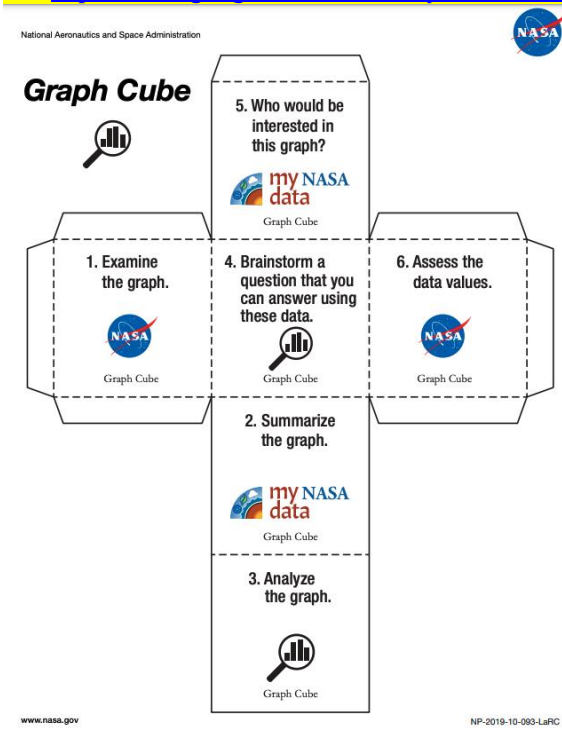
**Materials needed for Earth Day: Data Stories**
***April 20, 2021, 5:45–6:45 PM EDT***

***No advanced knowledge needed to prepare these materials.***

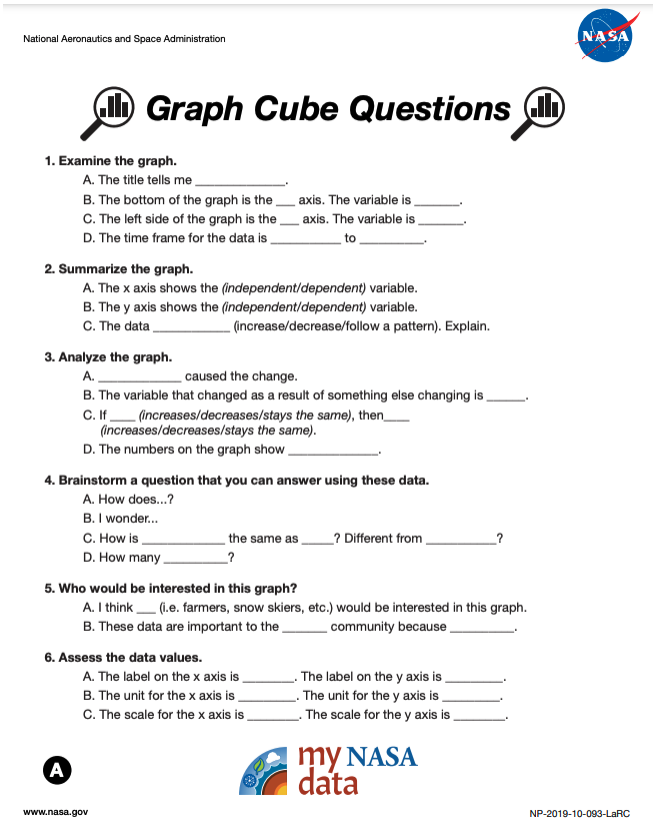
**Directions:**

**Please print, prepare, and bring the following materials**

1. Graph Cube and Question Sheet
    - Open the link - https://mynasadata.larc.nasa.gov/sites/default/files/2019-10/Final%20MND%20graph%20cube%20only.pdf
    - Print the **Graph Cube**, cut, and build the cube using the blackline master using scissors and tape (*Options: 1.) bring a regular gaming die or 2.) be prepared to use a virtual gaming die like https://www.google.com/search?q=dice+roller* )




    - Print **one** of the Graph Cube Questions of your choice (A-Beginner, B-Intermediate, C-Advanced, D-ELL; see label on bottom left of the question sheet for the question sheet type. Note: An unlabeled version follows the labeled versions of A, B, C, and D.)



