

Los Angeles Unified School District  
Office of Curriculum, Instruction and School Support  
Elementary History-Social Science and  
Elementary Science Divisions

**Day 10**  
**Mission Patch Design**

**ESSENTIAL QUESTION:**     What do humans need to survive and thrive in a new environment?

**FOCUS QUESTION:**     What are outstanding features of your plan?

**Objective**

During this activity, team members will have the opportunity to design a mission logo/patch like NASA has for their space missions. In their groups, students will decide what is important about their plan/proposal to NASA to travel to the Moon or Mars.

**Quick Look (Lesson Overview)**

- Conceptual Flow: During planning for a mission, a logo is created for each mission. Incorporated into the logo design are various elements depicting the different mission phases or goals.

Summary: Students will analyze their choice of location, their shelter needs, their economic purpose and occupations to determine what are the most outstanding qualities of their proposal to NASA. During this activity, team members will design a mission logo/patch like NASA has for their space mission.

- Time: Approximately 3 ½-4 hours
- Visual Arts Content Standards
  - VAPA2.7 Communicate values, opinions, or personal insights through an original work of art
  - VAPA 5.2 Identify and design icons, logos, and other graphic devices as symbols for ideas and information.
- \*Common Core State Standards  
Speaking and Listening Grade 5: 1,2,4,5  
\*see Appendix A
- Student Products
  - Mission Patch Design Sheet-Draft
  - Teams' Mission Patch Design Sheet
  - Presentation
  - Journal Entry

## **BACKGROUND**

NASA has a tradition for space mission teams, (flight crew and support personnel) to design what is called a “Mission Patch” that symbolically represents the objectives, goals and flight crewmembers on that particular mission. The team members work together to decide what will best represent their specific mission. The mission patches are usually worn on the right side of the space suit. In addition, while the mission is active, Mission Control will display a large version of the design as part of their commitment to the team. This symbolic tradition is a way for Mars and Moon teams to focus on their mission as a true team.

Elements to consider:

- Team has a clear vision of final product
- Creativity
- Patch reflects knowledge of mission goal
- Quality of work

## **Vocabulary**

Mission patch, symbolism, symbolic, synthesis, tradition, flight crew, Mission Control, goals

## **Materials**

- NASA Space Mission Patch Design Power Point (Teacher Resource 10.1).
- Mission Patch Design Planning Sheet (Student Handout 10.1), one for each group
- Mission Patch Design (Student Handout 10.2), one for each group
- colored pencils, crayons, markers, scissors, glue sticks,
- variety of paper

## **LOOKING FORWARD**

### **Objective**

- During this activity, team members will have the opportunity to design a mission logo/patch like NASA has for their space missions. In their groups, students will decide what is important about their plan/proposal to NASA to travel to the Moon or Mars. They will include their mission patch in their final presentation.

### **Engage/Introduction**

- Show students the NASA video that explains the process of designing mission patches. Go to this link:  
<http://www.nasa.gov/audience/foreducators/nasaclips/search.html?terms=&category=1000>
  - *Go to NASA.gov.*

- Click on the For Educators Tab.
- Scroll down to the eClips section on the left side of the page.
- Click on the eClips logo.
- In the Programs section in the middle of the page check the box marked “Our World” K-5. Type “patches” in the search window.

### **Explore/Analysis**

- Discuss the word “symbolism, and symbolic”.
- Show the Mission Patch ppt (Teacher Resource 10.1) selected missions and explain the connections between the symbols, the placement and colors, and how this relates to the specific NASA mission.
- In their colony groups have students brainstorm and sketch ideas for symbolically representing important aspects of their mission. Students can focus on their choice of location, economic purpose, survival needs, occupations etc. to determine the most outstanding qualities of their proposal to NASA. Ask students to consider what is going to make them stand out from all the other proposals to NASA to get their funding. Give each group a Mission Patch Design Planning Sheet (Student Handout 10.1) to record their ideas.
- Using Mission Patch Design (Student Handout 10.2), each group creates their Mission Patch. Remind students to to create a key explaining the symbols incorporated into their patch.

