 Assessment Task – Project Based Learning Task

Year 11 Mathematics Standard – Measurement

Measurement MS-M2: Journey of a Lifetime

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Assessment type: Take home assessment task

Stage 6

Due Date:

Outcomes

* MS11-3 Solves problems involving quantity measurement, including accuracy and the choice of relevant units
* MS11-4 Performs calculations in relation to two-dimensional figures
* MS11-9 Uses appropriate technology to investigate, organise and interpret information in a range of contexts
* MS11-10 Justifies a response to a given problem using appropriate mathematical terminology and/or calculations

Learning across the curriculum

Cross-curriculum priorities

☐ Aboriginal and Torres Strait Islander histories and cultures

☐ Asia and Australia's engagement with Asia

☐ Sustainability

General capabilities

✓ Critical and creative thinking

☐ Ethical understanding

✓ Information and communication technology capability

☐ Intercultural understanding

☐ Literacy

☐ Numeracy

☐ Personal and social capability

Other areas of learning

✓ Civics and citizenship

☐ Difference and diversity

☐ Work and enterprise

Task

Context

Students need to create a plan to visit a destination to attend a special event (sports game, concert, or convention). This plan will include travelling to the destination, attending an event and making an arrangement to broadcast the live telecast of the event to friends in their home city (Sydney).

The assignment includes two parts.

Part A: Planning Your Holiday

Task: Give a brief overview of your trip, and what event you plan on attending.

Suggested time of Completion: 1 week

Marks: 10

Part B: Going on Your Trip

Task: Give details of your journey and making sure that it is possible on your budget. Includes booking, organising and going on your holiday.

Suggested time of Completion: 2 weeks

Marks: 63

Part A: Planning Your Holiday (10 marks)

You have just heard that a sports game, concert, or convention you have dreamed of attending is being held in a country other than Australia. It must be a real event. Your task is to plan a one week holiday to the city where this event is being held. Your choice must be registered with your teacher before you proceed with the assignment.

Write down the:

1. Event you are attending, the date of the event and a brief description (4 marks)

1. Destination city and country (2 marks)

1. Time zone of Sydney during the month of the event (in UTC format) (1 mark)

1. Time zone of your destination during the month of the event (in UTC format) (1 mark)

1. Date of departure and arrival (2 marks)

Part B: Going on the Trip (63 marks)

Budget (21 marks)

For your journey you have a budget of $5000. Your budget must include:

* Transport to and from the airport in Sydney
* Transport to and from the airport in your destination city (estimate)\*
* Return flights
* Accommodation
* Entry to your chosen event
* Other expenses (food, local travelling cost, shopping, and so forth)

1. Conversion rate from AUD to destination currency (1 mark)

$1 (AUD) =

1. Document your spending in the following table. One mark will be awarded for each entry in the table. For each entry you have on your table, take a screenshot of evidence and include it on the following page. No marks will be awarded otherwise. (20 marks)

| Name of the expense | Cost (AUD) | Cost (destination currency) |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
| Total |  |  |

\*Teachers can guide students if they find it difficult to estimate the cost.

Screenshot evidence

Getting to your destination (6 marks)

All airports use 24-hour time for arrivals and departures. Therefore, you will need to know what times are displayed on your ticket and at the airport. Give all answers for this question in 24-hour time.

1. Name the airline company that you are going to fly with (1 mark)

1. Book your return flights from your destination. Attach a screenshot of your ticket details to support your answers.
   1. What local time, day and date does your flight leave from Sydney Airport? If you have a stopover, list the city and country where it is. (2 marks)

* 1. What is the time, day and date in Sydney when you arrive at your destination? Would it be an appropriate time to call your family to let them know you have made it safely? Show all your working out. (2 marks)

1. Screenshot of ticket (1 mark)

Screenshot evidence

Getting to the airport (14 marks)

Now that you have booked your trip, you have to actually get on the plane. Compare 2 different means of transport to get to the airport. This can include bus, train, ferry, taxi or Uber. You must include a screenshot of the timetable, for example, from Tripview, with an indication of which trip you are planning to use. Remember that for international flights you should get to the airport at least three hours before the departure time.

1. What time do you need to be at the airport according to the airline? (1 mark)

1. Compare 2 means of transport in a table addressing the following points: (9 marks)
   * Departure time from home
   * Arrival time to the airport
   * Time taken to reach the airport
   * Cost for the trip

Transport comparison table

1. Which means of transport would you choose? Justify your answer. (2 marks)

1. Screenshot of timetables and the cost of the trip. (2 marks)

Screenshot evidence

Contacting home and friends (5 marks)

You have reached your destination and you have to tell everyone about it. In the next section you must work out what is the best time to contact your family and friends around the world. You must show working out when calculating time differences. No marks will be awarded if no working out is shown.

