

Diagnostic Assessment for Outer Space and Cyber Space

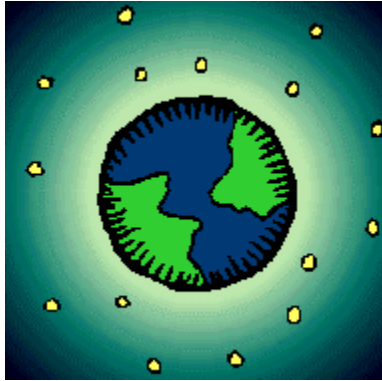


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Outer Space and Cyber Space

Diagnostic Assessment #1

Constructed Response

Duration: 40 minutes

Standards Assessed: SC.E.1.2.4.4.1, SC.E.1.2.5.4.1, LA.2.2.6.4.1, LA.B.2.2.6.4.2, LA.B.2.2.6.4.7, MA.E.1.2.2.4.1, MA.E.1.2.2.4.2, MA.E.1.2.3.4.1)

Description of Assessment Activity: This diagnostic assessment tool is used to evaluate the student's knowledge of the characteristics of the outer planets and of the gravitational pull that causes an orbit, as well as their knowledge of median, mean, mode, and range.

- First, students list characteristics of the five outer planets and explaining orbits. (SC.E.1.2.4.4.1, SC.E.1.2.5.4.1)
- Then, students write a short answer to a specific question concerning median, mode, mean and range. (MA.E.1.2.2.4.1, MA.E.1.2.2.4.2, MA.E.1.2.3.4.1)
- Finally, students write a paragraph about the sun. (LA.2.2.6.4.1, LA.B.2.2.6.4.2, LA.B.2.2.6.4.7)

NOTE: The purpose of the diagnostic assessment is for the **teacher** to find out what the students already know. Since this material should be new to the students, they probably will not know many of the answers. Do not allow them to become frustrated or spend excessive time on this assessment.

Teacher Directions: Download the assessment tool and duplicate for each student. Since they will know few of the answers, you may need to regulate the time spent on the assessment by guiding them through the KWL allowing about 20 minutes for the science portion (3 minutes for each planet's information in the "What do you know?" and "What do you want to know?" boxes), about 10 minutes for the entire math portion, and about 10 minutes for the writing portion.

Use the information gained from the diagnostic assessment to plan your instruction.

The KWL will be completed at a later date as a review for summative assessment #1.

Student Directions: Read the directions carefully and complete each part of the assessment. If you do not know an answer, it is OK. Just skip it and go to the next question. This assessment is not graded. Your teacher needs to know what you already know about these things so your instruction will be appropriate. You have 40 minutes to complete the assessment. When finished, proofread your paper, and then turn it in.

Scoring Method and Criteria: A teacher's key has been provided with this assessment. It is not scored and no grade is given. The diagnostic assessment is used to plan instruction.

Name _____

Date _____

Outer Space and Cyber Space Diagnostic Assessment

K - W - L

In each box write what you **know** and **want** to know. As you learn new things, you will write what you **learned**. Write at least **5** characteristics of each planet listed. (SC.E.1.2.4.4.1)

K What do you know ?	W What do you want to know?	L What did you learn ?
Jupiter	Jupiter	Jupiter
Saturn	Saturn	Saturn
Uranus	Uranus	Uranus
Neptune	Neptune	Neptune
Pluto	Pluto	Pluto

K What do you know ?	W What do you want to know?	L What did you learn ?
What keeps the planets in the same order as they move around the sun? (SC.E.1.2.5.4.1)		

Look at these numbers. Fill in the blanks with the correct answer. (MA.E.1.2.2.4.1)

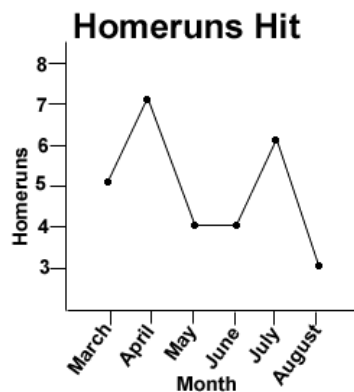
6, 2, 6, 1, 5, 6, 2

The **median** is _____.

The **mode** is _____.

The **mean** is _____.

Look at this line graph.
(MA.E.1.2.2.4.2)



The **range** is _____.

Use a calculator to find the range and mean of these numbers. (MA.E.1.2.3.4.1)

3, 5, 7, 3, 2

The **mean** is _____.

The **range** is _____.

Write a sentence to answer the question. (LA.B.2.2.4.4.1)

What could electronic technology be used for?

Turn the paper over and write a paragraph about the sun. Remember to focus on the topic, give facts to support your ideas, and use a variety of sentence structures. (LA.2.2.6.4.1, LA.B.2.2.6.4.2, LA.B.2.2.6.4.7)

**Outer Space and Cyber Space
Diagnostic Assessment**

**Teacher Key
K - W - L**

In each box write what you **know** and **want** to know. As you learn new things, you will write what you **learned**.

K What do you know ?	W What do you want to know?	L What did you learn ?
Write at least 5 characteristics of each planet. (SC.E.1.2.4.4.1) This diagnostic assessment is to be used by the teacher when planning which activities and strategies to use while teaching the target standards. This also lets the students know what they are expected to know at the conclusion of the unit. Since the target standard only addresses these 5 planets in 4th grade, knowledge of only these planets is assessed. Accept any 5 facts or characteristics about the planet addressed that is a true fact.		
Jupiter	Jupiter	Jupiter
Saturn	Saturn	Saturn
Uranus	Uranus	Uranus
Neptune	Neptune	Neptune
Pluto	Pluto	Pluto
What keeps the planets in the same order as they move around the sun? (SC.E.1.2.5.4.1) Answers should include the words "gravity" and "orbit."		

Look at these numbers. Fill in the blanks with the correct answer. (MA.E.1.2.2.4.1)

6, 2, 6, 1, 5, 6, 2

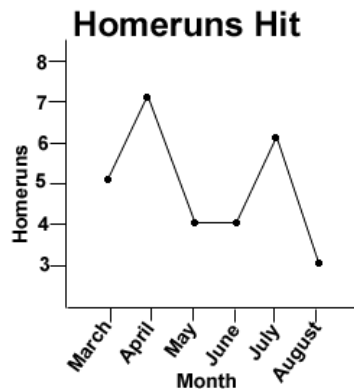
The **median** is **5**

The **mode** is **6**

The **mean** is **2**

Look at this line graph.
(MA.E.1.2.2.4.2)

The **range** is _____ **4** _____.



Use a calculator to find the range and mean of these numbers. (MA.E.1.2.3.4.1)

3, 5, 7, 3, 2

The **mean** is **20/5=4** **Students need not show the equation.**

The **range** is **7-2=5** **Students need not show the equation.**

Write a sentence to answer the question. (LA.B.2.2.4.4.1)

What could electronic technology be used for? **Accept any reasonable answer.**

Turn the paper over and write a paragraph about the sun. Remember to focus on the topic, give facts to support your ideas, and use a variety of sentence structures. (LA.2.2.6.4.1,

LA.B.2.2.6.4.2, LA.B.2.2.6.4.7) **Look specifically for criteria indicated above.**