

**Internal Assessment Resource**

Agribusiness Level 2

This resource supports assessment against Achievement Standard 91868

Standard title: Demonstrate understanding of cash flow forecasting for a business

Credits: 4

Resource title: Bottomless pool

**Resource reference:** Agribusiness 2.10A Version 1

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| This resource:* Clarifies the requirements of the achievement standard
* Supports good assessment practice
* Should be subjected to the school’s usual assessment quality assurance process
* Should be modified to make the context relevant to students in their school/kura environment and ensure that submitted evidence is authentic
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| Date version published by Ministry of Education | December 2017 Version 1To support internal assessment from 2018 |
| Authenticity of evidence | Teachers must manage authenticity for any assessment from a public source, because students may have access to the assessment schedule or exemplar material.Using this assessment resource without modification may mean that students’ work is not authentic. Teachers may need to change figures, measurements or data sources or set a different context or topic to be investigated or a different text to read or perform. |

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Teacher guidelines

The following guidelines are supplied to enable teachers to carry out valid and consistent assessment using this internal assessment resource.

Teachers need to be very familiar with the outcome being assessed by the achievement standard. The achievement criteria and the explanatory notes contain information, definitions, and requirements that are crucial when interpreting the standard and assessing students against it.

**Context/setting**

This activity requires students to demonstrate a comprehensive understanding of cash flow forecasting for a business.

Students will prepare a digital cash flow statement for a business. The statement will show, explain and justify the impact of an external factor on the cash flow of that business.

**Conditions**

Where a group approach is used, the teacher needs to ensure that there is evidence that each student has met all aspects of the standard. It is suggested that this task is completed individually.

During the assessment process, it may be best to allow the students to complete the cashflow forecast in advance, to ensure correct data and to explain and justify the impact of an external factor on the cash flow forecast.

As a guide, this assessment should reflect approximately 40 hours of teaching, learning and assessment in and out of the classroom.

Conditions of Assessment related to this achievement standard can be found at <http://ncea.tki.org.nz/Resources-for-Internally-Assessed-Achievement-Standards>

**Resource requirements**

Students will need to use spreadsheet software or an appropriate software alternative.

**Additional information**

If you are choosing an agribusiness context for this assessment, there is no expectation to cover all seven primary industries.

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Student instructions

**Introduction**

This assessment activity requires you to demonstrate understanding of cash flow forecasting for a business using a case study of a prawn farm.

You will be assessed on how comprehensively you demonstrate your understanding of cash flow forecasting. This includes how well you interpret and explain the information you collect, and how well you justify the response(s) of the business to a variation in an external factor.

Teacher note: Insert due dates and timeframes

**Task**

**Part A**

Prepare a cash flow forecast to show receipts and payments for ***January to June*** from the case study information below. You must use an appropriate software programme.

**Part B**

Using your cash flow forecast information, show, explain and justify the response to an external factor on the cash flow forecast. This should be no longer than 2000 words.

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| At the end of April, Allan Fisher received an invoice from the District Council, for a consent fee for the new breeding pool of $12,000. This needs to be paid in May. Allan did not factor this cost into his cash flow forecast.  |

You will need to:

* Show the effect of the consent fee on the cash flow forecast.
* Explain the effect of the consent fee on the Prawn Farm, using evidence from the cash flow forecast to support your explanations.
* Show a possible response(s) of the Prawn Farm to the consent fee on the cash flow forecast.
* Explain and justify the possible response(s) of the Prawn Farm, using evidence from the cash flow forecast to support your explanation/s. Consider whether certain features of the Prawn Farm have affected its response to the unexpected consent fee.

**Case study information**

Allan Fisher runs a prawn farm in Wairakei, Taupo. His business had been expanding so he decided to approach the bank for a loan to help him build a new breeding pool.

The loan of $100,000 was approved in January and the funds were made available at the beginning of February. As the floating interest rates were currently lower than the fixed interest rates, Allan decided to float his loan at 5.25% pa.

