Project: Modeling Pasteur's experiments

Aim: Investigate Pasteur's experiment and model this using your two bottles.

Instructions:

- Qualitative data (without numbers) is just as important as numerical data
- You are given 2 bottles of nutrient broth that have been boiled and sealed
- Make observations of what happens to each bottle over 8 days
- From your results deduce what this tells us about cells

Research Question: Can cells spontaneously generate?

Background Information:
What did Francesco Redi do to disprove spontaneous generation? Outline his experiment :

What did Louis Pasteur do? Outline his experiment:

Background Information: What did Louis Pasteur do? Outline his experiment:

***Qualitative data**:*

Flask	*Prediction*
1 (covered)	
2 (uncovered)	

	Qualitative Observations			
Flask	*Day 1*	*2*	*3*	*4*
1 (always covered)				
2 (always uncovered)				

	Qualitative Observations

Flask	*Day 5*	*6*	*7*	*8*
1				
2				

Variables (what are they?):

Independent:
Dependent:
Control:

Method:

1. *Place the bottles in a high up area where they won't be disturbed for 8 days (such as a shelf)*
2. *Remove 1 lid and leave the other tightly screwed on.*
3. *Write down your qualitative observations at the same time every day*

Photo evidence:

Reflective questions

1. Why was the broth boiled and sealed before the investigation?
2. Which bottle grows bacteria? Why?
3. Why does bacteria not appear in both bottles?
4. Where does the bacteria originate?
5. Was this enough data to support a conclusion?
6. Why are repeats important in science?

Conclusions (What does this experiment tell you about bacteria? And from that what can you deduce about cells?)