

CHAPTER 9

LONG-LIVED ASSETS

LECTURE OUTLINE

Property, Plant, and Equipment (LO1)

Property, plant and equipment are long-lived assets that are used for the production and sale of goods or services to consumers. They are recognized as a long term assets as long as they provide service to the company for a number of years. They are also commonly known as *fixed assets*; *land, building, and equipment*; or *capital assets*. They have three characteristics:

1. They have physical substance
2. They are used in the operations of the business
3. They are not intended for sale to customers.

Determining the Cost of Property, Plant and Equipment

1. Cost includes the purchase price plus any non-refundable taxes less discounts or rebates.

Cost consists of all expenditures necessary to acquire the asset, bring the asset to its required location and make it ready for its intended use.

Costs which benefit only the current period are expensed. These costs are called **operating expenditures**.

Costs that benefit future periods are included in a long-lived asset account and are called **capital expenditures**. Examples of capital expenditures are: the insurance paid to have an asset shipped to the company and major expenditures to an asset while it is in use that extends an asset's life or an asset's productivity.

Costs may include an estimation of asset retirement costs (if there is an obligation to dismantle, remove or restore the asset when it is retired).

2. **Property, plant, and equipment may be subdivided into four classes:**

Land, such as a building site.

Land improvements, such as driveways, parking lots, fencing, landscaping, and underground sprinkler systems.

Buildings, such as stores, offices, factories, and warehouses.

Equipment, such as store check-out counters, cash registers, coolers, office furniture, computer equipment, factory equipment, and delivery equipment.

3. Land

The cost of **land** includes: the purchase price and closing costs such as survey and legal fees, and the costs of preparing the land for its intended use such as removal of old buildings, clearing, draining, filling, and grading. All of these costs (less any proceeds from salvaged materials) are debited to the land account.

The cost of Land is not depreciated as Land has an unlimited useful life.

4. Land Improvements

Land improvements involve structural additions made to land that have limited useful lives as they require maintenance and replacement. Examples include driveways, sidewalks, parking lots and fences. Land improvements are recorded separately from land because, unlike land, they decline in service potential over time, and must be depreciated as a result.

5. Buildings

All costs related to the purchase or construction of a **building** are debited to the Buildings account. When a building is purchased, costs include the purchase price and closing costs (e.g. legal fees).

Costs to make the building ready for its intended use can consist of expenditures for remodelling, and replacing or repairing the roof, floors, electrical wiring, and plumbing.

Costs related to construction of a building include the contract price plus payments made for architect's fees, building permits, and excavation costs. In addition, interest costs incurred to finance the project are included in the cost of the asset when a significant period of time is required to get the asset ready for use. After construction is finished, future interest payments are debited to Interest Expense.

6. Equipment

The classification of equipment is a broad one that can include delivery equipment, office equipment, computers, machinery, vehicles, furniture and fixtures, and other similar assets.

The cost of **equipment** includes the cash purchase price, freight charges, and insurance during transit paid by the purchaser. It also includes expenditures required in assembling, installing, and testing the unit. Motor vehicle licenses and accident insurance on company trucks and cars are treated as operating expenditures as incurred, because they represent annual recurring expenditures and do not benefit future periods. The cost of motor vehicle licenses is treated as an expense and the cost of insurance is treated as a prepaid asset.

7. Allocating Cost to Multiple Assets or Significant Components

When assets are purchased as a group for a single price, it is known as a **basket purchase** (also known as a lump sum purchase). The total cost is allocated to the individual assets based on their relative fair values.

We need to know the cost of each individual asset in order to journalize the purchase and to later calculate the depreciation of each asset.

We determine individual costs by allocating the total price paid for the group of assets to each individual asset based on its relative fair value.

When an item of property, plant or equipment includes individual components that have different

useful lives, the cost of the item should be allocated to each of the significant components. This allows each component to be depreciated separately over different useful lives and possibly by using different depreciation methods.

TEACHING TIP

Use **ILLUSTRATION 9-1** to discuss the allocation of costs in a basket purchase.

Give the students an assumed useful life for a building – say 40 years and see if the students calculate depreciation based on the fair value or the cost.