National Aeronautics and Space Administration

# Graph Cube Questions

**1. Examine the graph.**
- A. The title tells me _____.
- B. The bottom of the graph is the ___ axis. The variable is _____.
- C. The left side of the graph is the ___ axis. The variable is _____.
- D. The time frame for the data is _____ to _____.

**2. Summarize the graph.**
- A. The x axis shows the *(independent/dependent)* variable.
- B. The y axis shows the *(independent/dependent)* variable.
- C. The data _____ (increase/decrease/follow a pattern). Explain.

**3. Analyze the graph.**
- A. _____ caused the change.
- B. The variable that changed as a result of something else changing is _____.
- C. If ____ *(increases/decreases/stays the same)*, then____ *(increases/decreases/stays the same)*.
- D. The numbers on the graph show _____.

**4. Brainstorm a question that you can answer using these data.**
- A. How does...?
- B. I wonder...
- C. How is _____ the same as _____? Different from _____?
- D. How many _____?

**5. Who would be interested in this graph?**
- A. I think ___ (i.e. farmers, snow skiers, etc.) would be interested in this graph.
- B. These data are important to the _____ community because _____.

**6. Assess the data values.**
- A. The label on the x axis is _____. The label on the y axis is _____.
- B. The unit for the x axis is _____. The unit for the y axis is _____.
- C. The scale for the x axis is _____. The scale for the y axis is _____.

A

my NASA data

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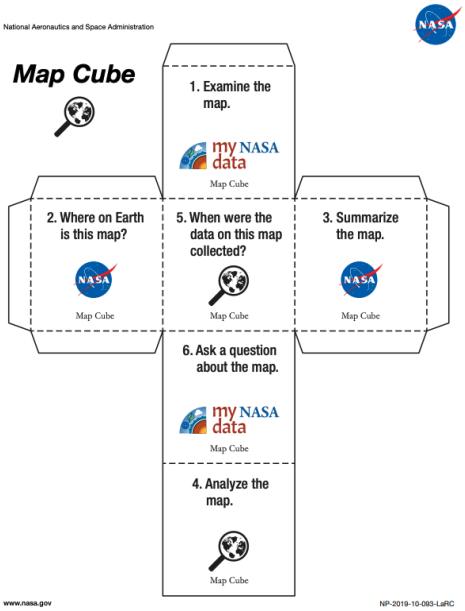
2. Map Cube and Question Sheet
   - Open the link – https://mynasadata.larc.nasa.gov/sites/default/files/2019-10/Final%20MND%20map%20cube%20only.pdf
   - Print the **Map Cube**, cut, and build the cube using the blackline master using scissors and tape (*Options: 1.) bring a regular gaming die or 2.) be prepared to use a virtual gaming die like https://www.google.com/search?q=dice+roller* )



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Map Cube

1. Examine the map.

my NASA data

Map Cube

2. Where on Earth is this map?

Map Cube

5. When were the data on this map collected?

Map Cube

3. Summarize the map.

Map Cube

6. Ask a question about the map.

my NASA data

Map Cube

4. Analyze the map.

Map Cube

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- Print **one** of the Map Cube Questions <u>of your choice</u> (A-Beginner, B-Intermediate, C-Advanced, D-ELL); see label on bottom left of the question sheet for the question sheet type. Note: An unlabeled version follows the labeled versions of A, B, C, and D.)

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**1. Examine the map.**

A. The color that shows the most is _____. It means _____.

B. The color that you do not see much is _____. It means _____.

**2. Where on Earth is this map?**

A. A place I know on the map is _____.

B. Another place I know on the map is _____.

**3. Summarize the map.**

A. The different colors stand for the variable _____. It is measured in _____. (unit)

B. The color with the biggest value/number is _____.

C. The color with the smallest value/number is _____.

D. The color in the middle is _____. Its value is _____.

**4. Analyze the map.**

A. The area/s with the highest values is/are _____. This means _____.

B. The area/s with the lowest values is/are _____. This means _____.

**5. When were the data on this map collected?**

A. The date/s shown on the map is/are _____.

B. A key word in the title that tells me the time frame of this map is _____.

**6. Ask a question about the map.**

A. How does…?

B. I wonder if…

C. How is _____ the same as? Different than?

D. How many...? How long...? How often...?