# Teacher's Guide

### **Pie Charts in Science**

### Introduction

As part of the IMAGE satellite program, there has been a web site created for teachers and students called POETRY. One of the links is titled 'Ask the Space Scientist'. From this link students may ask a scientist questions about space and read the posted answers. Each topic contains specific questions and their appropriate answers at the site. This activity explores the frequency of specific topics to determine the categories that have the most frequently asked questions.

## **Objective**

By completing the data table, students should be able to construct and interpret a graph which includes data from the table.

### **Procedure**

**Materials** 

- 1) Students should finish the table by filling in the blank central angle column.
- 2) Students should create a circle graph to represent the topic request percentages.
- 3) Students should answer the accompanying questions based on the information in the pie chart.

NOTE: When students have completed the activity, they may want to visit the POETRY web site and have a look at

some of the questions and answers they find at "Ask the Space Scientist."

—Calculator

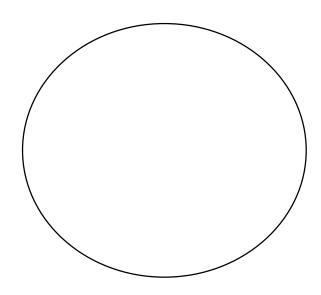
—Protractor



http://image.gsfc.nasa.gov/poetry

Name		Date
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Topic	Percent	Central Angle
The Earth	5	
The Planets	12	
Stars	18	
Black Holes	23	
The Big Bang	25	
Space Travel	9	
Careers	8	



### **Questions:**

- 1) What topic areas have the most popular questions
- 2) Which topic areas have the least popular questions
- 3) Can you think of a question you might "Ask the Space Scientist" in each of the topic areas
- 4) If this web site recorded 12,340 visitors during a week, how many would probably ask about Black Holes
- 5) If the web site has limited resources, which topic areas would you consider dropping to operate more economically?
- 6) If the web site had only 20 visitors, which topic area would have the least chance of being visited