Depreciation (LO2)

Depreciation is the systematic allocation of the cost of a long-lived asset, such as property, plant and equipment, over its useful life. The cost is allocated to expense over the asset's useful life so that the expenses are properly matched with the expected use of the asset.

IFRS HIGHLIGHTS

Under IFRS, companies can choose to account for their property, plant, and equipment under either the cost model or the revaluation model. Under ASPE, the cost model is the only model allowed.

Under the revaluation model, the carrying amount of the property, plant, and equipment is revalued to fair value (less accumulated depreciation) as long as the fair value can be reliably measured. Only about 3% of companies currently reporting under IFRS use the revaluation method. It is used primarily for companies in certain industries, such as real estate, where fair values are more relevant than cost.

1. Accumulated depreciation represents the total cost of a long-lived asset that has been charged to expense. Accumulated depreciation appears on the balance sheet as a contra account to the related asset account. Accumulated depreciation is not a cash fund as cash is neither increased nor decreased by the adjusting entry to record depreciation.

TEACHING TIP

Use **ILLUSTRATION 9-2** to discuss the concept of depreciation. Depreciation is not a process to determine an asset's real or market value.

2. Depreciation is a process of cost allocation, not a process of determining an asset's real value. The carrying amount (cost less accumulated depreciation) of a long-lived asset may differ significantly from its fair value. Under the cost model, an increase in an asset's fair value is not relevant because property, plant and equipment are not for resale.

3. A decline in revenue producing ability may occur because of:

Physical factors such as wear and tear.

Economic factors such as obsolescence, which is the process of becoming out of date before the asset physically wears out.

4. Factors in Calculating Depreciation

The calculation of depreciation expense is based on three factors:

1. Cost
2. Useful life (service life) is an estimate of the expected productive life of the asset. Useful life may be expressed in terms of time, units of activity, or in units of output. Useful life is an estimate based on such factors as the asset's intended use, its expected need for repair and maintenance, and how vulnerable it is to obsolescence.
3. Residual value is an estimate of the asset's value at the end of its useful life. Residual value is not depreciated as this is the amount expected to be recovered at the end of the asset's useful life. Residual value is sometimes called salvage value.

The difference between the asset's cost and its residual value is called the depreciable amount, which is the amount to be depreciated over the asset's useful life. When reporting under ASPE the term amortization is used instead of depreciation. Therefore the term amortizable cost may be used instead of depreciable amount.

TEACHING TIP

Use **ILLUSTRATION 9-3** to illustrate the three factors in calculating depreciation.

Include in the discussion with students the concept that the amount of the residual value will depend on how long the asset will be used.

5. Depreciation Methods

Depreciation is generally calculated using one of the following methods:

1. Straight-line
2. Diminishing-balance
3. Units-of-production

Management chooses the method that it believes will best match the estimated pattern in which the asset's future economic benefits are expected to be consumed.

If the expected pattern of consumption of the future economic benefits changes, the depreciation method must change.

The depreciation method and the useful life and residual values must be reviewed each year.

6. Straight-Line

Under the **straight-line** method, depreciation is the same for each full year of the asset's useful life. The formula for calculating annual depreciation expense is the depreciable amount (cost less residual value) divided by useful life. The straight-line method is simple to apply, and it is appropriate to use when an asset is used quite uniformly throughout its useful life.

TEACHING TIP

Use **ILLUSTRATION 9-4** to discuss the formula for the straight-line method.

You may want to discuss with students why we only need to allocate the depreciable amount over the assets useful life not the full cost.

We can calculate an annual percentage rate at which to depreciate the asset by dividing 100% by the useful life in years.

TEACHING TIP

ILLUSTRATION 9-5 provides a schedule using a straight-line depreciation rate of 20% for each year the asset is depreciated.

Instructors should emphasize that in Illustration 9-4 we were using a fraction (1/5) and that in this illustration we are using a percentage but that 1/5 and 20% are the same.

7. Diminishing Balance Method (also known as Declining-Balance)

1. The **diminishing-balance** method produces a decreasing annual depreciation expense over the useful life of the asset. Annual depreciation expense is calculated by multiplying the carrying amount at the beginning of the year by the constant straight-line depreciation rate. The rate remains constant from year to year, but the rate is applied to a carrying amount that declines each year. Carrying amount for the first year is the asset's cost. Residual value is not deducted from the cost of the asset during the calculation. However, the asset cannot be depreciated below the residual value. This method can be used with different rates, such as one time, two times etc. A common one used is double the straight-line rate and is referred to as the double diminishing-balance method.

