



Coherence and Alignment Among Science Curriculum, Instruction, and Assessment (CASCIA) Project

Grade 8 Unit 2: Gravity and Motion of Objects in the Solar System

Task 1 Prompt 2 Parts A & B Scored and Annotated Anchor Set

March 2025

Grade 8 Unit 2: Gravity and Motion of Objects in the Solar System, Task 1 Prompt 2 Parts A & B Scored and Annotated Anchor Set was developed with funding from the U.S. Department of Education under the Competitive Grants for State Assessments Program CFDA 84.368A. The contents of this paper do not represent the policy of the U.S. Department of Education, and no assumption of endorsement by the Federal government should be made.

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CASCIA Grade 8 EOU Assessment 2 Task 1: Orbiting Around

Prompt 2 Parts A & B Score Point 3

Prompt 2 Parts A & B Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 2 Part A. & Part B.	No aspect of the response is correct	Response includes one (1) of the three (3) aspects	Response includes two (2) of the three (3) aspects	Response includes the following aspects: Part A - Describes that the longer the distance and/or the longer it takes for one location indicates the planet is further from the sun using information from Table 1 Part B - Explains that the inner planets are closer and the amount of time for an orbit is shorter and/or the opposite for the outer planet - Identifies at least one example of a planet from the inner planets and one from the outer planets	NA

Score Point 3 (3/3 aspects met)

- Part A
 - Describes that the longer the distance of the orbit, the farther the planet is from the sun.

NOTE: The response does not require an example.

- Part B
 - Explains that the inner planets are closer and the amount of time for their orbits is shorter than for outer planets.
 - Identifies at least one example of the orbital time for an inner and outer planet to support response.

Part A.

Explain how the distance traveled by each planet when completing one orbit of the sun can be used to determine the order of the planets outward from the sun. Use data from Table 1 to support your response.

We know that the least amount of miles is going to be closer to the sun and the ones with more miles is going to be further from the sun so you can just go least to greatest amount of miles

Part B.

Explain how the amount of time it takes for each planet to complete one orbit of the sun can be used to identify the inner planets from the outer planets. Use data from Table 1 to support your response.

You can identify them by the amount of months for example earth is an inner planet and Pluto is an outer planet but earth has 12 months but Pluto has 29.77 months which is a lot more but we can figure this out by just looking at the amount of months between the inner and outer planets

CASCIA Grade 8 EOU Assessment 2 Task 1: Orbiting Around

Prompt 2 Parts A & B Score Point 2

Prompt 2 Parts A & B Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 2 Part A. & Part B.	No aspect of the response is correct	Response includes one (1) of the three (3) aspects	Response includes two (2) of the three (3) aspects	Response includes the following aspects: Part A - Describes that the longer the distance and/or the longer it takes for one location indicates the planet is further from the sun using information from Table 1 Part B - Explains that the inner planets are closer and the amount of time for an orbit is shorter and/or the opposite for the outer planet - Identifies at least one example of a planet from the inner planets and one from the outer planets	NA

Score Point 2 (2/3 aspects met)

- Part A
 - Describes that the 'further' the distance of the orbit, the farther the planet is from the sun.

NOTE: The response does not require an example.

- Part B
 - Explains that the amount of time for inner planets to complete their orbits is shorter than for outer planets due to larger orbits.
 - Does **NOT** identify at least one example of the orbital time for an inner and outer planet to support response.

Part A.

Explain how the **distance traveled** by each planet when completing one orbit of the sun can be used to determine the order of the planets outward from the sun. Use data from **Table 1** to support your response.

The farther the distance traveled the farther there out which then shows in what order the planets are

Part B.

Explain how the **amount of time** it takes for each planet to complete one orbit of the sun can be used to identify the inner planets from the outer planets. Use data from **Table 1** to support your response.

The amount of time it takes a planet to complete one orbit can show us that the inner planets will take less time because of the smaller orbit and the outer planets by larger times due to their large orbits

CASCIA Grade 8 EOU Assessment 2 Task 1: Orbiting Around

Prompt 2 Parts A & B Score Point 1

Prompt 2 Parts A & B Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 2 Part A. & Part B.	No aspect of the response is correct	Response includes one (1) of the three (3) aspects	Response includes two (2) of the three (3) aspects	Response includes the following aspects: Part A - Describes that the longer the distance and/or the longer it takes for one location indicates the planet is further from the sun using information from Table 1 Part B - Explains that the inner planets are closer and the amount of time for an orbit is shorter and/or the opposite for the outer planet - Identifies at least one example of a planet from the inner planets and one from the outer planets	NA

Score Point 1 (1/3 aspects met)

- Part A
 - Describes that the longer the distance of the orbit, the farther the planet is from the sun.

NOTE: The response does not require an example.

- Part B
 - Does **NOT** explain that the inner planets are closer and the amount of time for an orbit is faster.
 - Does **NOT** identify at least one example of the orbital time for an inner and outer planet to support response.

Part A.

Explain how the distance traveled by each planet when completing one orbit of the sun can be used to determine the order of the planets outward from the sun. Use data from Table 1 to support your response.

The lower the number is the closer they are & The higher the # the farther it is from the sun.

Part B.

Explain how the amount of time it takes for each planet to complete one orbit of the sun can be used to identify the inner planets from the outer planets. Use data from Table 1 to support your response.

how many months it takes to move around the Sun intirly.

CASCIA Grade 8 EOU Assessment 2 Task 1: Orbiting Around

Prompt 2 Parts A & B Score Point 0

Prompt 2 Parts A & B Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 2 Part A. & Part B.	No aspect of the response is correct	Response includes one (1) of the three (3) aspects	Response includes two (2) of the three (3) aspects	Response includes the following aspects: Part A - Describes that the longer the distance and/or the longer it takes for one location indicates the planet is further from the sun using information from Table 1 Part B - Explains that the inner planets are closer and the amount of time for an orbit is shorter and/or the opposite for the outer planet - Identifies at least one example of a planet from the inner planets and one from the outer planets	NA

Score Point 0 (0/3 aspects met)

- Part A
 - Does **NOT** describe that the longer the distance of the orbit, the farther the planet is from the sun.

NOTE: The response does not require an example.

- Part B
 - Does **NOT** explain that the inner planets are closer and the amount of time for an orbit is faster.
 - Does **NOT** identify at least one example of the orbital time for an inner and outer planet to support response.

Part A.

Explain how the **distance traveled** by each planet when completing one orbit of the sun can be used to determine the order of the planets outward from the sun. Use data from **Table 1** to support your response.

They don't complete around the sun's orbit and all have different number

Part B.

Explain how the **amount of time** it takes for each planet to complete one orbit of the sun can be used to identify the inner planets from the outer planets. Use data from **Table 1** to support your response.

The amount of time it takes for a planet is way different