

Topic Overview

Topic	Strategies and Management E4: Resources Management – Accounting Equation
Level	S3
Duration	3 lessons (40 minutes per lesson)

Learning Objectives:

1. Understand the concept of assets, liabilities and capitals in accounting sense,
2. Understanding basic accounting equation,
3. Use the accounting equation to describe the financial position of an organization, and
4. Use the accounting equation to analyse business transactions.

Overview of Contents:	
Lesson 1	Concepts and Characteristics of Assets
Lesson 2	Concepts and Characteristics of Liabilities and Capitals
Lesson 3	Understanding and Use of Accounting Equation.

Resources:

- Topic Overview and Teaching Plan
- PowerPoint Presentation

Suggested Activities:

- Class Discussion
- Group Discussion
- In-class exercise

Lesson 1	
Theme	Concepts and Characteristics of Assets
Duration	40 minutes

Expected Learning Outcomes:

Upon completion of this lesson, students will be able to:

1. describe what are assets in business situations.

Teaching Sequence and Time Allocation:

Activities	Reference	Time Allocation
Part I: Introduction		
<ul style="list-style-type: none"> ✧ Teacher starts the lesson with a discussion. ✧ Students share their ideas, teacher then explains the need of accounting. 	PPT #2	5 minutes
<ul style="list-style-type: none"> ✧ Teacher explains the concept of accounting and five elements of financial statements. 	PPT #3 - 4	5 minutes
Part II: Content		
<ul style="list-style-type: none"> ✧ Teacher explains the definition and characteristics of assets. 	PPT #5 – 6	5 minutes
<ul style="list-style-type: none"> ✧ Activity 1: Class discussion <ul style="list-style-type: none"> ■ Students are invited to suggest examples of assets in their daily lives. ✧ Teacher explains whether these items meet the definition of asset and makes conclusion. 	PPT #7 PPT #8	5 minutes
<ul style="list-style-type: none"> ✧ Teacher provides examples of assets in business 	PPT #9	3 minutes
<ul style="list-style-type: none"> ✧ Activity 2: Group discussion <ul style="list-style-type: none"> ■ Students are divided into groups of four to five and then discuss whether the items in questions are assets of a company or not. ■ Students are invited to present their ideas. ✧ Teacher goes through the answer with students and make conclusion. 	PPT 10 PPT #11 – 14	10 minutes 5 minutes
Part III: Conclusion		
<ul style="list-style-type: none"> ✧ Teacher concludes the lesson by reviewing the key points covered. 		2 minutes

Lesson 2	
Theme	Concepts and Characteristics of Liabilities and Capitals
Duration	40 minutes

Expected Learning Outcomes:

Upon completion of this lesson, students will be able to:

1. describe liabilities and capitals in business situations, and
2. explain when a company will incur a liability.

Teaching Sequence and Time Allocation:

Activities	Reference	Time Allocation
Part I: Introduction		
<ul style="list-style-type: none"> ✧ Teacher starts the lesson by a question. ✧ Students share their ideas, teacher then explains the concept of borrowings. 	PPT #2	3 minutes
Part II: Content		
<ul style="list-style-type: none"> ✧ Teacher explains the definition and characteristics of liabilities 	PPT #3 – 5	5 minutes
<ul style="list-style-type: none"> ✧ Activity 1: Group discussion <ul style="list-style-type: none"> ■ Students are divided into groups of three to four and then discuss whether the situation in question incurs liability or not. ■ Students are invited to present their ideas. ✧ Teacher goes through answers and makes conclusion. 	PPT #6	5 minutes
<ul style="list-style-type: none"> ✧ Teacher provides examples of liabilities in business 	PPT #7	2 minutes
<ul style="list-style-type: none"> ✧ Teacher provides examples of liabilities in business 	PPT #8	3 minutes
<ul style="list-style-type: none"> ✧ Activity 2: In-class exercise <ul style="list-style-type: none"> ■ Students are required to differentiate items between assets and liabilities. ✧ Teacher goes through answers and makes conclusion. 	PPT 9	3 minutes
<ul style="list-style-type: none"> ✧ Teacher goes through answers and makes conclusion. 	PPT #10	2 minutes
<ul style="list-style-type: none"> ✧ Teacher explains the definition and characteristics of capitals 	PPT #11 – 14	8 minutes
<ul style="list-style-type: none"> ✧ Activity 3: In-class exercise <ul style="list-style-type: none"> ■ Students are required to identify the items which belong to capital. ✧ Teacher goes through answers and makes conclusion. 	PPT #15	5 minutes
<ul style="list-style-type: none"> ✧ Teacher goes through answers and makes conclusion. 	PPT #16	2 minutes
Part III: Conclusion		
<ul style="list-style-type: none"> ✧ Teacher concludes the lesson by reviewing the key points covered. 		2 minutes