The following information and estimates are available:

|  |  |  |
| --- | --- | --- |
|  | Sales# | Prawn Farming Expenses |
| January | 60,000 | 16,000 |
| February | 60,000 | 16,000 |
| March | 90,000 | 24,000 |
| April | 95,000 | 24,000 |
| May | 100,000\* | 50,000\* |
| June | 125,000\* | 60,000\* |
| # sales include cash and credit\*estimated |

* Allan started the build for the breeding pool in March. The build took two months and Allan was required to make two payments of $50,000, one at the beginning of March and then another at the beginning of April.
* In order to help increase his sales, Allan started to advertise in “FoodFirst”, a magazine for restaurants in New Zealand. This cost him $7,000 in January and February, but decreases to $5,000 per month for the rest of the period.
* Allan also starts to offer 30-day credit terms to the restaurant market. He anticipates that from March, $20,000 of sales each month will be on credit to restaurants.
* 80% of the prawn farming expenses are paid in the month they are incurred and the remainder 20% are paid in the following month. December’s prawn farming expenses were $14,000.
* Allan has a business mortgage on his prawn farm, which costs $14,450 per month, but he is able to offset part of this by renting out the shop for a restaurant on site for $5,800 per month.
* Currently Allan pays himself $8,000 per month and has three employees at a further $10,800 per month, though this rises from March to $14,400 as Allan needs an extra employee for the new breeding pool.
* Operating expenses, such as electricity, vehicles, weed and pest control, repairs and maintenance, water, rates, communication, insurance etc. are currently $15,000 per month. Allan expects these to increase by 20% with the completion of the new breeding pool from the beginning of May.
* Other business expenses, miscellaneous and sundry items usually come to about $18,000 per year and are paid evenly throughout the year.
* The $100,000 loan was for a period of three years and with a floating interest rate of 5.25%, this would mean monthly repayments of principal and interest of $3,000 per month.
* Allan has an opening bank balance of $6,400.
* Allan did not know that he needed a consent for the new breeding pool and therefore had not factored this cost into his cash flow forecast when he applied for the initial bank loan. The bank loan was to pay for the building of the pool at a cost of $100,000.

**Assessment schedule: Agribusiness 91868 - Bottomless pool**

|  |  |  |
| --- | --- | --- |
| **Evidence/Judgements for Achievement** | **Evidence/Judgements for Achievement with Merit** | **Evidence/Judgements for Achievement with Excellence** |
| The student demonstrates understanding of cash flow forecasting for a business. The student has prepared a cash flow forecast for the prawn farm using a software programme to show the receipts and payments, for given and calculated figures.The student has demonstrated correct treatment of the unexpected District Council Consent Fee $12,000 on the cash flow forecast by:* inserting an additional line for cash outflows Consent Fee $12,000 for the month of May in the cash flow forecast
* adjusting the total cash outflow and therefore the net cash flow figure and the closing bank balance for May
* adjusting the opening bank balance and therefore the closing bank balance for June
* explaining the effect of the unexpected consent fee on the Prawn Farm.

**For example: (partial evidence)**See Appendix 1The unexpected $12,000 consent fee on the Prawn Farm has increased the Total Cash Outflows for May by $12,000. This has led to a Net Cash Flow decrease of $12,000, causing the closing bank balance to be overdrawn by $14,950. The Prawn Farm will need to arrange this overdraft facility in advance with their bank or one of their other cash payments, for example advertising, may not be honoured and this could be costly for the Prawn Farm as they will be charged possible penalty fees by both the bank and the supplier. *The examples above are indicative samples only.* | The student demonstrates in-depth understanding of cash flow forecasting for a business. The student has shown a possible response by the Prawn Farm to the unexpected District Council Consent Fee $12,000 on the cash flow forecast by:* adjusting the cash flow forecast to minimise the effect of the unexpected consent fee for both the months of May and June
* explaining the possible response(s) of the Prawn Farm to the unexpected consent fee.

**For example: (partial evidence)**See Appendix 1In addition to the evidence for achieved:The possible responses of the Prawn Farm to this unexpected consent fee of $12,000 is to:* cut back on the advertising for the month of May, reducing the advertising outflow from $5,000 to $0, and
* Allan should invest an additional $5,000 into the Prawn Farm, increasing the cash inflow by $5,000 for the month of May.

