

Cathode Ray Tube Experiments ~ Project

Name: _____

Potential Credits: /15

Using a pencil, answer the following questions. The lab is marked based on clarity of responses, completeness, neatness, and accuracy. Do your best! Please ensure that any data measured (or recorded) includes the appropriate number of significant digits (only one uncertain digit).

Background:

The experimentation of cathode rays can be traced back to a famous physicist from England, J. J. Thomson. He performed a series of ground-breaking experiments that helped to define and manipulate cathode rays found in Cathode Ray Tubes (CRTs).

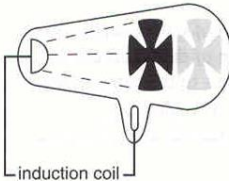
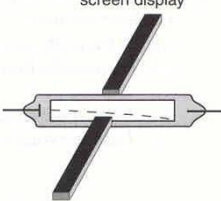
Your task is to research the significance of the four main CRT experiments below and discuss how they were interpreted. The four CRTs were set up as follows

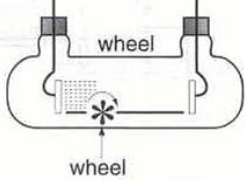
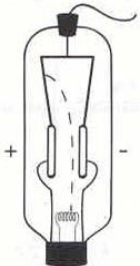
- One contained a “Maltese cross”
- One contained electric plates
- One simply had a fluorescent display screen
- One contained a glass wheel

Research:

Describe the basic structure and function of a cathode ray tube from this era. Include any significant dates and scientists.

Complete the table below

Cathode ray tube	What was observed	What this showed
Maltese cross tube 		
Screen display tube with magnets 		

Cathode ray tube	What was observed	What this showed
Paddle wheel tube rotating wheel 		
Screen display tube with electric plates electric plates 		

Please cite all sources in a basic bibliography at the end.