TEACHING TIP

ILLUSTRATION 9-7 provides the formula for calculating the annual depreciation expense for the double diminishing method.

You may want to include in this discussion the concept that the amount of the residual value will depend on how long the asset will be used.

TEACHING TIP

ILLUSTRATION 9-8 provides the schedule for the double diminishing-balance method.

You may want to point out that the final year's depreciation expense is a "plug" in that it is a number that makes accumulated depreciation = \$23,000 or total depreciable amount.

A manager may use this method of depreciation if the company receives more benefit in the early years of the asset's useful life than in the later years.

8. Units-of-Production

Under the **units-of-production** method, instead of expressing the life as a time period, useful life is expressed in terms of the total units of production or use expected from the asset. Annual depreciation expense is calculated by multiplying depreciable amount per unit by the units of activity during the year. This method is not nearly as popular as the straight-line method because it is often difficult to make a reasonable estimate of total activity.

This method is ideal for equipment whose activity is measured in units of output, such as kilometres driven or hours in use.

TEACHING TIP

Use **ILLUSTRATION 9-9** to explain and demonstrate the calculation of annual depreciation using the units-of-productions method. Emphasize that the amount of annual depreciation expense is dependent on the measure of output or activity for the year.

You may want to emphasize that total estimated units of activity is estimated when the asset is first purchased and at that time the total actual is unknown.

TEACHING TIP

ILLUSTRATION 9-10 provides the schedule for Units-of-Production Depreciation.

You may want to point out that in this illustration the total actual units is equal to the total estimated units – something that doesn't typically happen in real life. A second point is that if the asset was used the same amount every year the depreciation expense would be the same as in straight-line – so only use units of production when usage is expected to vary each year.

9. Comparison of Depreciation Methods

TEACHING TIP

ILLUSTRATION 9-11 presents a comparison of the annual depreciation expense for the three depreciation methods. Point out the different effects that the depreciation methods will have on income for the year. Note also that, in total, over the entire useful life of the asset, the choice of depreciation method makes no difference.

1. While the depreciation expense and profit will be different each year for each method, total depreciation expense and total profit after the five-year period are the same for all three methods.
2. Straight-line depreciation results in the same amount of depreciation expense and profit each year. Diminishing-balance depreciation results in a higher depreciation expense and lower profits in early years. Units-of-production method varies depending on how much the asset is used in each year.
3. Since the pattern in which an asset's economic benefits are expected to be consumed is different for each type of asset, the depreciation method should be chosen based on the method that best matches this pattern for the specific asset.
4. Partial Period Depreciation

Using straight-line depreciation, if an asset is acquired part-way through the year, the depreciation is prorated for the time the asset was in use during the year. For example, if an asset is used for a partial year such as nine months, then the depreciation should be for nine months. The calculation would be $\text{Depreciable amount} \times \text{Depreciation Rate} \times \frac{9}{12}$. Depreciation is normally rounded to the nearest month. Some companies establish a convention for partial-period depreciation, rather than calculating depreciation monthly. Companies may choose to record a full year's depreciation in the year of acquisition and none in the year of disposal. Others may record a half year's depreciation in the year of acquisition and a half year's depreciation in the year of disposal.

Using the diminishing balance method, if an asset is acquired part-way through the year, the depreciation is prorated for the time the asset was in use during the first year.

Using the units-of-production method, if an asset is acquired part-way through the year, the depreciation is unaffected, since the units of production already reflect the time the asset was in use during the year.

5. Depreciation and Income Tax

Canada Revenue Agency (CRA) does not allow the taxpayer to choose the depreciation method when calculating taxable income. For income tax purposes, taxpayers must use the single diminishing-balance method, applied to a group of like assets. The method is known as **capital cost allowance (CCA)**. CRA specifies the rates that must be used for each class of assets. Only one-half of the CCA is allowed in the year of acquisition. CCA is an optional deduction, there is not a minimum amount, but there is a maximum amount that can be claimed.

