to best display data given and how to create a graph that is not misleading. For this lesson, an authentic problem will be displayed visually and explained audibly about “Game Informer” magazine requiring help in collecting data and creating graphs for an article in one of their upcoming issues about preteens and console gaming. “Game Informer” requests that students create a ten question survey to collect data about favorite console, owning a console, time spent playing video games, playing mature rated games, etc. Students will collaborate as partners to create a survey using GoogleDocs forms. Students will then conduct the survey and get at least 30 respondents that fall within their peer age group. Upon completion of data collection, partner groups will analyze the data and interpret the best types of graphs to create for organization and display of the survey data (i.e. circle graph for favorite console, bar graph for console ownership and playing mature-rated games, line graph for length of console ownership and time spent playing video games). As a final product, students will create each graph using their survey summary spreadsheet and a narrative description that infers conclusions about their peer group and console gaming based on their graphs. Their final product will be emailed to “Game Informer” magazine for consideration of inclusion in their article about preteen gaming. In the next lesson, the teacher will display all student-created circle graphs alongside teacher-created other graphs showing the same

information so that classes can compare and contrast circle graphs to other types of graphs showing the same information.

**Type/Source/Description of Tool:** Students will accept a *cooperative challenge* to use *asynchronous communication* by conducting a *web survey* using GoogleDocs where they will gather information and create graphs to *e-mail* as a solution to article information needed by a magazine.

**Description of**

- a. **Authentic Problem:** I have received a letter from “Game Informer” magazine published by the retail store “GameStop”. “Game Informer” is considering an article for publication about preteen gaming. They are requesting that students from this age group help them collect data about console gaming and create displays of the data for the article. Examples of information they will consider using in the article include favorite console of preteens, console ownership, amount of time age group spends playing video games, playing mature rated games, etc. We should help “Gamer Informer” out by creating ten question surveys to gather some information from fellow students and use the information gathered to create some graphs for them to use in their article.
- b. **Clear Outcome/Product:** One bar graph, one line graph, and two circle graphs with a description of inferences for use in the magazine article about preteen console gaming.
- c. **Thinking Skills:** Students will *plan, organize,* and create an effective survey using *questioning skills*. Students will *retrieve information* from the survey and then *infer attributes* of the information to *classify* the information into categories for best creating different types of graphs. Finally, students will *draw conclusions* about the information displayed in the graphs to create a narrative description.
- d. **Software Skills:** Students have prior knowledge turning on and logging in to a computer workstation, the basics of internet navigation (going to Internet Explorer, using a hyperlink to navigate to a website, and logging in to the website). Students will learn how to create an online survey using GoogleDocs forms. Students will have experiences creating item questions, changing question types and changing options such as theme. Students will share the online survey by copying and pasting a hyperlink to a class word document and saving the document. Students will view a summary of the results of their survey and insert charts (graphs). To create charts, the teacher will have to demonstrate to and provide a cheat sheet for the students on how to insert a chart, selecting data ranges, choosing a chart type, and giving the chart a name. Students will then use the insert chart icon to create a graph on their summary spreadsheet. Students will select the appropriate data ranges, choose a chart type, and use a tab system to find the correct tab in which they can label their graph. Students will then have the experience of using e-mail to send their document along with a narrative description of their graphs. This experience will include learning how to add recipients to an e-mail, share a link via e-mail, in addition to typing and sending an e-mail document. Some will have prior knowledge with these skills while others will need to use a teacher-created cheat sheet to follow the steps in creating and sending an e-mail.
- e. **SSCC:** Students will *search* for and *create* ten effective and appropriate survey questions about preteen gaming in which the results can be displayed in a bar, line, or circle graph. Students will *sort* the data collected from the surveys into effective categories that can be used to *create* bar, line, or circle graphs. Students will *create* one bar, one line, and two circle graphs that effectively *communicate* the results of their survey. Students will *search* and *sort*

the information in the graphs to *create* inferences that they will *communicate* in a description of their graphs.

### **Sequence of Events:**

#### Lesson Timeline

- Three Sixty Minute Class Periods

#### Materials

- Classroom Projection System
- Authentic Problem SMART Notebook
- Laptops (1 per student)
- Access to GoogleDocs
- Navigating GoogleDocs Forms Cheat Sheet (1 per partner group)
- Shared Drive Teacher-created Document for Student Hyperlink Posts
- Creating and Sending an E-Mail Cheat Sheet (1 per partner group)