Lesson 3

Theme	Understanding and Use of Accounting Equation
Duration	40 minutes

Expected Learning Outcomes:

Upon completion of this lesson, students will be able to:

1. explain the concept of accounting equation, and
2. explain the financial position of an organisation by using the accounting equation.

Teaching Sequence and Time Allocation:

Activities	Reference	Time Allocation
Part I: Introduction		
✧ Teacher starts the lesson by recapping the concepts of assets, liabilities and capitals.	PPT #2	3 minutes
Part II: Content		
✧ Teacher explains the concept of accounting equation.	PPT #3 – 5	8 minutes
✧ Teacher further explains the concepts with examples and illustrations in business transactions	PPT #6 – 10	8 minutes
✧ Activity 1: In-class exercise ■ Students are required to record the business transactions provided.	PPT #11	5 minutes
✧ Teacher goes through the answers with students and make conclusion.	PPT #12	3 minutes
✧ Teacher explains the effects of transactions on accounting equation.	PPT #13	2 minutes
✧ Activity 2: In-class exercise ■ Students are required to complete the table by filling in the missing numbers.	PPT #14	3 minutes
✧ Teacher goes through the answer and makes conclusion.	PPT #15	2 minutes
✧ Teacher further explains the concept of capital by introducing the concept of contributed/ paid-in capital and retained earnings.	PPT #16 – 17	4 minutes
Part III: Conclusion		
✧ Teacher concludes the lesson by reviewing the key points covered.		2 minutes

Accounting Equation

Lesson 1 – Concepts and Characteristics of Assets



1

Let's Imagine...

- Your elder sister wants to set up an on-line business selling various kinds of accessories.
- How do you think she should start her business?
- How can she know about the performance of her business and the current status in dollar value in the future?



2

Introduction

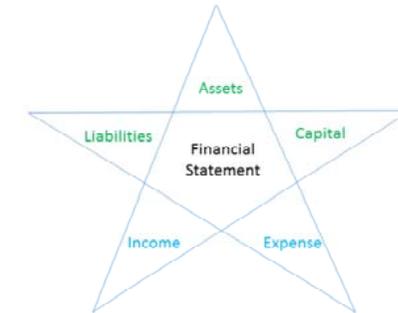
- Accounting is a systematic method of recording economic transactions of a business so that the information can be used by both internal users (e.g. owners and managers) and external users (e.g. investors and suppliers) to make business decisions.
- The output of accounting information is called financial statement.



3

Five Elements of Financial Statements

- Assets
- Liabilities
- Capital (Equity)
- Income
- Expense

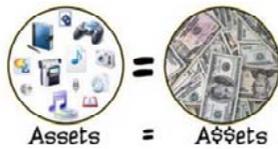


4

Since assets, liabilities and capital are the elements of financial statements, it is important to let students know what is accounting and what is financial statement (as discussed in previous slide) before introducing assets as one of the five elements in a financial statement.

Assets

- Resources possessed by the business and expected to generate income for the business in the future.
- Have cash value or can be converted into cash.



5

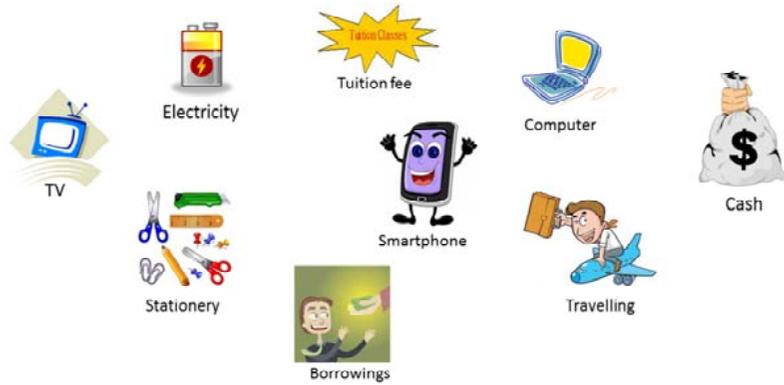
Three Essential Characteristics of an Asset

1. must provide future economic benefits
2. must be possessed (controlled) by the entity
3. must be a result of past transactions or events (e.g. by means of purchase)



6

Activity 1 – What are the assets in your daily lives?