Revising Periodic Depreciation (LO3)

1. Depreciation needs to be revised if there are:

1. Capital expenditures during the useful life of the asset,
2. Impairments in the fair value of the asset,
3. Changes in the asset's fair value when using the revaluation model, and/or
4. Changes in the appropriate depreciation method, or in the asset's estimated useful life or residual value

2. Capital Expenditures during Useful Life

Ordinary repairs are costs to maintain the operating efficiency and expected productive life of the unit.

These are usually small, frequent repairs such as motor tune-ups, oil changes, repainting a building, and replacement of worn-out gears on machinery. Repairs can be larger, infrequent amounts, but simply restore an asset to its prior condition.

The repairs are debited to Repair Expense as they occur.

Additions **and improvements** are costs that are incurred to increase the operating efficiency, productive capacity, or expected useful life of the asset.

These are usually large costs and are not as frequent.

Additions and improvements that add to the future cash flows associated with that asset are not expensed as they occur – they are capitalized. They are generally debited to the appropriate property, plant or equipment account or to the specific component of that asset.

Additions and improvements can change an asset's annual depreciation as there may be a change in useful life.

3. Impairments

In some circumstances the fair value of a long-lived asset falls far below its carrying amount.

If the asset's carrying amount exceeds its recoverable amount, the asset is considered impaired. The recoverable amount is the higher of the asset's fair value less costs to sell, or its value in use which is based on future cash flows. The impairment loss is the amount by which the asset's carrying amount exceeds its recoverable amount

Companies are required to determine on a regular basis whether there is indication of impairment. If there is an indication of possible impairment, then an impairment test must be done.

To record an impairment loss, Impairment Loss is debited and Accumulated Depreciation is credited. Depreciation calculations will need to be adjusted if there has been a reduction in an asset's carrying amount.

IFRS allows for the reversal of a previously recorded impairment loss. Under ASPE no reversal is allowed. Under IFRS, at each year end, the company must determine whether or not an impairment loss still exists by measuring the asset's recoverable amount. If this

recoverable amount exceeds the current carrying amount, then a reversal is recorded. The reversal for an asset is limited to the amount required to increase the asset's carrying amount to what it would have been if the impairment loss had not been recorded.

TEACHING TIP

Page 484 provides an example of an impairment loss and the journal entry to record the impairment.

You may want to discuss why it is necessary to credit the accumulated depreciation account.

4. Cost Model versus the Revaluation Model

Under the revaluation model, the carrying amount of property, plant and equipment is its fair value less accumulated depreciation less any subsequent impairment losses.

A company can use this model only for assets whose fair value can be reliably measured, and revaluation must occur often enough so that its fair value is not materially different from the asset's fair value at the balance sheet date.

It should be noted that a few companies would use the revaluation method. In fact only 3% of companies reporting under IFRS use this method. This method is not allowed under ASPE.

5. Changes in Estimated Useful Life or Residual Value

Management should review its estimates of the useful life and residual value of the company's depreciable assets at least annually.

If wear and tear or obsolescence indicates that the estimates are too low or too high, the estimates should be changed.

A change in depreciation method, estimated useful life or residual value will also cause a revision to the depreciation calculations.

6. Revised Depreciation Calculations

Revisions of periodic depreciation are considered to be changes in estimates and are made in current and future years but not retroactively. The rationale for this treatment is that the original calculation made in the past was based on the best information available at that time.

To determine the new annual depreciation expense, the asset's carrying amount at the time of the revision (asset's original cost minus accumulated depreciation to date plus any capital expenditures less any impairment in value) is determined. The carrying amount is allocated over the remaining useful life of the asset.

TEACHING TIP

Illustration 9-14 provides the formula for revised straight-line depreciation.

Students struggle with this formula. You may want to emphasize the differences between cost, carrying amount and depreciable amount. You will also need to emphasize that it is the “remaining” useful life.

If the units-of-production depreciation is used, the calculation is the same as the straight-line method except that the remaining useful life is expressed as units rather than years.

If the diminishing-balance method is used, the revised rate would be applied to the carrying amount at the time of the change in estimate.

