Lesson Title	Space Travel… In Mississippi?!
Length of Lesson	One (50 minute) class period
Created By	Bo Cherry
Subject	General Science
Grade Level	7th grade
State Standards	7th: 1 f (Inquiry); 4 e (Earth and Space Science)
DOK Level	DOK 2
DOK Application	Distinguish, Compare, Develop a Logical Argument
National Standards	5-8: A (Inquiry); D (Earth and Space Science)
Graduate Research Element	Mississippi's contribution to space exploration has resulted in valuable data that is used in geosciences research.

Student Learning Goal:
MS 7th Grade:
(Inquiry) 1 (f) Explain how science and technology are reciprocal. (DOK 1); (Earth and Space Science) 4 (e) Research and develop a logical argument to support the funding of NASA's Space Programs. (DOK 3)

National Science Education Standards of Content 5-8:
(Inquiry) 5-8(A) Abilities necessary to do scientific inquiry, Understandings about scientific inquiry; (Earth & Space Science) (D) Structure of the earth system, Earth in the solar system.

Materials Needed (supplies, hand-outs, resources)
Computer, Projecter, Powerpoint (INSPIRE_Cherry_PP_1.15.12)

Lesson Performance Task/Assessment:
This lesson will be mostly a lecture, but will keep students interested by including several videos and images of some spectacular space equipment. The lesson revolves mostly around the Stennis Space Center, in Hancock County, Mississippi. A brief history of the space center is included in the lesson, along with what they are currently doing at the center. Some of these facts will also appear of a unit test at the end of the unit. Students will also discuss how the space center has affected the local economy. Statistics on education level will be provided, which will add a more meaningful lesson for the

students. Other companies in Mississippi that contribute to space exploration will be discussed. This will show students that space travel is a national effort, which provides several jobs in a time when they are not so easy to find. Lastly, the class will divide into small groups and come up with an argument for or against the funding of NASA. Each group will be *assigned* their argument (either for or against). At the end of the class, each group will be able to present their arguments to the class. It is best to alternate for then against, and repeat.

Lesson Relevance to Performance Task and Students:
This lesson is made relevant to students as most of them will not know that Mississippi has such a large role in space exploration. This will come as a surprise to most, but also, by showing students how many jobs it creates and the level of education that is required for most of the jobs there, it will also make the case for a career in science. The videos included in the lesson show some tests run at the space center, which give students a different perspective on the magnitude of the rockets and the rockets' power. Lastly, the BrainPop videos (mentioned in "Teachers Notes") and quizzes will also show how space exploration is not only a national effort, but also an international effort. Another video and quiz will be on the Apollo missions, which can serve as a review of previous lessons, or a segue into a new lesson.

Anticipatory Set/Capture Interest:
The anticipatory set for this lesson will be an interesting video about space exploration at the Stennis Space Center, which will be displayed via the projector or promethean board (smart board).

Guided Practice:
This lesson will be guided as the instructor uses a powerpoint presentation to guide students through the lesson.

Independent Practice:
The development of the argument is to be done in small groups and presented to the class individually.

Remediation and/or Enrichment:
Remediation - Individual IEP; Go over previous topics such as forces as a review.
Enrichment - Brainpop exercises.

Check(s) for Understanding:
Observation of students' participation during the Powerpoint will serve as formative feedback for the instructor. Also, selection of students during the BrainPop quizzes can serve as more summative feedback to ensure that all students understand the concepts and big picture.

Closure:
Question 1: Is space exploration something that is done by one group of people in one place, or is it a more collaborative effort? Explain your answer.

Question 2: What are a few reasons *for* the exploration of space. Justify your answers.

Possible Alternate Subject Integrations:
Physics, Physical Science, Astronomy

Teacher Notes:
A few helpful websites:
http://www.nasa.gov/centers/stennis/home/index.html

http://www.brainpop.com/science/space/internationalspacestation/

http://www.brainpop.com/science/space/apolloproject/preview.weml