7

Activity 1 – What are the assets in your daily lives?

Asset or not?	
Yes	No
TV	Electricity
Smartphone	Travelling
Computer	Tuition fee
Stationery	Borrowings
Cash	
✔	✘

8

Examples of Assets in Business



Non-current assets: held by the business for production purpose and will be kept for use for more than 1 year.

- land, building, machinery

Intangible assets: assets without physical substance.

- licences, trademarks, goodwill

Current assets: held by the business for trading purpose and will be kept for use within 1 year.

- cash, trade receivables, inventory

9

Teacher can explain the term “trade receivables “ is used interchangeably with “trade debtors”, while “accounts receivables "will be equal to trade receivables if there is no other receivables.

Activity 2 – Group Discussion

- Discuss whether or not the following items bought/developed by a company are assets of the business?
 1. Lorry which is used to delivering goods to customers
 2. Old computer which is retired from use
 3. Knowledge which is applied in company’s product
 4. Stationery



10

Activity 2

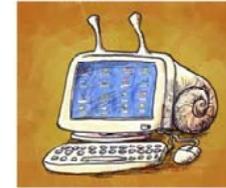
- Lorry
 - It is purchased by the company.
 - The use of it is controlled by the company.
 - The company can use it to generate income by delivery of goods to customers.
- Answer: Yes



11

Activity 2

- Old Computer
 - It is purchased by the company.
 - The use of it is controlled by the company.
 - But the company will no longer use it to generate income anymore because it is retired.
- Answer: No



12

Activity 2



- Knowledge
 - It is developed by the company.
 - The use of it is controlled by the company.
 - The company can use it to generate income by applying the knowledge into its product.

- Answer: Yes

Note: The company may register its knowledge as patent. However, if the knowledge is still under the conceptual/design stage e.g. design of a smart phone, no income has yet been generated and should not be regarded as an asset.

13

Activity 2



- Stationery
 - It is purchased by the company.
 - The use of it is controlled by the company.
 - The company can use it to generate income.

- Answer: Yes

Note: Stationery is quickly consumed and too cheap to be regarded as assets. It is often that companies to treat it as an expense for calculation and presentation purpose.

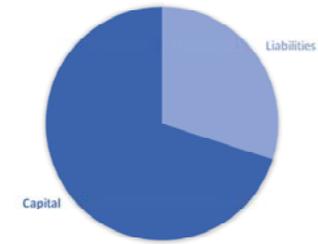
14

The End

15

Accounting Equation

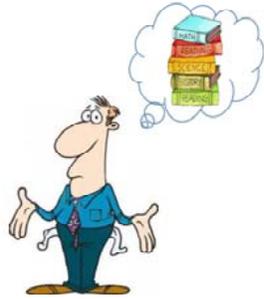
Lesson 2– Concepts and Characteristics of Liabilities and Capital



1

Introduction

- If you want to buy some textbooks at a price of \$1,000 but you do not have sufficient cash, what will you do?



2

Students may raise so many ideas such as drawings from their bank savings, ask parents, doing part-time or borrow from friends, teacher then explains the concept of borrowings.

Liabilities

- Obligations that are owed by the business and expected to provide assets (e.g. money) or services to outsiders in the future.
 - Consist of money owing for goods supplied to the company, and for expenses or loans made to it.



3

The three essential characteristics of a liability

1. A present obligation to another entity
2. As a result of a past transaction or other past events (e.g. purchases from suppliers, work done by staffs)
3. Involve a future giving up of economic benefits to fulfil the obligation



4

Settlement of Present Liabilities

- Settlement of a present obligation may occur in a number of ways:
 - By paying cash
 - By transferring other assets, such as products, to customers
 - By providing services



5

Activity 1 – Group Discussion

- Your uncle had been prosecuted for smoking in public covered area. A penalty of \$500 was charged to your uncle but he didn't pay the fine yet.
- Is this \$500 a liability of your uncle?