Disposal of Property, Plant and Equipment (LO4)

TEACHING TIP

Illustration 9-15 presents the three methods of disposing of property, plant and equipment: Retirement, Sale or Exchange.

1. There are four sequential steps required to record the retirement, sale, or exchange of a long-lived asset.

Update any unrecorded depreciation.

Calculate the carrying amount.

Calculate the gain or loss (compare the proceeds received with the carrying amount at the date of disposal).

Record the disposal.

Gains on disposal are recorded as credits because credits increase owner's equity; losses on disposal are recorded as debits because debits decrease owner's equity. Gains and losses are reported in the operating section of the multiple-step income statement as they are considered adjustments to the depreciation expense.

TEACHING TIP

Page 488 provides an example of the journal entry for the disposal of a capital asset.

You may want to use an example where you show the students the balance sheet before the disposal and what the balance sheet should look like after the disposal (i.e. both cost and accumulated depreciation equals zero to help the students internalize what amounts we need to put into the journal entry).

2. Retirement: of Property, Plant, and Equipment

When an asset is retired, there are no proceeds for the company.

Update any unrecorded depreciation up to the retirement date.

- a. Debit Accumulated Depreciation and credit the asset account for their balances; if the asset is fully depreciated these amounts will be the same so there is no gain or loss. Even if the carrying amount equals zero, a journal entry is required to remove the asset and its related depreciation account from the books.
- b. If the asset is not fully depreciated debit Accumulated Depreciation for its balance, credit the asset account for its balance, and debit Loss on Disposal for the difference.

Loss on disposals is reported in the operating section of the income statement.

There will never be a gain when an asset is retired: the proceeds are always zero and therefore never greater than the carrying amount of the retired asset.

TEACHING TIP

Page 489 provides an example of the journal entry for the depreciation expense to the date of disposal for the equipment.

Page 489 provides an example of a journal entry for the retirement of the fully depreciated equipment.

Page 490 provides an example of a journal entry for the retirement of equipment at a loss.

3. Sale of Property, Plant, and Equipment

Update any unrecorded depreciation up to the date of disposition.

Calculate the carrying amount.

Compare the proceeds to the carrying amount to determine the gain or loss

Record the journal entry. Cash is debited with the proceeds, Accumulated Depreciation is debited for its balance, the asset is credited for its balance, and a gain or loss is recorded if the proceeds are not equal to the carrying amount.

TEACHING TIP

Page 491 provides an example of the journal entry for the sale of office furniture that has a gain.

Page 491 provides an example of a journal entry for the sale of office furniture that has a loss.

You may want to use the balance sheet equations that are in the margins to emphasize how owner's equity will change and thus the need to record a gain or loss.

4. Exchanges of Property, Plant and Equipment

In an exchange of assets, a new asset is purchased by trading in an old asset, on which a **trade-in allowance** is given toward the purchase price of the new asset. Cash may also be involved. Trade-in allowances seldom represent the fair value of the asset given up, so are ignored for accounting purposes.

Instead of using the stated purchase price, the new asset is recorded at the fair value of the asset given up plus any cash paid (or less any cash received).

Instead of using the trade-in allowance, the fair value of the asset given up is used to calculate the gain or loss on the asset being given up. A loss results if the carrying amount of the asset being given up is more than its fair value. A gain results if the carrying amount is less than its fair value.

The procedure to account for exchanges of assets is as follows:

1. Update any unrecorded depreciation expense to the date of the exchange.
2. Calculate carrying amount of the asset being given up (cost – accumulated depreciation).
3. Calculate any gain or loss on disposal (fair value – carrying amount = gain (loss)).
4. Record the exchange as follows:
 - a. Remove the cost and the accumulated depreciation of the asset that is given up.
 - b. Record any gain or loss on disposal.
 - c. Record the new asset at the fair value of the old asset plus any cash paid (or less any cash received).
 - d. Record the cash paid or received.

TEACHING TIP

Page 492 provides the journal entry to update the depreciation to the date of the exchange. This example has a loss and the journal entry is provided for this loss.

Students will benefit from a discussion of list price versus the correct value of the new asset.