The combined effect of reducing the advertising by $5,000 and Allan investing an additional $5,000 for May reduces the overdrawn closing bank balance by $10,000, to $4,950. This overdraft will have to be pre-arranged with the bank to cover the cash shortage for May. However in June this closing bank balance is no longer overdrawn and is looking positive with a balance of $3,500. Introducing additional capital of $5,000 has the advantage of reducing the interest/administration costs that are incurred when setting up a large bank overdraft for a period of time longer than a month. Pausing/reducing the advertising for the month of May has the advantage of reducing the net cash flow and as advertising has already taken place for four consecutive months prior to May in the “Food First” magazine the effect on the Prawn Farm of pausing the advertising for one month would be minimised. Allan could negotiate with FoodFirst Magazine to take out smaller ads or change from colour to black and white ads.*The examples above are indicative samples only.* | The student demonstrates comprehensive understanding of cash flow forecasting for a business. The student has justified the most effective response(s) of the Prawn Farm to the unexpected consent fee.**For example: (partial evidence)**See Appendix 1In addition to the evidence for achieved and merit:The disadvantages of reducing the advertising is that the Prawn Farm runs the risk that in May the “FoodFirst” magazine may have an increase in subscribers/readers and therefore will not see the advertising by the Prawn Farm and therefore the Prawn Farm could suffer a loss of potential sales. In addition, a competitor of the Prawn Farm could sign up for that now empty advertising space in the “Food First” magazine and therefore the Prawn Farm could run the risk of losing clients that they already have to new competitors and losing their advertising space in this popular magazine. The disadvantage of switching to smaller or to black and white advisements is that these might be less prominent for readers / restaurants but it does mean that the Prawn Farm is still featured so this minimises impact on sales. The most appropriate response by the Prawn Farm is to reduce the advertising and invest the additional capital. This is because if the Prawn Farm make cuts to the other possible cash outflows, that is, prawn farm expenses or operating expenses, this could affect the quality of the prawns and lead to greater costs in the future, for example, losing an entire breeding season of prawns as a cheaper supplier was found. In addition, Allan investing additional capital means that he retains ownership of the Prawn Farm as he is reducing his need to borrow. This means that Allan could still expand, as he wants to in the future, as the bank will not think he is too risky. He would reduce his interest payments on overdraft significantly, as the overdraft would be needed for such a short space of time to cover the cash shortage.Note that a student’s response would recognise that cutbacks to staffing/wages have to be made in accordance with employment law).*The examples above are indicative samples only.* |

Final grades will be decided using professional judgement based on a holistic examination of the evidence provided against the criteria in the Achievement Standard.

**Appendix 1**

**Cash Flow Forecast**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **January** | **February** | **March** | **April** | **May** | **June** |
| **Cash Inflows** |  |  |  |  |  |  |
| Sales (cash) | 60,000 | 60,000 | 70,000 | 75,000 | 80,000 | 105,000 |
| Accounts Receivable |  |  |  | 20,000 | 20,000 | 20,000 |
| Loan |  | 100,000 |  |  |  |  |
| Rent | 5,800 | 5,800 | 5,800 | 5,800 | 5,800 | 5,800 |
| **Total Cash Inflow** | **65,800** | **165,800** | **75,800** | **100,800** | **105,800** | **130,800** |
|  |  |  |  |  |  |  |
| **Cash Outflows** |  |  |  |  |  |  |
| Prawn Farm Expenses | 12,800 | 12,800 | 19,200 | 19,200 | 40,000 | 48,000 |
| Accounts Payable | 2,800 | 3,200 | 3,200 | 4,800 | 4,800 | 10,000 |
| Breeding Pool Build |  |  | 50,000 | 50,000 |  |  |
| Advertising | 7,000 | 7,000 | 5,000 | 5,000 | 5,000 | 5,000 |
| Mortgage | 14,450 | 14,450 | 14,450 | 14,450 | 14,450 | 14,450 |
| Wages - Allan | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 |
| * Employees
 | 10,800 | 10,800 | 14,400 | 14,400 | 14,400 | 14,400 |
| Operating Expenses | 15,000 | 15,000 | 15,000 | 15,000 | 18,000 | 18,000 |
| Other Expenses | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 |
| Loan Repayment |  |  | 3,000 | 3,000 | 3,000 | 3,000 |
| **Total Cash Outflow** | **72,350** | **72,750** | **133,750** | **135,350** | **109,150** | **122,350** |
|  |  |  |  |  |  |  |
| **Opening Bank Bal** | **6,400** | **(150)** | **92,900** | **34,950** | **400** | **(2,950)** |
| **Net Cash Flow** | **(6,550)** | **93,050** | **(57,950)** | **(34,550)** | **(3,350)** | **8,450** |
| **Closing Bank Bal** | **(150)** | **92,900** | **34,950** | **400** | **(2,950)** | **5,500** |