6

Activity 1 – Group Discussion

Guidance to answer:

1. A future giving up of economic benefits?
Yes, he has to pay \$500 penalty.
2. A present obligation to another entity?
Yes, he has to pay to the government.
3. A result of a past transaction or other past events?
Yes, because he smoked in a public covered area and has been prosecuted.

Conclusion: Yes, it is a liability.



7

Examples of Liabilities in Business

- Non-current liabilities: to be settled 12 months later
 - Debentures, mortgage loan
- Current liabilities: due within 12 months
 - Trade payables, taxes payables



8

Teacher can explain the term “trade payables” can be used interchangeably with “trade creditors”, while “accounts payables” will be the same as “trade payables” when the company has no other payables .

Activity 2

- Distinguish the items that are liabilities from those that are assets:

- | | | | |
|----------------------------|---|------------------|---|
| a. Office equipment |  | b. Building |  |
| c. Furniture |  | d. Bank loan |  |
| e. Owe for goods purchased |  | f. Cash and bank |  |

9

Activity 2 - Answer

- Assets: a, b, c, f
- Liabilities: d, e



10

Capital

- Residual ownership – what's left in owner's hand from the assets after all liabilities have been settled.
- i.e. Assets minus liabilities.



11

Nature of Capital

- Capital = Assets – Liabilities
- The capital balance represents the owner's claims on the entity's net assets. → Net worth of the company.



12

Component of Capital

- Capital has two distinct parts:
 - Contributed capital; and
 - Retained earnings.
- Money contributed by the owners to the business is known as contributed capital.
- Any amounts of surplus income that are kept for future uses by the business is called retained earnings.



13

Retained Earnings

- Other than contributions by owners, capital can also increase as a result of profitable operations, i.e. the excesses of income over expenses.
- Similarly, capital is decreased by unprofitable operations and by distributions to owners (e.g. drawings, dividends etc).
- Retained earnings are the cumulative surplus from prior years after distributions to owners.



14

Activity 3

Determine which of the following are part of the capital of a company:

1. Cash borrowed from the bank.
2. Cash invested by a shareholder.
3. Money received in advance from customers.
4. Profit earned for the sales of goods.



15

Activity 3 - Solution

1. Cash borrowed from the bank. (No, it is liability of the company as there is an obligation to repay in future.)
2. Cash invested by a shareholder. (Yes, it is money contributed by the owners of the business)
3. Money received in advance from customers. (No, it is liability of the company as there is an obligation to deliver goods/provide services to customers)
4. Profit earned for the sales of goods. (Yes, it is the result of profitable operation)



16

The End

17

Accounting Equation

Lesson 3 – Understanding and Use of Accounting Equation



1

Accounting Equation

- The whole of financial accounting is based on the accounting equation.
- For a firm to operate it needs resources (assets), and those resources have to be supplied to the firm by outsider (liabilities) or the owner himself (capital).
- Based on the accounting equation, we can describe the financial position of an organisation.

2

The Accounting Equation

Assets = Liabilities + Capital



Economic Resources



Claims to Economic Resources

Both sides of the equation has to be equal!

3

If total value of assets is \$100,000 and total value of liabilities is \$70,000, total value of capital will be 30,000

The Two Sides of the Equation must be Equal

- In fact, we are dealing with the same thing from two different points of view!



The resources we have (assets)

=

The resources from whom supplied (liabilities + capital)

What resources does the firm have? (Assets)

=

Where do those resources come from? (Liabilities and Capital)

4

The Two Sides of the Equation must be Equal

- The accounting equation must remain in balance (equal) at all times.
- An increase to the left (right) side would mean
 - an increase to the right (left) side; or
 - a simultaneous decrease in another item(s) on the same side.

$$\text{Assets} = \text{Liabilities} + \text{Capitals}$$

Diagram illustrating the accounting equation: Assets = Liabilities + Capitals. A blue arrow points up from Liabilities, and a blue arrow points down from Capitals. A yellow arrow points down from Liabilities, and a yellow arrow points up from Capitals.

