

Focus Standards and Claim

Claim 4
2.MD.C Work with time and money.

Stimulus

Art Day!

You are helping your 4th grade class organize an Art Day.

There will be three stations:

- Painting
- Pottery
- Chalk Art

You have two tasks. You will help create the supply list and the schedule for Art Day.

Task 1: Supply List

You need to make sure there are enough supplies at each station for everyone to participate. You will use the following information to create a list of art supplies for your class.

- There are 24 students in your class.
- Each student needs –
 - 2 paint brushes for the Painting Station.
 - 3 pounds of clay for the Pottery Station.
 - 5 pieces of chalk for the Chalk Art Station.

Task 2: Schedule

You also need to help plan the schedule for Art Day using the following information.

- The day starts at 9:00 a.m. and ends at 2:00 p.m.
- Your entire class will rotate through the three stations together.
- The Break has to be at least 10 minutes.
- The Break and Lunch together total 1 hour.
- The three stations (Painting, Pottery, and Chalk Art) do **not** need to be the same amount of time, but each one has to be 30 minutes or longer.

Item Prompt

Your next task is to help plan the schedule for Art Day using the information from Task 2: Schedule.

Create a schedule for your class to follow on Art Day. You must follow the order given in the table.

Art Day Schedule*

*Times must be given using a 12-hour clock.

Activity	Start Time	End Time
Painting	9:00 a.m.	
Break		
Pottery		
Lunch		
Chalk Art		2:00 p.m.

Scoring Guide

SCORE	1 POINT	0 POINTS
	<p>Student enters times that satisfy the restrictions listed in Task 2: Schedule (at least 10 minutes for Break, Break and Lunch take exactly one hour, and each station is at least 30 minutes in length).</p> <p>Note: Although students can enter a.m. and p.m. in the schedule, it is not required, nor should it count against the students if they use the wrong indication (a.m. or p.m.).</p>	All other responses

Sample Responses

Student Sample A



Activity	Start Time	End Time
Painting	9:00 a.m.	9:30 a.m.
Break	9:30 a.m.	9:40 a.m.
Pottery	9:40 a.m.	10:10 a.m.
Lunch	10:10 a.m.	11:00
Chalk Art	11:00	2:00 p.m.

SCORE RATIONALE

The student met all of the requirements of this item by creating a schedule that correctly applies the provided information. The student allotted 30 minutes for the first 2 activities, with the time for the final activity being much longer, at 3 hours. The response contains evidence of the student's ability to retrieve information from the context and design a model that satisfies the given constraints. Perhaps this student loves chalk art, or has some personal experience with chalk art requiring a lot of time.

Student Sample B



Activity	Start Time	End Time
Painting	9:00 a.m.	10:00
Break	10:10	10:25
Pottery	10:30	11:30
Lunch	11:40	12:25
Chalk Art	12:30	2:00 p.m.

SCORE RATIONALE

The student met all of the requirements of this item by creating a schedule that correctly applies the provided information. The student allotted equal time for each station, with each being 1 hour long, and appears to have considered time to transition from one station to the next in the schedule, as the end times and start times are not the same. The response contains evidence of reasoning carefully within the context, and an ability to design a model that satisfies the given constraints.

Student Sample C



Activity	Start Time	End Time
Painting	9:00 a.m.	10:10 a.m.
Break	10:10 a.m.	10:30 a.m.
Pottery	10:30 a.m.	11:20 a.m.
Lunch	11:20 a.m.	12:00 a.m.
Chalk Art	12:00	2:00 p.m.

SCORE RATIONALE

The student met all of the requirements of this item by creating a schedule that correctly applies the provided information. Although the student used "a.m." to indicate times through 12:00, the use of a.m. and p.m. in this item is not a focus of the assessment. Therefore, incorrect usage is not penalized.

Student Sample D



Activity	Start Time	End Time
Painting	9:00 a.m.	10:00 am
Break	10:20 am	10:30 am
Pottery	10:30 am	11:30 am
Lunch	12:10 pm	1:10 pm
Chalk Art	1:30 am	2:00 p.m.

SCORE RATIONALE

The student created a schedule that correctly applies the provided information about the time allotted for each station, however, the schedule does not reflect the requirement that the total time for lunch and break should be 1 hour. The student instead allotted 1 hour for lunch and 10 minutes for the break. Therefore, the response contains evidence of a model that satisfies most, but not all, of the given constraints. All of the given schedule constraints must be satisfied for full credit, so this response receives 0 points.

Student Sample E



Activity	Start Time	End Time
Painting	9:00 a.m.	9:55
Break	10:00	10:15
Pottery	10:20	11:20
Lunch	11:25	12:35
Chalk Art	12:40	2:00 p.m.

SCORE RATIONALE

The student created a schedule that correctly applies the provided information about the stations. It also appears that the student considered transition times in the schedule, as end times and start times are not the same. However, the student did not meet the requirement that the total time for lunch and break should be 1 hour, allotting more than 1 hour for lunch. Therefore, the response contains evidence of a model that satisfies most, but not all, of the given constraints. Even though the response offers evidence of a very reasonable and thoughtful plan for Art Day, all requirements must be satisfied for full credit.

Student Sample F



Activity	Start Time	End Time
Painting	9:00 a.m.	2:00 pm
Break	12:20	1:10
Pottery	2:50	3:40
Lunch	3:59	4:00
Chalk Art	4:30	2:00 p.m.

SCORE RATIONALE

This response demonstrates a partial understanding of the problem. The student placed the final end time of 2:00 p.m. as the first station's end time, and then went back in time to 12:20 to begin the break. The student continued to place times in the schedule, but they are not sequential, with the start time for Chalk Art 2.5 hours after the end time. There is just 1 minute for lunch in this schedule. The response earns 0 points.