



Lesson Activity Sheet

School: Malpas Court

Date: 27/01/15

Class size: 20-30

Year group: 6

Application used: Numbers (spreadsheet) and Minecraft

Resources: 15 ipad minis, interactive whiteboard

Topic: Handling Information - Understanding Pie Charts

Overview:

This lesson uses Minecraft to get across the idea of extracting data from objects.

Week 3

Learning Objective/s:

1. To understand what types of data can be displayed with a pie chart
2. To be able to produce relevant data that can be used in a pie chart

Learning Outcome:

Each child will have used data collected from an object in minecraft to produce a table to data and a pie chart. This will allow them to understand how different graphs can have different purposes in everyday life.

LESSON OUTLINE

Input (5-10 mins)

Teacher to discuss with class how a bar graph (which they produced in previous weeks) displays a data in a different way to a pie chart. Using the whiteboard, a number of examples are displayed.

Starter (10 mins)

Teacher to place a table on the whiteboard displaying different amounts of blocks in minecraft (eg, 10 glass blocks, 15 green blocks, 25 dirt blocks). Children in groups of two or three are then to produce some sort of shape using only the blocks displayed on the board.

Input (5-10 mins)

Teacher to stop the class and ask the groups to hold up and show what they have produced in minecraft. Teacher to then generate a pie chart using the figures the children just used to produce their shapes. Teacher to then discuss that the shapes they just made are 10% glass blocks, 15% green blocks, etc.

Activity (20 mins)

Teacher to place a piece of pixel art created in minecraft on the white board. Children are then asked to extract data about how many blocks have been used and what kind (by counting them from the board). They are then to produce a table and generate a pie chart based on the pixel art.

extension: Brighter pupils can see if there are any other types of graphs they can generate that will display the data correctly.

Plenary/Reinforcement (5-10 mins at the end)

Recap on learning objectives and ask pupils to shout out their results for each block one group at a time and to compare results. Then discuss why there may be some discrepancies between the groups (did some groups count incorrectly, etc).

It is important to gauge the level of learning that has taken place across the whole class and so to that end it is often appropriate to have a show of hands for each learning objective. Pupils can show 1 to 5 fingers indicating how well they feel they grasped each concept or learning objective. Alternatively, you can use a simple sketch app to turn the iPad into a mini whiteboard that they can hold up with a number drawn on.

.....

Differentiation and Extension

For the less able pupils secondary 1to1 input may be given when the data entry and data extraction portion of the lesson.

For the more able pupils there is an opportunity to explore what other graphs can display the data correctly. If the entire class complete the activity quickly displaying another piece of pixel art with different blocks is an option.

National Curriculum:

- 1. Handling Information**
- 2. Recording and entering data**
- 3. Manipulating and displaying data**