### **Explain/Conclusion**

- Display the patches around the room. Have students walk around and look at other teams’ work. Ask students to write their impressions of their peer’s patches and what they think the patch represents on post-its. Before each team presents, have the class share of what they think the patch represents.
- Team Presentations
  - Use the Travelers and Talkers Protocol used in Day 8.
- Students make a presentation explaining and justifying their symbolic representation of the mission patch. They can then post the key next to their patch design.
  - Questions to consider during the team’s presentation:
    1. *What do the symbols on your patch represent?*
    2. *How did your group make decisions about what should be included in your patch?*
    3. *How effective were your team members in working together?*
    4. *What could you do to improve on your decision making process?*
    5. *How could you work better as a team?*
- **Journal Entry**  
Students will write a journal entry explaining the symbols on their mission patch.

## Mission Patch Design Planning Sheet

### Student Data Sheet

Team Name: \_\_\_\_\_

Team Members: \_\_\_\_\_

For every journey into space, a patch or emblem is designed that identifies its unique mission.

### Design Elements

Write down a list of significant components of the mission that the team may want to include in the design.

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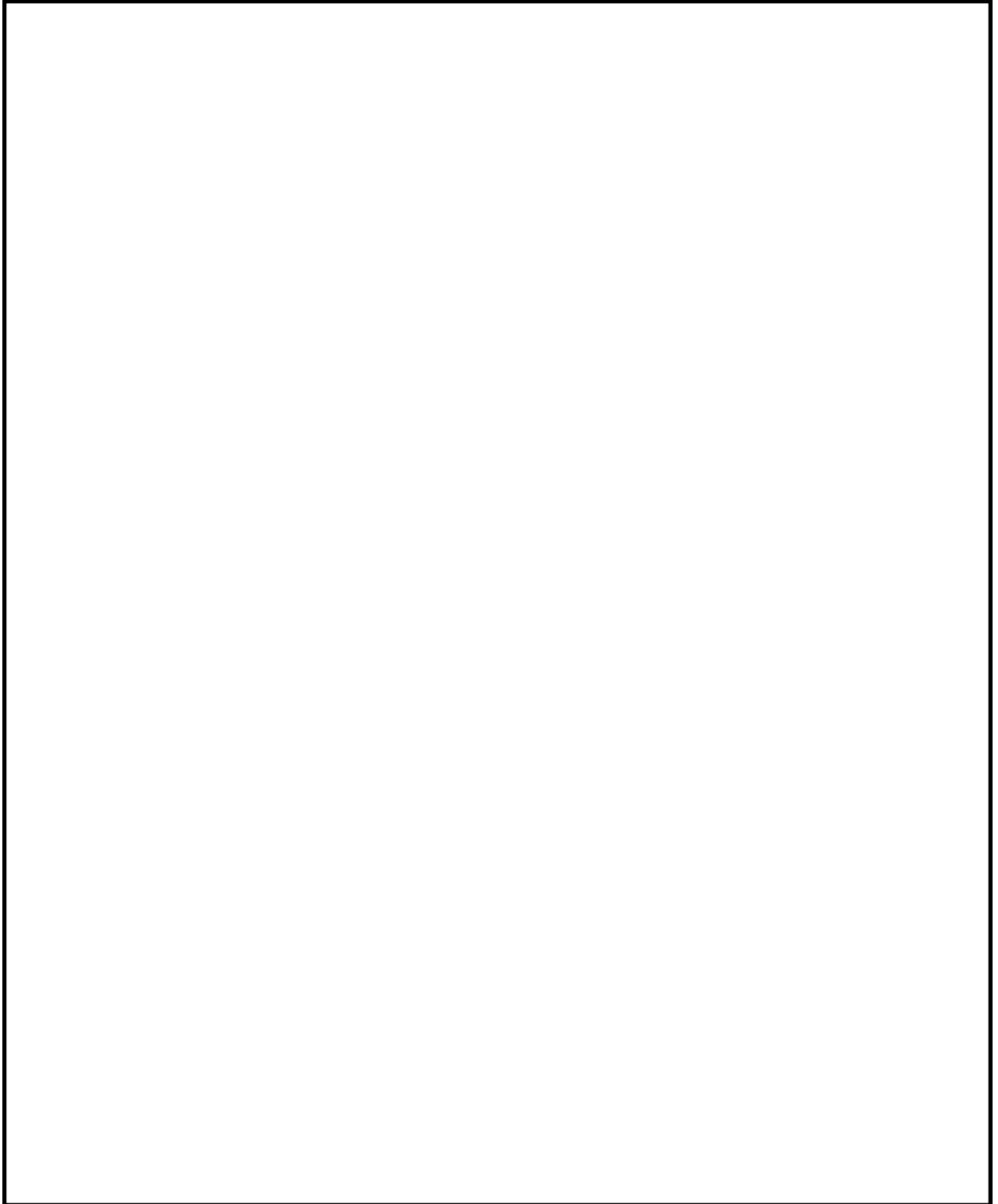
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### Brainstorm and Sketch Ideas

## Teams' Mission Patch Design

A large, empty rectangular box with a black border, intended for students to draw their team's mission patch design.