In some cases, the exchange lacks commercial substance or the fair values of the assets acquired or given up cannot be determined. In these cases, the new asset is recorded at the carrying amount of the old asset that was given up plus any cash paid (or less any cash received). Since this is considered a basic swap of one asset for another, NO gain or loss is recorded.

Natural Resources (LO5)

1. Natural resources consist of standing timber and underground deposits of oil, gas, and minerals.
2. Natural resources, frequently called wasting assets, have two distinguishing characteristics.
 - They are physically extracted in operations, such as mining, cutting or pumping.
 - They are replaceable only by an act of nature.
3. Natural resources are tangible assets similar to property, plant and equipment. The distinction is that natural resources physically lose substance or deplete as they are used.

Cost

1. The acquisition cost of a natural resource is the cash or cash equivalent price necessary to acquire the resource and prepare it for its intended use.
2. The cost of the natural resource is often referred to as acquisition, exploration, and development costs.
3. The cost also includes the estimated future removal and site restoration cleanup costs. Restoration costs are usually required in order to return the resource to its natural state at the end of its useful life.

Depreciation (often called depletion for natural resources)

1. The units-of-production method is generally used to calculate depreciation of wasting assets, because periodic depreciation corresponds to the units extracted during the year.

TEACHING TIP

ILLUSTRATION 9-16 provides the formula for units-of-production method for natural resources.

You may want to discuss why the depreciation expense is debited to inventory and not an expense account on the income statement.

2. The depreciation is allocated, along with any production costs such as labour, to inventory. Once sold, the cost of the inventory is transferred to cost of goods sold and matched with the period's revenue.
3. Like depreciation of property, plant and equipment, the depreciation of natural resources needs to be revised if there are any capital expenditures during the useful life or when the estimated total units of the resources have changed.
4. Natural resources must be reviewed and tested for impairment annually. If there is impairment, an impairment loss is recorded, and current and future depreciation is revised.

TEACHING TIP

Page 496 provides the journal entry to record the depletion expense on an uranium mine.

Disposal of Natural Resources

1. Any unrecorded depreciation must be updated for the portion of the year up to the date of the disposal.
2. Proceeds are recorded, the cost and the accumulated depreciation of the natural resource are removed, and a gain or loss, if any, is recorded.

Intangible Assets and Goodwill (LO6)

Intangible assets are rights, privileges, and competitive advantages that result from ownership of long-lived assets that do not possess physical substance.

Intangible assets must be identifiable, which means it must meet one of the following criteria:

1. It can be separated from the company and sold whether the company intends to do so, or
2. It is based on contractual or legal rights, regardless of whether or not it can be separated from the company.

Since goodwill cannot be separated from a company and sold, there are differences in the accounting for goodwill versus other intangible assets.

Accounting for Intangible Assets

1. In general, accounting for intangible assets parallels the accounting for tangible assets.

Intangible assets are recorded at cost. Costs include all the costs of acquisition and other costs that are needed to make the intangible asset ready for its intended use – including legal fees and similar charges.

Under the cost model, if an intangible asset has a finite life, its cost is expensed over the asset's useful life in a rational and systematic manner through *amortization*.

For an intangible asset with a finite life, its amortizable amount should be allocated over the shorter of the estimated useful life and legal title.

2. There are a few differences between accounting for intangible assets and accounting for tangible assets.

Some intangible assets have indefinite (unlimited) lives. These intangibles are not amortized.

If an intangible asset has a finite useful life, its amortizable amount is allocated over the shorter of the (1) estimated useful life and (2) legal life.

If any impairment is evident, the asset must be written down to its recoverable amount and an impairment loss must be recorded.

IFRS HIGHLIGHTS

Under IFRS, intangible assets with indefinite lives must be tested for impairment at least once a year. Under ASPE an annual impairment test is not required unless there are indicators of impairment.

Under IFRS, an impairment loss can be reversed for intangible assets (but not goodwill), similar to property, plant, and equipment. Under ASPE, losses cannot be reversed.

Intangible Assets with Finite Lives

1. **Patents** are an exclusive right issued by The Canadian Intellectual Property Office of Industry Canada that enables the recipient to manufacture, sell, or otherwise control the invention for a period of 20 years from the date of the application.

The initial cost of a patent is the price paid to acquire the patent.