5

Example

- You want to buy a smartphone at a price of \$5,000.
- You have only \$3,000 in the pocket, therefore, you borrow \$2,000 from your brother to buy the smartphone.



Asset (Smartphone) worth \$5,000

=



Liabilities (borrowing) \$2,000

+



Capital (your own money) \$3,000

6

Illustration in Business Transactions

1. Mr. Wong started his business on 3 January and deposited \$100,000 into a bank account opened specially for the business.
2. On 5 January, Mr. Wong had borrowed \$50,000 to purchase some goods for sale.



7

Illustration in Business Transactions

1. Mr. Wong started his business on 3 January and deposited \$100,000 into a bank account opened specially for the business.
- According to the accounting equation, an increase of \$100,000 in asset (bank) would lead to a simultaneous increase in a capital (Mr. Wong's investment).



8

Illustration in Business Transactions

- On 5 January, Mr. Wong had borrowed \$50,000 to purchase some goods for sale.
- According to the accounting equation, an increase in \$50,000 of asset (stocks) would lead to a simultaneous increase in liability (borrowing).



9

Teacher can explain the term “stocks” can be used interchangeably with “inventories” which “stocks” is the UK term whereas “inventories” is the US term. International Accounting Standards (IAS) 2 and Hong Kong Accounting Standards (HKAS) 2 use the term inventory.

Illustration in Business Transactions

Summary of the transactions:

Date	Assets		=	Liabilities +	Capital
	Bank	Stocks		Loan	Capital
3 Jan	\$100,000				\$100,000
5 Jan		\$50,000		\$50,000	
Total	\$150,000			\$150,000	



10

Activity 1

Record the following transactions by use of the accounting equation:

1. Miss Ho started her business on 1 March and deposited \$80,000 into a bank account opened specially for the business.
2. On 7 March, Miss Ho had borrowed \$140,000 to purchase a production machine.



11

Activity 1 – Solution

Summary of the transactions:

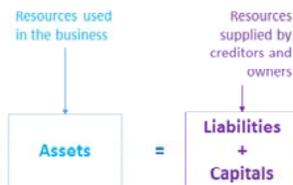
Date	Assets		=	Liabilities +	
	Bank	Machinery		Loan	Capital
1 Mar	\$80,000				\$80,000
7 Mar		\$140,000		\$140,000	
Total	\$220,000			\$220,000	



12

Effects of Transactions on the Accounting Equation

- Each and every business transaction affects the elements of an accounting equation.
- The effect is shown by the use of (+) or (-) placed against the elements affected. i.e. increase cash by \$1,000 is shown as +\$1,000 in assets of the equation and increase trade payables by \$800 is shown as +\$800 in liabilities.
- Note particularly that the equation remains in balance after each transaction.



13

Note: (+) means the increase in an element whereas (-) means a decrease.

Activity 2

- You are required to complete the gaps in the following table:

	Assets	Liabilities	Capital
	\$	\$	\$
(a)	47,000	32,000	?
(b)	?	21,000	34,000
(c)	52,100	?	17,600
(d)	123,400	65,400	?
(e)	39,800	?	22,700
(f)	?	43,420	11,730

14

Activity 2

• Solution:

	Assets	Liabilities	Capital
	\$	\$	\$
(a)	47,000	32,000	15,000
(b)	55,000	21,000	34,000
(c)	52,100	34,500	17,600
(d)	123,400	65,400	58,000
(e)	39,800	17,100	22,700
(f)	55,150	43,420	11,730

15

The Expanded Accounting Equation

$$\text{Assets} = \text{Liabilities} + \text{Paid-in capital} + \text{Retained earnings}$$

- Contributed capital/paid-in capital: amount invested by its owners.
- Retained earnings: accumulated amount earned by income-producing activities and kept for use in the business.



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The Expanded Accounting Equation

$$\text{Assets} = \text{Liabilities} + \text{Paid-in capital} + (\text{Revenue} - \text{Expenses})$$

- Revenues are items that increase in retained earnings resulted from delivering goods or services to customers (such as sales)
- Expenses are items that decrease retained earnings resulted from business operations (such as cost of good sold, electricity and water, rent and rates, salaries and wages, etc)



17

The End

18

Section A: Multiple Choice Questions (@1, total 10 marks)

1. Which of the following is not the characteristic of an asset?

- A. Provide future economic benefits.
- B. Value cannot be measured.
- C. Controlled by the business.
- D. As a result of past event.