# NASA Mission Patch Design

Apollo 16



# Apollo 16

## Apollo 16

**Crew:** Commander: John W. Young  
Lunar Module Pilot: Charles M. Duke Jr.  
Command Module Pilot: Thomas K. Mattingly II

### **Mission:**

- The team had three main tasks:
  - Inspect, survey, and sample materials and surface features at a selected landing site in the Descartes region;
  - Place and activate surface experiments
  - Conduct in-flight experiments and photographic tasks from lunar orbit. Additional objectives included performance of experiments requiring zero gravity and engineering evaluation of spacecraft and equipment.





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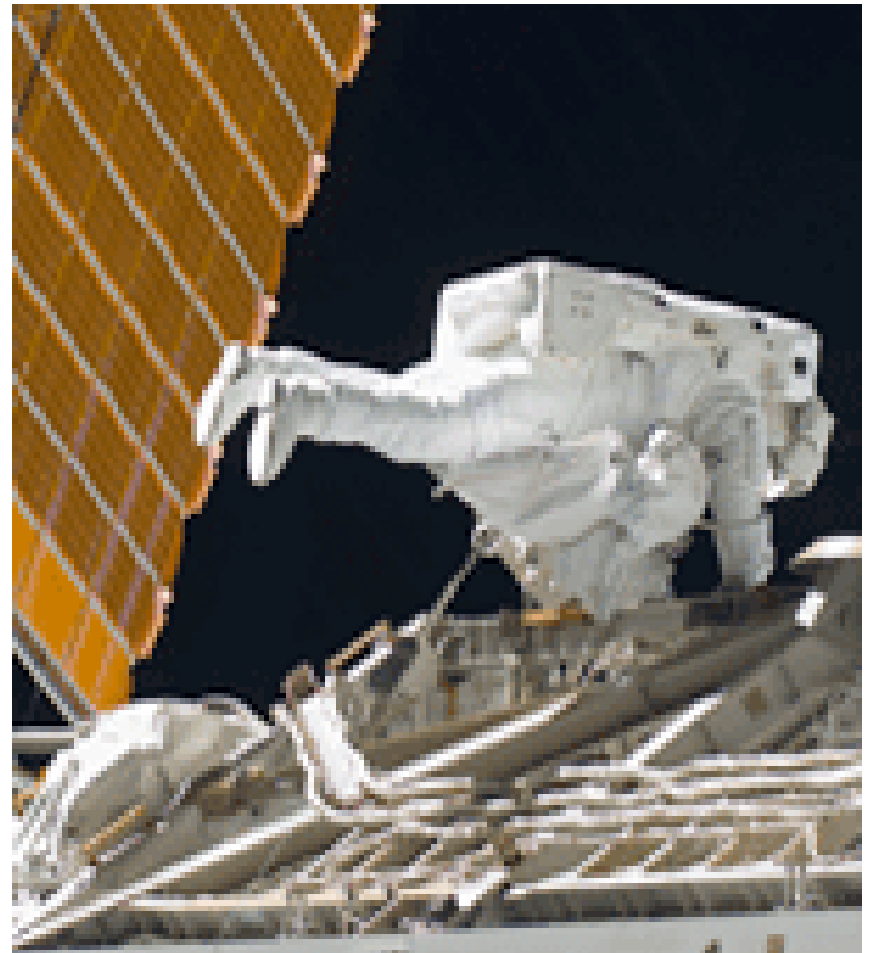