If the owner incurs legal costs in successfully defending the patent in an infringement suit, such costs are considered necessary to establish the validity of the patent. Thus, they are added to the Patent account and amortized over the remaining life of the patent.

The cost of a patent should be amortized over its 20 year legal life or its useful life, whichever is shorter.

2. **Copyrights** are also granted by The Canadian Intellectual Property Office, giving the owner the exclusive right to reproduce and sell an artistic or published work.

Copyrights extend for the life of the creator plus 50 years.

The cost of the copyright consists of the cost of acquiring and defending it.

The useful life of a copyright generally is significantly shorter than its legal life.

3. **Research and development (R&D) costs** are not intangible assets per se, but are expenditures incurred to develop new products and processes that will likely result in intangible assets (for example patents and copyrights).

Research is original, planned investigation that is done to gain new knowledge and understanding, so research costs are expensed when incurred as it is unknown whether a future benefit will exist as a result of the research.

Development is the use of research findings and knowledge. Certain development costs with reasonably assured future benefits can be capitalized. Otherwise, they must be expensed.

TEACHING TIP

ILLUSTRATION 9-17 Illustrates the distinction between research and development.

Intangibles with Indefinite Lives

1. Trademarks and Trade Names

A **trademark** or **trade name** is a word, phrase, jingle, or symbol that distinguishes or identifies a particular enterprise or product.

The creator or original user may obtain exclusive legal right to a trademark or trade name by registering it with The Canadian Intellectual Property Office.

If the trademark or trade name is purchased, the cost is the purchase price. If it is developed by the enterprise itself, it cannot be recognized as an intangible asset on the balance sheet.

Trademarks and trade names can be renewed every 15 years. If the useful life is indefinite, no amortization is recorded but the asset is tested periodically for impairment.

2. Franchises and Licences

A **franchise** is a contractual arrangement under which the franchisor grants the franchisee the right to sell certain products, to render specific services, or to use certain trademarks or trade names, usually within a designated geographical area.

Goodwill

The value of all favourable attributes that relate to a business enterprise. These include exceptional management, desirable location, good customer relations, skilled employees, high quality products, fair pricing policies, and harmonious relations with labour unions.

Goodwill cannot be sold individually in the marketplace; it can be identified only with the business as a whole.

Goodwill is recorded only when there is an exchange transaction that involves the purchase of an entire business.

When an entire business is purchased, goodwill is the excess of the price paid to purchase the entire company over the fair value of the net assets (assets less liabilities) acquired.

Goodwill is not amortized but is tested regularly for impairment.

IFRS requires goodwill to be tested annually for impairment even if there is no indication of impairment. Under ASPE, impairment tests of goodwill are only conducted if there is an indication that impairment exists.

Statement Presentation and Analysis (LO7)

Presentation

Long-lived assets are reported under the headings “property, plant, and equipment”, “intangible assets” or “goodwill”. Some companies group all tangible and intangible assets under one heading “capital assets”. Goodwill must be disclosed separately.

For assets subject to depreciation, the balances and accumulated depreciation should be disclosed. Depreciation methods should be described. The amount of depreciation expense for the period should also be disclosed.

TEACHING TIP

Use **ILLUSTRATION 9-18** shows an example of the balance sheet presentation of long-lived assets.

IFRS HIGHLIGHTS

Under IFRS, companies will also have to disclose if they are using the cost or the revaluation model for each class of assets, as well as a reconciliation of the carrying amount at the beginning and end of period for each class of assets. This means they must show all of the following for each class of long-lived assets in the notes to the financial statements: Additions, disposals, depreciation or amortization, impairment losses and reversals of impairment losses. ASPE does not require disclosure of all these details.

Analysis

The **asset turnover** and **return on assets** ratios are useful measures to determine the profitability of total assets, of which capital assets comprise a significant portion.

The asset turnover ratio is calculated by dividing net sales by the average total assets. It indicates how efficiently a company is using its assets.

The return on assets ratio is calculated by dividing the profit by the average total assets. It indicates the amount of profit that is generated by each dollar invested in assets.

TEACHING TIP

Use **ILLUSTRATION 9-19** to calculate the asset turnover.

TEACHING TIP

Use **ILLUSTRATION 9-20** to calculate the return on assets.