

Date: \_\_\_\_\_ 3. \_\_\_\_\_

1. \_\_\_\_\_ 4. \_\_\_\_\_

2. \_\_\_\_\_ 5. \_\_\_\_\_

**List team members:** A team must have a minimum of two members and cannot exceed five individuals in total. Each team member will receive the same grade.

### **SAVE YOUR PEOPLE! MARRY THAT GIRL!**

(10 points)

Tsin Kletsin has assumed control of the Great House, known as Aztec, a four-day walk along the Great North Road from Pueblo Bonito. You, Chacra Vida, as one of his trusted aides with excellent knowledge of the sky and its motions, have been put in charge of formulating a calendar so that Tsin Kletsin's subjects will know when to plant and harvest crops as well as celebrate religious festivals. Unfortunately, the five-year drought and ensuing warfare between Great House warlords has destroyed all formal records of past astronomical observations and the great sunroom calendar at Pueblo Tsin Kletsin, which your grandfather helped to construct about 40 years ago.

As an innovative and ambitious individual, you have kept a vigilant watch over the heavens in anticipation of this opportunity. If you are successful and please the warlord, Tsin Kletsin, you will gain great wealth and be able to marry the woman who has caught your fancy. Tsin Kletsin's young, attractive daughter has been promised to a much older past rival of Tsin Kletsin to cement a military alliance between the two Great House chiefs. Success in this venture would secure your future and potentially make Tsin Kletsin accept your marriage wishes to his daughter.

You are acutely aware that failure to establish a calendar is not an option. The Vida family name would be erased, and you would face a slow, agonizing death, abandoned by Tsin Kletsin and his followers at Aztec. The stakes are high. How will you use the sky and its various objects to establish a calendar and save the day for Tsin Kletsin, as well as secure the War Lord's daughter for your wife?

**Grading:** The determination of an astronomical object (sun, moon, stars, constellations, planets etc.) to be used in creating the calendar is the team's choice. Teams should consider making a drawing to clarify the solution. Only use one astronomical object to determine your calendar. Teams will describe the following:

1. What astronomical object will be used to create the calendar? (1 pt.).
2. What will be the astronomical effect(s) that you will be observing? (2 pts.).
3. How will the calendar repeat itself in a year's time? (2 pts.).
4. How will you conduct the astronomical observations, and what device/equipment will you use/build to solve the calendar problem successfully? (5 pts.).

The team's solution will be written on the back of this paper. Only one paper should be submitted per team, but each team member should have a copy of the information.  
**Save Your People! Win That Girl!**

Team solution

(1 pt.) What astronomical object will be used to create the calendar?

(2 pts.) What will be the astronomical effect(s) that you will be observing?

(2 pts.) How will the calendar repeat itself in a year's time?

(5 pts.) How will you conduct the astronomical observations, and what device/equipment will you use/build to solve the calendar problem successfully?

A drawing may prove useful here.



Sunday	Sun
Monday	Moon
Tuesday	Mars
Wednesday	Mercury
Thursday	Jupiter
Friday	Venus
Saturday	Saturn