**Cash Flow Forecast – Unexpected Consent Fee**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **January** | **February** | **March** | **April** | **May** | **June** |
| Sales (cash) | 60,000 | 60,000 | 70,000 | 75,000 | 80,000 | 105,000 |
| Accounts Receivable |  |  |  | 20,000 | 20,000 | 20,000 |
| Loan |  | 100,000 |  |  |  |  |
| Rent | 5,800 | 5,800 | 5,800 | 5,800 | 5,800 | 5,800 |
| **Total Cash Inflow** | **65,800** | **165,800** | **75,800** | **100,800** | **105,800** | **130,800** |
|  |  |  |  |  |  |  |
| **Cash Outflows** |  |  |  |  |  |  |
| Prawn Farm Expenses | 12,800 | 12,800 | 19,200 | 19,200 | 40,000 | 48,000 |
| Accounts Payable | 2,800 | 3,200 | 3,200 | 4,800 | 4,800 | 10,000 |
| Breeding Pool Build |  |  | 50,000 | 50,000 |  |  |
| Advertising | 7,000 | 7,000 | 5,000 | 5,000 | 5,000 | 5,000 |
| Mortgage | 14,450 | 14,450 | 14,450 | 14,450 | 14,450 | 14,450 |
| Wages - Allan | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 |
| * Employees
 | 10,800 | 10,800 | 14,400 | 14,400 | 14,400 | 14,400 |
| Operating Expenses | 15,000 | 15,000 | 15,000 | 15,000 | 18,000 | 18,000 |
| Other Expenses | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 |
| Loan Repayment |  |  | 3,000 | 3,000 | 3,000 | 3,000 |
| ***Consent Fee*** |  |  |  |  | ***12,000*** |  |
| **Total Cash Outflow** | **72,350** | **72,750** | **133,750** | **135,350** | **121,150** | **122,350** |
|  |  |  |  |  |  |  |
| **Opening Bank Bal** | **6,400** | **(150)** | **92,900** | **34,950** | **400** | **(14,950)** |
| **Net Cash Flow** | **(6,550)** | **93,050** | **(57,950)** | **(34,550)** | **(15,350)** | **8,450** |
| **Closing Bank Bal** | **(150)** | **92,900** | **34,950** | **400** | **(14,950)** | **(6,500)** |

**Cash Flow Forecast – Unexpected Consent Fee/Possible Response**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **January** | **February** | **March** | **April** | **May** | **June** |
| Sales (cash) | 60,000 | 60,000 | 70,000 | 75,000 | 80,000 | 105,000 |
| Accounts Receivable |  |  |  | 20,000 | 20,000 | 20,000 |
| Loan |  | 100,000 |  |  |  |  |
| Rent | 5,800 | 5,800 | 5,800 | 5,800 | 5,800 | 5,800 |
| Capital |  |  |  |  | 5,000 |  |
| **Total Cash Inflow** | **65,800** | **165,800** | **75,800** | **100,800** | **110,800** | **130,800** |
|  |  |  |  |  |  |  |
| **Cash Outflows** |  |  |  |  |  |  |
| Prawn Farm Expenses | 12,800 | 12,800 | 19,200 | 19,200 | 40,000 | 48,000 |
| Accounts Payable | 2,800 | 3,200 | 3,200 | 4,800 | 4,800 | 10,000 |
| Breeding Pool Build |  |  | 50,000 | 50,000 |  |  |
| Advertising | 7,000 | 7,000 | 5,000 | 5,000 | 0 | 5,000 |
| Mortgage | 14,450 | 14,450 | 14,450 | 14,450 | 14,450 | 14,450 |
| Wages - Allan | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 |
| * Employees
 | 10,800 | 10,800 | 14,400 | 14,400 | 14,400 | 14,400 |
| Operating Expenses | 15,000 | 15,000 | 15,000 | 15,000 | 18,000 | 18,000 |
| Other Expenses | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 |
| Loan Repayment |  |  | 3,000 | 3,000 | 3,000 | 3,000 |
| ***Consent Fee*** |  |  |  |  | ***12,000*** |  |
| **Total Cash Outflow** | **72,350** | **72,750** | **133,750** | **135,350** | **116,150** | **122,350** |
|  |  |  |  |  |  |  |
| **Opening Bank Bal** | **6,400** | **(150)** | **92,900** | **34,950** | **400** | **(4,950)** |
| **Net Cash Flow** | **(6,550)** | **93,050** | **(57,950)** | **(34,550)** | **(5,350)** | **8,450** |
| **Closing Bank Bal** | **(150)** | **92,900** | **34,950** | **400** | **(4,950)** | **3,500** |