

Warm Up 5: Universe  
11-20-18

LT I can describe what galaxies are and the direction they are moving.

Q1. What Galaxy do we live in?

Q2. What is a Galaxy?

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LT I can describe the solar system.

Q1. What Galaxy do we live in?

Ⓐ1. The Milky-Way

Q2. What is a Galaxy?

Ⓐ2. A group of about 100 billion stars in a given area.

## Today's Plan

Warm Up

Check HW

Watch video's and answer questions  
(breaks to discuss videos between topics)

what are galaxies

<https://www.youtube.com/watch?v=vO7k8sHhMic>

<https://www.youtube.com/watch?v=-gbOt1knW3s>

<http://www.youtube.com/watch?v=eRJvB3hM7K0>

Quasar

<http://www.youtube.com/watch?v=Et9Nnr86dVQ>

Red Shift

<http://www.youtube.com/watch?v=FhfnqboacV0>

<http://www.youtube.com/watch?v=a3RfULw7aAY>

<http://www.youtube.com/watch?v=3kw4id0NvJ0>

Newton's Law of Universal Gravitation

<http://www.youtube.com/watch?v=HrUTL8Ap2tM>

<https://www.youtube.com/watch?v=MTY1Kje0yLg>

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

## Notes 2: Our Universe

Directions: Please visit the class webpage and click on the "links" button. There you will find the SPACE header. Under space, you will find the correlating to the topics below. Watch the videos and answer the questions.

### Galaxies

- What makes up a Galaxy?
  
- How many stars are in a Galaxy?
  
- How many Galaxies in the Universe?
  
- What kind of Galaxies are there, what Galaxies do we live in, what is it's name?

### Red Shift

- Does blue light have shorter or longer wave length? What about red light?
  
- When something is moving away from us, is the sound/wavelength shorten or elongate? Is this more like blue light or red light?
  
- What does it mean if an object has red shifted?
  
- Are galaxies around us Red shifted or blue shifted? What does this tell us about the universe?

### Newton's Law of Universal Gravitation

- What is the equation for Universal Gravitation?
  
- Why doesn't the moon crash into earth like an apple?
  
- Simply put, what does Newton's Law of Universal Gravitation mean?

Activity:

Blanket and two objects

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LT I can describe the solar system.

Q1. What Galaxy do we live in?

Q2. What is a Galaxy?

Q3. List the following words in order from smallest to largest: USA, Solar System, OR, Universe, Earth, Eugene, Milky Way

Q4. What does Red Shifting tell us about our Universe?

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LT I can describe the solar system.

Q3. List the following words in order from smallest to largest: USA, Solar System, OR, Universe, Earth, Eugene, Milky Way

Ⓐ3. Eugene, OR, USA, Earth, Solar System, Milky Way (our Galaxy), Universe

Q4. What does Red Shifting tell us about our Universe?

Ⓐ4. It tells us that our Universe is moving away from each other, EXPANDING.