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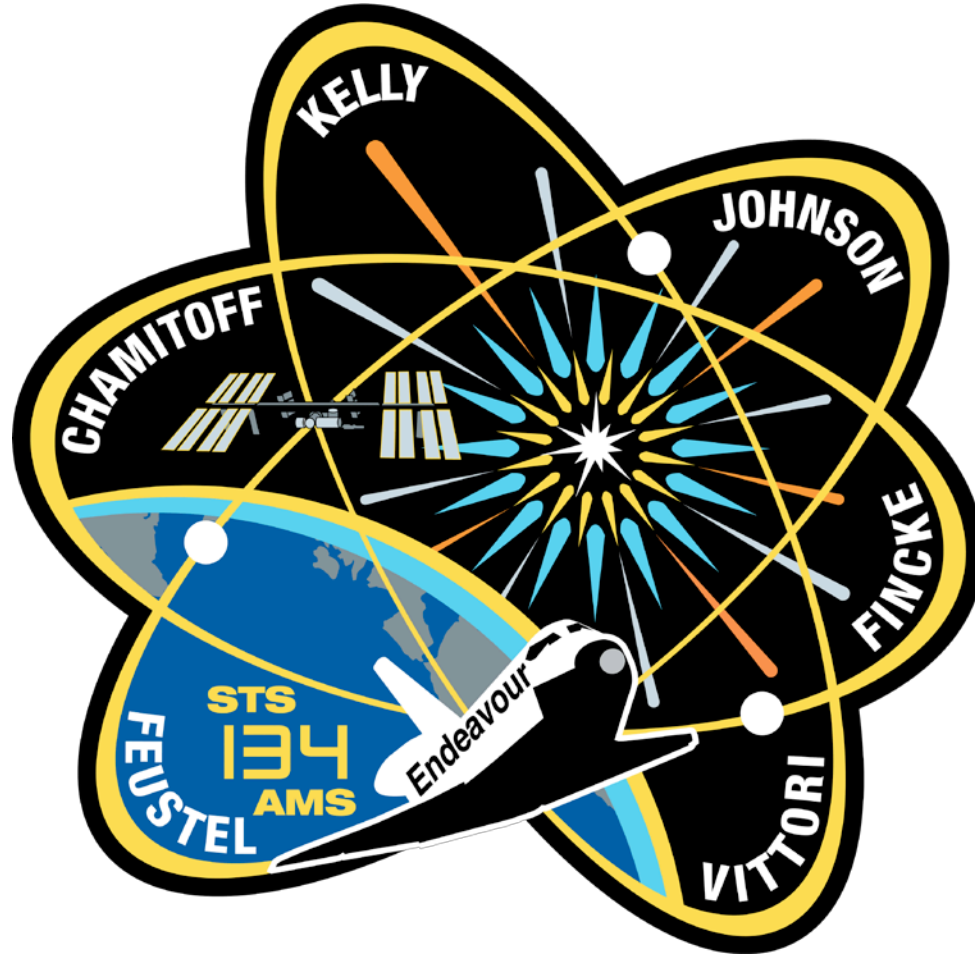


<http://www.nasa.gov/audience/forstudents/5-8/features/sts126-patch-explorer-text.html>

Interactive version: <http://www.nasa.gov/audience/forstudents/5-8/features/sts126-patch-explorer.html>



# STS-134



<http://www.nasa.gov/audience/forstudents/5-8/features/sts134-patch-exp-text.html>

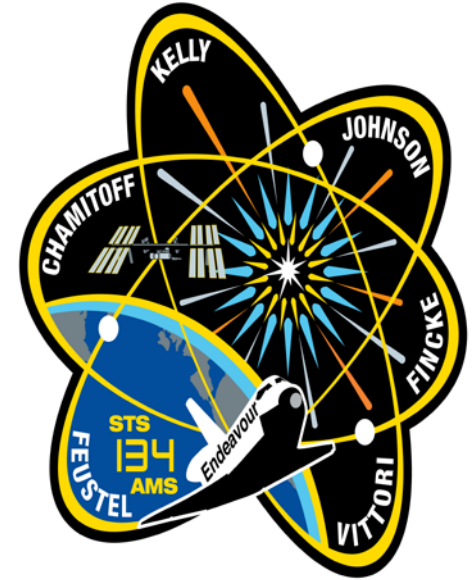
Interactive version link:

<http://www.nasa.gov/audience/forstudents/5-8/features/sts134-patch-exp.html>





# Mission Patch Shapes



# Your Turn

## Team Brainstorm

- With your group decide:
  - What are the most important parts of your proposal to Congress
  - What are your mission goals
- Begin to design how you will symbolically represent your mission's goals