#### Instructional Sequence

- Teacher will introduce authentic problem visually (classroom projection system) and audibly.
- Teacher will start a class discussion about creating effective survey questions.
- After teacher demonstration, students will partner up, get a laptop, navigate the Internet, and create a survey using GoogleDocs.
- Teacher will offer aid in copying and pasting hyperlink to teacher-created document on student shared drive.
- Students will post the hyperlink to their survey in a document on the student shared drive and save the document.
- Teacher will instruct all students to get a laptop and open the document of hyperlinks on the student shared drive.
- Students will access other surveys using the hyperlinks posted in the shared document and complete at least 30 surveys individually.
- Teacher will demonstrate accessing survey summary spreadsheet and creating graphs using GoogleDocs.
- Students will access their partner group's summary spreadsheet and categorize the data results in to the best graph display.
- Students will create one bar, one line, and two circle graphs using GoogleDocs and their survey data results.
- Students will compose an e-mail with a narrative description of inferences about their graph data to "Game Informer" magazine and attach a hyperlink of their survey summary spreadsheet with graphs before sending.
- Teacher will respond to all e-mails sent to "Game Informer" to offer feedback and a clear closure of the activity.

**Evaluation Strategy:** Teacher will evaluate each survey summary sheet for proper criteria and mathematical reasoning using the attached rubric:

<b>Console Gaming Data Analysis</b>			
<b>Criteria</b>	<b>1 Point</b>	<b>2 Points</b>	<b>3 Points</b>
	Missing or incomplete.	Complete but contains ineffective questions.	Complete and effective.
Survey			
	Missing or incomplete.	Complete but ineffective use.	Complete and effective.
Bar Graph			
Line Graph			
Circle Graph One			
Circle Graph Two			
	Missing or incomplete.	Complete but contains errors and/or incorrect predictions.	Complete and effective.
Narrative Description			
<b>Total:</b>			<b>/18</b>

## **Telecommunications: Tools for Life-Long Learners**

According to Norton and Sprague, telecommunications is “communication at a distance,” but many people think of it as using a computer to communicate. No longer is learning confined to the four walls of the classroom because through telecommunications the world’s cumulative knowledge can become available to educators and learners. Telecommunications tools customize life-long learning opportunities by enhancing digital literacy, promoting higher level thinking and software skills, and having the affordances required to authenticate learning.

In the words of Paul Gilster, “Technology is not merely machinery, it is a fashioning of implements”. Being as it takes more than a simple instruction manual to navigate today’s Internet effectively it is important that we educate our children in digital literacy. Being able to evaluate web resources for trustworthy content is a skill that must be practiced by our youth. To go blindly into the great beyond we know as the World Wide Web would create a group of uneducated adults. Due to the falsities that one would find and believe, a digitally illiterate person would not know what the community needed even if had the will to do it. Teaching students to evaluate web resources can be tricky as they often believe that if it is printed it must be true. Using telecommunications tools, one can *off-load* the teaching of digital literacy while teaching other aspects of their standardized curriculum. Through collaboration during such lessons, students can discuss and adapt skills necessary to properly evaluate web resources and develop netiquette. Telecommunications tools can be used in modern education to meet the learners’ needs and gradually immerse them in digital literacy.

The use of ACTS is intertwined greatly with integrating telecommunications tools in schools. ACTS means giving students an authentic problem in which they use thinking and software skills to create a clear outcome. Authentic problems are those that life-long learners will see in the community and solve no matter what age they may be. Using an authentic problem hooks students and brings learning alive. The thinking and software skills required in creating a clear outcome such as an on-line survey are essential for doing what the community needs in a future knowledge based society like the one described in “Revolutionary Wealth”. To create such a survey, students must have the software skills necessary and be able to plan, organize, create and then classify and infer results. Often students need to collect data in order to create a graph so this is a timely and effective way to do so. Learning that this is the timeliest and most effective way to get results fast means that as adults and life-long learners they will be able to easily survey problem areas and create appropriate solutions.

Telecommunications tools have the perfect affordance for ACTS. In a WebQuest it is easy to create an authentic introduction that hooks the reader and has them move on to the task which lists a clear outcome. Using web resources, students complete the task and therefore solve a real-world situation. According to J. Abner Peddiwell, they are in essence an educated person, knowing what the community needs and having the will to do it. WebQuests are a simpler version of the computer simulation software on Ender Wiggin’s tablet as described in “Ender’s Game”. They allow learners to take on a role and collaboratively arrive at a solution taking them to the next step and finally a clear outcome. Although they may not have an effect on the real problem, they will be lead to believe their solution was taken into consideration and does matter.

The *scaffolding* provided by such telecommunications tools customizes the learning experience and has each learner arriving at a solution that suits their abilities.

Just like Collins and Halverson's "Rethinking Education in the Age of Technology", I believe that the way computers have transformed our workplaces and lives can and should be adapted to transform American schooling. Through digital literacy, higher level thinking and software skills, and authentic learning, telecommunications tools expand the classroom beyond four walls and a sole deliverer of information to bring learning alive for the *NetGeneration* to collaborate and customize their own life-long learning opportunities.