Your Place in the Universe

Activity UCIObs – 1
Grade Level: 8 – 12

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Standards: This activity addresses these California Science Content Standards:
Gr 9-12 Earth Science:
  2a: Students know the solar system is located in an outer edge of the disc-shaped Milk Way galaxy, which spans 100,000 light years.
  2b: Students know galaxies are made of billions of stars and comprise most of the visible mass of the universe.
Gr 8 Physical Science:
  4a: Students know galaxies are clusters of billions of stars and may have different shapes.
  4b: Students know that the Sun is one of many stars in the Milky Way galaxy and that stars may differ in size, temperature, and color.

What's This Activity About?
In this activity, students will explore where our Earth and our Solar System reside in our Galaxy.

What Will Students Do?
Students will locate and describe their position on a series of maps and pictures. Every successive picture or map is a wider field of view to give students a perspective of their place in the Universe.

Preparation:
1. Photocopy the student worksheet (pages 4 - 6) for each student.

Procedure:
1. Have students read through the Student Instructions on the worksheet before they begin.
2. Explain that each map/picture represents a wider field of view as you move away from the surface of the Earth. Students should find their own personal location on each map and clearly mark it with an X.
3. Have students draw a map of the classroom in box A. You may want to draw an example map of the classroom on the board. See Figure 1.

![Sketch of classroom](image1)

**Figure 1**

4. Have the students draw maps of the school and the city in boxes B and C. Google Maps is an excellent source to share with the students and can be found at [http://maps.google.com/](http://maps.google.com/)

Type in the school’s address and select ‘Search Maps’ (Figure 2).

![Find your school on an internet map](image2)

**Figure 2**

Select the ‘Satellite’ tab on the map for the best view (Figure 3). Project this map for students to use as a guide for drawing their own maps. Or copy a map of your city from Google maps or the Thomas Guide into box C.
5. Students should describe their location in words when they complete the information requested for their Galactic Address, see student worksheet.

6. On pages 2&3, students mark their location on the maps and pictures provided with an X and describe it in the Galactic Address box.

7. You may choose to have students cut out the maps and ‘Galactic Addresses’ and staple them together to make a flip book, just remember to have them put their names on the back of the last page!

**Assessment:**

Students should have correctly labeled their location on each map and accurately described their location in the Galactic Address boxes. You may choose to award extra credit for colored maps and neatness.