MANCHESTER COLLEGE
Education Department

LESSON PLAN by Dawa F Sherpa

Lesson: Exploring Stars **length:** two or three class period
Age or Grade Intended: Fifth Grade

Academic Standards:

5.3.2 Observe and describe that stars are like the sun, some being smaller and some being larger, but they are so far away that they look like points of light.

5.3.3 Observe the stars and identify stars that are unusually bright and those that have unusual colors, such as reddish or bluish.

Performance objectives:

Given the materials, students will describe the life cycle of a small, medium, or large star for the stages in a star's life using correct vocabulary and no grammatical error.

The students will make flipbook "movies" detailing the life cycle of a small, medium, or large star after watching a video and will compare the life cycles of small, medium, and large stars.

Advanced preparation by Teacher:

Exploring Stars video and VCR, or DVD and DVD player

Heavy white paper, 15 to 20, 3"x 5" (7.62 cm x 12.7 cm) sheets per student (for flipbooks)

1 finished flipbook for class demonstration (any topic)

Crayons, markers, or colored pencils

Heavy duty stapler or hole punch and string for binding flipbooks

Texts with pictures and information about the life cycles of stars (Science texts, encyclopedias, and magazines)

Computer with Internet access (optional)

Procedure:

Introduction/Motivation:

(Engagement)Talk about the life of a star. A good way to introduce this topic is to show *Exploring Stars*. After watching the program, talk about the different types of stars found in the universe.

Bloom's knowledge questions

- What are stars?
- What are they made of?
- How is a red star different from a blue star?
- Discuss and review the life cycles of small, medium, and large stars.

- What is the first stage in the life cycle of a star?
- How does a large star die?

Ask students to observe stars at night when they are at home.

Step by step

1. Exploration- Explain to students that they will be making a "movie" of the life of a star. Show students a finished flipbook that you have made and demonstrate how each page details a "frame" in the movie; each page has a slightly different picture than the one before and after it. When you flip the pages the pictures appear to move, becoming an animated movie. Explain to students that when they construct their flipbooks, they need to make sure their pages are fastened in order and that the pages are lined up before fastening them together or else the flipbook won't work correctly. Talk about how to draw the pictures so that each page is only slight different from the one before it.

2. Tell students they may choose to make a flipbook movie of a small, medium, or large star. Each flipbook must start with a drawing of the star's beginning and the pages must detail the changes that take place in a star over the course of its lifetime. Allow students time in class to use Exploring Stars and texts with pictures and information about the life cycles of stars to research their flipbook drawings.

3. Explanation-Once students have finished their drawings, have them staple the pages of their flipbooks in order and test them out. Place students in groups of 3-5 according to what size star they researched; each group should have at least one person who made a flipbook for a small star, one who made a flipbook for a medium star, and one student who made a flipbook for a large star. Have them share their flipbooks with one another and ask them to describe the life cycle of the star in their flipbook to the rest of their group.

4. Elaboration-Have the groups compare the life cycles of small, medium, and large stars with one another. Ask Bloom’s Comprehension questions
    - Which stars form a red supergiant?
    - What comes after a white dwarf in the life cycle of a medium star?
    - How does the death of a large star differ from the death of a small star?

5. Evaluation-Walk around the classroom to assess student knowledge as the students share their flipbooks and information with one another. Listen to make sure students have picked up on the names of the different stages in a star's life cycle. Once all flipbooks have been shared, ask for volunteers to share some of what they learned with the rest of the class. Review the similarities and differences between the life cycles of small, medium, and large stars with the class.

Closure:

Display the flipbooks in the classroom so that students have a chance to watch the star "movies" during their free time.

Adaptation/Enrichments:

If there are students with the hearing disability will aid get notes for the video shown in the class.

Cut the pages for the students if they have difficulty and it will also save the students time if they are slow

Assessments: students will be assessed on their engagement in class and group discussions; produced creative, colorful, and accurate flipbooks of the life cycle of a start. Students will also be assessed for using the correct vocabulary for each state and compare the life cycles of small, medium, and large start with one another.