

## Exploring a Zooniverse Project Worksheet **Example Answers**

### Introduction

Engineers take scientific knowledge, usually from multiple scientific disciplines, and apply it to create useful technology. On the Zooniverse website and in the questions below, you will learn more about how multiple scientific and engineering disciplines are applied to create innovative technology that employs citizen science to achieve its goals.

### Instructions

Review the Zooniverse website ([www.zooniverse.org](http://www.zooniverse.org)). Pick a Zooniverse project and use the information provided by the project's website to answer the questions below.

**Note:** Each project has a few pages of background information in the About section, Science section, blog and/or other areas of the project website. However, sometimes the information needed to answer the questions is not explicitly stated on the project's website. In those cases, infer the answer using the available information to provide your best idea/guess.

### Questions

1. Go to [www.zooniverse.org](http://www.zooniverse.org). Spend 1-3 minutes looking through the projects and then pick one that looks interesting. Write the project name below:

*Example project: Galaxy Zoo*

2. Do a classification or two for the project, but do not spend more than 5 minutes on it. What was your impression of it? (2-3 sentences)

*Example answer: It was pretty easy to do, especially with the help button. I like the galaxy pictures. They're pretty colorful and radiant so I think people who like astronomy would like this.*

3. Who are the researchers, what fields of science and engineering do they represent, and what do they provide? What is the role of the non-scientists/citizens in this project?

*Example answer: The researchers for this project include professional astronomers, physicists, astrophysicists, astrochemists, astrophotographers, cosmologist from around the world who are studying the universe, as well as educators, computer science engineers, software developers, computer programmers, graphic designers, web developers, translators, engineers involved with telescopes and cameras. The researchers provide images of distant galaxies that citizen scientists volunteer to classify by their shape and other visual characteristics.*

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Class: \_\_\_\_\_

4. What does your project monitor and how? (Hint: look for the “About” section, science section, blog section and/or similar pages of the project website to provide more detail on this.) (2-3 sentences)

*Example answer:* They monitor galaxies, and they perform this task using pictures from the Sloan Digital Sky Survey, which were taken over many years by a 2.5 meter telescope in New Mexico and the Hubble Space Telescope.

5. Why are the researchers monitoring it? In other words, what does the information they collect help them make more informed decisions about? (1-2 sentences)

*Example answer:* Basically, it helps researchers understand the formation, structure and evolution of galaxies over time.

6. How does this project benefit society? Say more than just that it provides knowledge. What practical purpose might it have? If the website does not give any hint, think about it and think of a way that it could possibly be used to benefit society. (2-3 sentences)

*Example answer:* At some point in the future our galaxy might merge with another nearby galaxy. This research could be the starting point to prepare for when that happens so that humans can survive if possible, such as by abandoning Earth and travelling to a new galaxy or to another part of the galaxy.

7. Most if not all of the Zooniverse projects have a forum where citizens can discuss the project and provide feedback. You do not have to do that. Instead, think about a way that your project could be improved. What change or feature could be made to the project to improve it? (at least 2 sentences)

*Example answer:* Sometimes I wonder where in the universe is this galaxy. Is it floating in the middle of nowhere? I think it would be interesting and educational to see where the galaxies that I am classifying are located in the universe or at least in relation to the location of our own Milky Way galaxy.