1. You have to call your parents every day at 7:00pm their local time. What will be your local time to match up with their time? Would this be a realistic time for you? If it isn’t, why? (2 marks)

Working out

1. You have to organise a conference call for your friends in Sydney, Tokyo and New York (pick a third location to broadcast if your destination city is Tokyo or New York.) to discuss the event every day. What is the best time that suits the availability of everyone? List the local time for each friend. (3 marks)

Working out

Your local time

Sydney friend

Tokyo friend

New York friend

The day of the event (13 marks)

Today is the day. The reason for your journey has finally arrived. Before the event starts, you have to make sure you have everything planned.

1. List the event name, date, time and expected duration. Take a screenshot of an advertisement or any promotional material for your event and attach at the end. (4 marks)

1. How are you going to broadcast the event to your friends in Sydney, Tokyo and New York? (1 mark)

1. What will be the time of the event for your friends in Sydney, Tokyo and New York? (3 marks)

Working out

Your local time

Sydney friend

Tokyo friend

New York friend

1. What are some possible problems you or your friends might face during that time? For example, running out of charge, money, or electricity outage. Discuss at least 2 problems. (2 marks)

1. How will you prevent each problem? (2 marks)

1. Screenshot of the event (1 mark)

Screenshot evidence

Evaluation (4 marks)

You have been, you have seen, you cannot stick around. You’ve finally returned from your journey and are back home. Now you have to write one paragraph reflecting on your journey. Think about all the planning you did for your holiday.

* Would you do the same thing next time you go overseas?
* Comment on your journey to the airport in Sydney with respect to time and cost.
* How was your experience with flights?
* What were the difficulties you faced in respect to time differences while contacting your friends and family?
* Would you think about contacting people at different times of the day or did it work well?
* How did you go with your budget?
* Did you enjoy your imaginary journey?

Marking criteria/guidelines

Part A: Planning Your Holiday (10 marks)

| Question | Description | Marks |
| --- | --- | --- |
| 1 | * Name of event given * Date of event given * Description of event given containing at least two pieces of information | 1  1  2 |
| 2 | * Name of city given * Name of country given | 1  1 |
| 3 | * Sydney time zone during the month of the event in UTC form | 1 |
| 4 | * Time zone of destination during the month of the event in UTC form | 1 |
| 5 | * Date of departure (from Sydney) * Date of arrival (at destination) | 1  1 |

Part B: Going on the Trip (63 marks)

| Question | Description | Marks |
| --- | --- | --- |
| N/A | Budget | N/A |
| 1 | * Conversion from AUD to destination currency given | 1 |
| 2 | * Student has all 6 required expenses listed and evidenced on the spreadsheet * Student has all 6 costs included on the spreadsheet * Student has converted all 6 costs correctly to their destination currency * Student has correctly added their expenses in both AUD and destination currency, ensuring that they have stayed within their budget | 6  6  6  2 |
| N/A | **Getting to your destination** | N/A |
| 1 | * Student identifies the airline company | 1 |
| 2 | * Student identifies the time and date the flight leaves and lists stopovers where applicable * Student calculates the correct Sydney time, day and date for the destination using appropriate conversion factor and uses that to make a real life decision | 2  2 |
| 3 | * Student includes the screenshot of the ticket | 1 |
| N/A | **Getting to the airport** | N/A |
| 1 | * Student calculates time correctly to reach the airport | 1 |
| 2 | * Student compares the means of transport for:   + Departure time from home   + Arrival time to the airport   + Time taken to reach the airport   + Cost for the trip   + Information presented in tabular form | 2  2  2  2  1 |
| 3 | * Student describes the means of transport chosen with justification | 2 |
| 4 | * Student includes screenshot for the timetable and the cost of the trips | 2 |
| N/A | Contacting home and friends | N/A |
| 1 | * Student calculates local time of the destination correctly using appropriate conversion and shows all working out | 2 |
| 2 | * Student calculates local time of all three cities correctly using appropriate conversion factors and shows all working out | 3 |
| N/A | The day of the event | N/A |
| 1 | * Student lists the event name, date, time and expected duration | 4 |
| 2 | * Student identifies the means to broadcast the event | 1 |
| 3 | * Student calculates the local time of 3 cities for the event | 3 |
| 4 | * Student identifies at least 2 problems related to the broadcast | 2 |
| 5 | * Student identifies solutions to the problems | 2 |
| 6 | * Student includes a screenshot of the event | 1 |
| N/A | Evaluation | N/A |
| 1 | * Demonstrates fluent and comprehensive literacy skills when reflecting upon the assignment * Reflects on at least 3 separate aspects of the assignment * Always uses appropriate mathematical language, notation and symbols where relevant | 4 |
| 1 | * Demonstrates solid and appropriate literacy skills when reflecting upon the assignment * Reflects on at least 2 separate aspects of the assignment * Mostly uses appropriate mathematical language, notation and symbols where relevant | 3 |
| 1 | * Demonstrates sound and appropriate literacy skills when reflecting upon the assignment * Reflects on at least 1 separate aspects of the assignment * Sometimes uses appropriate mathematical language, notation and symbols where relevant | 2 |
| 1 | * Demonstrates basic literacy skills when reflecting upon the assignment * Reflects on at least 1 separate aspects of the assignment * Occasionally uses mathematical language, notation and symbols where relevant | 1 |

Total: