

## Universe—Lesson Five

### Grouping Stars in the Sky

**Standard IV: Students will understand the scale size, distance between objects, movements, and apparent motion (due to Earth’s rotation) of objects in the universe and how cultures have understood, related to and used these objects in the night sky.**

**Objective 2: Describe the appearance and apparent motion of groups of stars in the night sky relative to Earth how various culture have understood them.**

**Indicator a: Locate and identify stars that are grouped in patterns in the night sky.**

**Indicator b: Identify ways people have historically grouped stars in the night sky.**

Materials: State of Utah Science Teacher Resource Book pages 11.1.4, 11.1.5, 11.2. 6, and 11.2.4

Directions:

1. Read about how stars have fascinated people on page 11.1.4 beginning with, “Stars in the sky...” to the bottom of the page and discuss this.
2. Continue to read on page 11.1.5 about the myths of stars beginning with, “Ancient Arabs, Egyptians, Babylonians, and Greeks...” and read it to the bottom of the page and discuss this.
3. Tell the students that long ago, the only way people could explain how unexplainable things happened, they made up stories called myths to satisfy their reasoning.
  - a. Read the myth Greek Myth of Ursa Major that tells how these bears got their long tails.
  - b. When the students have read the story, have them discuss the purpose of myths and their importance at the time of unexplainable phenomena.
  - c. Ask them if they know of any myths that were told to them when they were younger.
4. Tell the students that they are going to learn where constellations are in the night sky.
  - a. Have each student print out their own “Uncle Al’s Sky Wheel” by going to this website: [http://www.lawrencehallofscience.org/do\\_science\\_now/starwheels](http://www.lawrencehallofscience.org/do_science_now/starwheels). Then click on: English – Northern Hemisphere Star Wheel.

**Note: The Sky Wheel is free to print off from this website by each student. If it is printed off by the teacher and copied for students, permission to do so would need to be acquired. It is best for the students to print their own from the above website.**

- b. Have the students make the Sky Wheel according to the directions.
- c. Teach them how to use the Sky Wheel by yourself or there is a video to watch online at this website if desired:

[https://video.search.yahoo.com/video/play;\\_ylt=A2Klo9SZZZxV01kA4zsnllQ;\\_ylu=X3oDMTByZWc0dGJtBHNIYwNzcgRzbGsDdmkKBHZ0aWQDBGdwb3MDMQ--?p=Uncle+Al%27s+Constellation+Star+Wheel&vid=f7b575007f51717b78b752eda5155097&turl=http%3A%2F%2Fts4.mm.bing.net%2Fth%3Fid%3DWN.l13odhuCBWDDfdwzOWluGQ%26pid%3D15.1%26h%3D200%26w%3D300%26c%3D7%26rs%3D1&rurl=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DRzzxsoCqI2k&tit=Using+Uncle+Al%26%2339%3Bs+Star+Wheel&c=0&h=200&w=300&l=522&sigr=11bj7t1md&sigt=10v8dcf3a&sigi=12kliieu4&age=1308256099&fr2=p%3As%2Cv%3Av&fr=yhs-mozilla-003&hsimp=yhs-003&hspart=mozilla&tt=b](https://video.search.yahoo.com/video/play;_ylt=A2Klo9SZZZxV01kA4zsnllQ;_ylu=X3oDMTByZWc0dGJtBHNIYwNzcgRzbGsDdmkKBHZ0aWQDBGdwb3MDMQ--?p=Uncle+Al%27s+Constellation+Star+Wheel&vid=f7b575007f51717b78b752eda5155097&turl=http%3A%2F%2Fts4.mm.bing.net%2Fth%3Fid%3DWN.l13odhuCBWDDfdwzOWluGQ%26pid%3D15.1%26h%3D200%26w%3D300%26c%3D7%26rs%3D1&rurl=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DRzzxsoCqI2k&tit=Using+Uncle+Al%26%2339%3Bs+Star+Wheel&c=0&h=200&w=300&l=522&sigr=11bj7t1md&sigt=10v8dcf3a&sigi=12kliieu4&age=1308256099&fr2=p%3As%2Cv%3Av&fr=yhs-mozilla-003&hsimp=yhs-003&hspart=mozilla&tt=b)

- d. Have them look at all the different constellations on the Star Wheel. Ask them which ones they have heard of or even seen in the sky.
5. Many of the constellations have very bright stars. By looking at the brightest star chart (11.2.4), have the students find where those stars are in their respective constellations.