Level of difficulty: *

2. Which of the following items is not an asset of a company?

- A. Computer.
- B. Cash.
- C. Trade payable.
- D. Motor car.

Level of difficulty: *

3. Which of the following statements is incorrect?

- A. Non-current assets are held by the business for production purpose and will be used for more than 1 year.
- B. Intangible assets are assets without physical substance.
- C. Assets are resources that are possessed by the owner and expected to generate money for the company in the next year only.
- D. Accounting is a systematic method of recording the economic transactions of a business.

Level of difficulty: **

4. Which of the followings is not a settlement method of a present obligation?

- A. Paying cash.
- B. Provision of service.
- C. Delivery of goods.
- D. Borrowing cash.

Level of difficulty: *

5. Which of the followings is/are current liability?

- I. Trade payables.
 - II. Loan payable fall due in 1 year.
 - III. Loan payable fall due in 2 years.
 - IV. Mortgage loan.
-
- A. I and II only.
 - B. I and III only.
 - C. II and IV only.
 - D. All of the above.

Level of difficulty: **

6. Which of the followings is the best description of capital?

- A. It is the net assets of the business.
- B. It is contributed by the owners.
- C. It is earned by the business.
- D. It is the amount owed by the owner.

Level of difficulty: *

7. Retained earnings can be increased by:

- A. Owners investment.
- B. Profitable operation.
- C. Drawings.
- D. Borrowing.

Level of difficulty: *

8. Assets = \$5,000, Liability = \$3,000, Capital = ?

- A. \$2,000
- B. \$3,000
- C. \$5,000
- D. \$8,000

Level of difficulty: *

9. According to the accounting equation, when there is an increase in assets, which of the following statements is correct?

- A. There is a decrease in liabilities.
- B. There is a decrease in capitals.
- C. There is an increase in liabilities.
- D. None of the above.

Level of difficulty: **

10. Mr. Lee started his business on 1 April and deposited \$50,000 into the company's bank account. Which of the following statements is/are correct?

- A. Asset will increase \$50,000.
- B. Capital will increase \$50,000.
- C. Both A and B are correct.
- D. Neither A nor B is correct.

Level of difficulty: **

Section B: Short Questions (20 marks)

*** 1. Explain whether a business trip to Europe is an asset of a company or not. (7 marks)

*** 2. A company is being prosecuted for the violation of Employment Ordinance. The penalty is HK\$10,000 as according to the Ordinance which will be paid in next month. Should the company require to record a liability for this now? Why? (7 marks)

* 3. Complete the below table: (6 marks)

	Assets	Liabilities	Capital
	\$	\$	\$
(a)	22,000	18,000	?
(b)	?	33,000	11,000
(c)	23,400	?	12,300
(d)	82,340	53,620	?
(e)	?	31,330	18,920
(f)	117,200	?	43,390

Suggested Solutions

Section A: MCQs

1. B	2. C	3. C	4. D	5. A
6. A	7. B	8. A	9. C	10. C

Section B: Short Questions.

Question 1

A business trip can only fulfill one criteria of an asset:

1. must provide future economic benefits (not sure in this case);
2. must be possessed (controlled) by the entity (cannot be possessed in this case);
3. must be a result of past transactions or events (the travelling in this case).

Therefore it is not an asset.

(2 marks@
decision
criteria, 1
mark for
conclusion)

Question 2

The company is required to record a liability of \$10,000 because it meets all the characteristics of a liability:

A future giving up of economic benefits (i.e. \$10,000).

A present obligation to another entity (i.e. the payment of penalty to the government).

As a result of past event (i.e. the violation of law).

(2 marks@
decision
criteria, 1 mark
for conclusion)

Question 3

	Assets	Liabilities	Capital
	\$	\$	\$
(a)	22,000	18,000	4,000
(b)	44,000	33,000	11,000
(c)	23,400	11,100	12,300
(d)	82,340	53,620	28,720
(e)	50,250	31,330	18,920
(f)	117,200	73,810	43,390

(@1, total 6
marks)