

# EduWorks

## **PEP Grade 5 Heavy Performance Task (Advanced)**

Integrated Mathematics + Language Arts + Reasoning

**Use:** Assessment, PEP preparation, tutoring, classroom performance task practice.

**Includes:** Scenario, data set, multi-step math, graphing, budgeting, writing, rubric (Levels 1–4), suggested answer outline.

## **SCENARIO**

Your community is preparing for the hurricane season. The school is partnering with families and local businesses to create an emergency preparedness plan. Students must analyse data, make a budget, and write a proposal to support the plan.

**Student Instructions:** Read all parts carefully. Show your working. Use complete sentences when writing explanations.

## DATA SET 1: FAMILY PREPAREDNESS SURVEY

A survey of **60 households** was done. The results are shown below.

Preparedness Item	Households With Item
Battery-powered radio	38
Flashlight	52
First-aid kit	27
3-day supply of water	19
Canned food supply	33

### PART A: DATA & MATHEMATICS (25 marks)

1. Calculate the number of households without each item.
2. Find the fraction of households that have a first-aid kit. Write it in simplest form.
3. Convert the fraction in Question 2 to a percentage.
4. Which item has the lowest number of households prepared? State the item and the number.
5. Calculate the difference between households with flashlights and households with a 3-day water supply.
6. Draw a bar graph to represent the number of households with each item.
7. Write two conclusions you can make from the survey data.

## **DATA SET 2: EMERGENCY KIT PRICE LIST (JMD)**

The school wants to assemble **25 emergency kits** for families most in need.

Item (per kit)	Cost per unit (J\$)
Flashlight	950
Batteries (pack)	420
Small first-aid kit	1,250
Water (6-pack)	780
Canned food bundle	1,600
Whistle	120

## **PART B: BUDGETING & MULTI-STEP PROBLEM SOLVING (25 marks)**

8. Calculate the total cost to make one emergency kit.
9. Calculate the total cost to make 25 emergency kits.
10. A business offers a 10% discount on the canned food bundle if the school buys 25 or more. Calculate the new canned food cost per unit and the new total cost for 25 kits.
11. The PTA contributes J\$85,000. The school raises J\$60,000 from a bake sale. How much money is available in total?
12. Is the total money raised enough to cover the discounted cost of 25 kits? Show working and state your conclusion.
13. If there is not enough money, suggest two realistic ways the school could reduce cost without removing safety items.
14. If there is extra money, propose how it should be used to improve preparedness (give reasons).

## **PART C: LANGUAGE ARTS – PROPOSAL WRITING (25 marks)**

15. Write a proposal (3–4 paragraphs) to the principal and council explaining the emergency kit plan. Your proposal must include:

- A clear introduction explaining the hurricane preparedness problem
- Evidence from the survey (use at least two numbers from Data Set 1)
- A budget summary (include your total cost and whether funds are enough)
- Two action steps the school/community can take (e.g., education campaign, collection plan, storage plan)
- A strong conclusion encouraging immediate action

**Writing expectations:** Clear paragraphs, correct punctuation, varied sentences, strong vocabulary.

## **PART D: REASONING & REFLECTION (10 marks)**

16. Explain why a bar graph is an effective way to display the survey data.
17. Identify one limitation of the survey and suggest how the school could improve the data collection.
18. Do you believe the school should prioritise water or first-aid kits first? Defend your opinion using evidence.

## TEACHER MARKING RUBRIC (LEVELS 1–4)

Criteria	Level 4 (Excellent)	Level 3 (Good)	Level 2 (Basic)	Level 1 (Limited)
Math Accuracy & Method	Most multi-step calculations correct; efficient strategies; clear working shown; frequent error detection; working or missing steps explained	Most multi-step calculations correct; efficient strategies; clear working shown; frequent error detection; working or missing steps explained	Most multi-step calculations correct; efficient strategies; clear working shown; frequent error detection; working or missing steps explained	Few; domino; working or missing steps explained
Data Representation	Graphs interpreted and labelled, neatly and accurately; labels for data accurate, missing labels few; incomplete	Graphs interpreted and labelled, neatly and accurately; labels for data accurate, missing labels few; incomplete	Graphs interpreted and labelled, neatly and accurately; labels for data accurate, missing labels few; incomplete	Labels incomplete; little/no interpretation
Budgeting & Decision Making	Accurate totals/discounts; strong justification; some errors	Mostly accurate; some errors; limited justification; accuracy; limited justification	Some totals; weak decision making	Justification totals; weak decision making
Writing & Organisation	Clear, well-structured; strong organisation; appropriate grammar and punctuation; simple sentences	Organised; appropriate grammar and punctuation; simple sentences	Disorganised; several errors; difficult to read	Disorganised; several errors; difficult to read
Reasoning & Evidence	Logical explanations using evidence (numbers) and direct reasons; little evidence	Evidence (numbers) and direct reasons; little evidence	Weak or missing reasons/evidence	Weak or missing reasons/evidence

## **SUGGESTED ANSWER OUTLINE (TEACHER USE)**

- Part A: Households without item = 60 – with item.
- First-aid fraction =  $27/60 = 9/20$ . Percentage = 45%.
- Lowest prepared item: 3-day water supply (19 households). Difference flashlight vs water =  $52 - 19 = 33$ .
- Part B: One kit cost = 5120 J\$. Total for 25 kits = 128000 J\$.
- Discounted canned food per kit = 1440 J\$. New total for 25 kits  $\approx 124000$  J\$.
- Total funds raised = 145000 J\$. Compare to discounted total to determine surplus/shortfall.
- Part C: Proposal must cite at least two data points and include two solutions + budget conclusion.
- Part D: Accept well-supported opinions using evidence.