**Big Bang Opinionnaire**

Your name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ #: \_\_\_\_\_\_\_\_\_ Due date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

In the first column, please indicate your own opinion: do you agree or disagree with the statement? In the following columns record the answers of other people: two 6th-graders, two 7th-graders, two adult males, two adult females.

Do NOT ask anyone in this class. Do NOT ask anyone who has already responded to the statements.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Person asked:** | **You** | 6th-M | 7th-M | 6th-F | 7th-F | Adult-M | Adult-M | Adult-F | Adult-F | Total | Scientists |
| **Response (agree or disagree):** | a / d | a / d | a / d | a / d | a / d | a / d | a / d | a / d | a / d | a / d | A/D |
| 1. The universe had a beginning. |  |  |  |  |  |  |  |  |  |  |  |
| 2. It is impossible to know what the universe  looked like when it first formed. |  |  |  |  |  |  |  |  |  |  |  |
| 3. There is more than one universe. |  |  |  |  |  |  |  |  |  |  |  |
| 4. The universe is not changing in size. |  |  |  |  |  |  |  |  |  |  |  |
| 5. There is no way to change the flow of  time. |  |  |  |  |  |  |  |  |  |  |  |
| 6. There is nothing in between stars except empty space. |  |  |  |  |  |  |  |  |  |  |  |
| 7. Earth is the only planet in the universe  with intelligent life. |  |  |  |  |  |  |  |  |  |  |  |
| 8. We can build better telescopes to help us  see farther out into space than ever before. |  |  |  |  |  |  |  |  |  |  |  |
| 9. The elements that make up our physical  bodies originated in stars. |  |  |  |  |  |  |  |  |  |  |  |
| 10. The Big Bang is the best explanation we  have for how the universe formed. |  |  |  |  |  |  |  |  |  |  |  |

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Title: Big Bang Opinionaire**

**Introduction:** The Big Bang Theory is a well-known scientific theory of universe formation. People vary in their understanding of the theory and in their acceptance of the evidence, how it is gathered and what it means. In this activity you will survey adults and students to see what level of acceptance exists in your community and compare the results to the scientific community.

**Procedures:**

1. Fill out the “you” column in your opinionaire.

2. Fill out the rest of the survey as homework. You will have until \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to have it finished.

3. Tally the data you found. Create a bar graph comparing the different ages and genders.

**The survey question/statement I will choose is: (choose one question from Q1-10) ?????????**

**Results: tally all the 10 questions into the table below**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **7th grade Male** | **7th grade Female** | **Adult male** | **Adult female** | **Total for 7th graders** | **Total for Adults** | **Total for Males** | **Total for Females** |
| Agree |  |  |  |  |  |  |  |  |
| Disagree |  |  |  |  |  |  |  |  |

Create your bar graph on graph paper. Staple it. For instance, green bar is agree; red bar is disagree

Example below ~ Results of Survey

9th grade 9th grade Adult male Adult female All 9th All Adults All males All females

Male Female graders

Compare your results to what scientists think:

|  |  |
| --- | --- |
| 1. The universe had a beginning. | Yes, evidence exists that is summarized in the big bang theory. |
| 2. It is impossible to know what the universe  looked like when it first formed. | No, the light and matter given off in the big bang would look similar to explosions seen in space today. |
| 3. There is more than one universe. | This is a question scientists are asking today. |
| 4. The universe is not changing in size. | Yes, it appears to be expanding based on red shift. |
| 5. There is no way to change the flow of time. | Einstein’s theories have been tested and time does slow down the faster an object moves. |
| 6. There is nothing in between stars except empty space. | No, scientists are working to discover what this substance (called dark matter) is. |
| 7. Earth is the only planet in the universe  with intelligent life. | No, scientists do not claim this. |
| 8. We can build better telescopes to help us  see farther out into space than ever before. | Yes, better telescopes continue to be built. |
| 9. The elements that make up our physical bodies originated in stars. | Yes, the star cycle can be observed in space today. |
| 10. The Big Bang is the best explanation we have for how the universe formed. | Yes, scientists overwhelmingly support this theory |

**Today is: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ My name is: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ #: \_\_\_\_**

**Analysis:**

1. How “scientifically” do the people in our survey think when it comes to the universe?
2. What might affect a person’s thinking about the formation of the universe?
3. How is that type of thinking different from scientific thinking?

**Conclusion:**