**Middle School Science: Astronomy**

Why on Earth should we continue to explore outer space? What’s out there? What’s in space, which we cannot see? Our God created it all. In this course, we will study the history of astronomy, properties of our sun, structure of stars, the Milky Way Galaxy and many other bodies in our solar system. Observing the night sky and seeing the beautiful world God has created will be an amazing journey. Get ready to enjoy virtual labs, web quests, hands-on experiments, and activities.

**Grades:** 5-8

**Prerequisites:** none

**Day & time of Class:** Tuesday 1:00

**Semester:** Fall 2018 (15 weeks)

**Instructor’s Name:** Elisabeth Rainey

**Instructor’s Email:** erainey@myfunscience.com

**Instructor’s Phone:** 919-264-6799

**Textbook:** eBook and all worksheets will be provided

**Additional Supplies/Resources Needed:**

1. headset, microphone, notebook, a device (such as a phone-nothing fancy)to take pictures of your experiments
2. Common household supplies such as (paperclip, scissors, soup can, water bottle, tack, rubber bands, glass jar, drinking straw, tinfoil, water, paper plate, cardboard, etc…)
3. Please purchase the **Science First Galileo Telescope Teacher Demo Kit $10.49**

<https://www.schoolspecialty.com/science-first-galileo-telescope-teacher-demo-kit-110-4916?gclid=Cj0KCQjw0PTXBRCGARIsAKNYfG24IDQJt4bazKD9ekiNxiUguIiv9nLJABaVSwhOqb3ypf_uBcg-SEEaAsgMEALw_wcB>

**Weekly Homework:** Homework will be assigned at the end of each live class session and will be due before the next live class. Homework should take approximately 2.5 hours per week.

HW will consist of …

1. answering questions from the previous weeks assignment
2. completing experiment/activities(s) & submitting lab notes & a picture
3. reading about the “new” topic that we will discuss in our next class

**Homework Policy:** The goal of homework is to reinforce and explore the concepts that were taught in class. This is a core class and you will need to keep up with assignments. Contact me if your assignments will be late. I will work with you. Otherwise, 5 points off per day.

**Additional Policies:** Students should conduct themselves appropriately with their speech and texts during our live class. Students who are unable to adhere to this type of conduct may be separated from the class or removed from the session.

**Evaluation:**

Weekly questions 30 % of final grade

Weekly Experiments/Activities 30% of final grade

Tests 40 % of final grade

100%

**Grading Scale:**

100-90: A

89-80: B

79-70: C

69-60: D

59 – 0: No effort: F

### Anticipated Weekly Course Schedule:

| week |  |
| --- | --- |
| Week 1 | History of Astronomy |
| Week 2 | Observational Astronomy & telescopes |
| Week 3 | The sun (magnetic activity, solar structure) |
| Week 4 | The Milky Way |
| Week 5 | Planets |
| Week 6 | Small solar system bodies |
| Week 7 | Stars & Stellar Objects |
| Week 8 | The night sky |
| Week 9  | Constellations  |
| Week 10 | Supernova |
| Week 11 | Black Holes |
| Week 12 | Clusters & Nebulae |
| Week 13 | Galaxies |
| Week14 | Active space missions (humans, robots) |
| Week 15 | Astronomy and the future |
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