

Lesson Title: Wages, Salary & Deductions **Part One**

Total Time: Two 60 Minute classes with the second class being a work period

Brief Description: In the first class, students will watch *The House That STEM Built* video titled “Wages, Salary & Deductions”. Throughout the video, they will have a worksheet to follow along and solve deductions such as CPP, EI, and Income Tax. In the second class, time will be provided for students to complete a project using a career of their choice.

Curriculum Outcomes: Taken from the New Brunswick Geometry, Measurement, and Finance 10 curriculum

General Curriculum Outcomes: Develop number sense and critical thinking skills

Specific Curriculum Outcomes: N2 - Demonstrate an understanding of income, including wages, salary, contracts, commissions, and piecework to calculate gross pay and net pay.

New Brunswick Global Competencies Achieved:

https://www2.gnb.ca/content/dam/gnb/Departments/ed/pdf/K12/curric/competencies/NBCompetencies.pdf?fbclid=IwAR1ldrZs1gFgiNm8rC4oz7Fmx6mSn-6t_QJkenev0eD33rZ-foYYn6bmdmc

Critical Thinking and Problem Solving

- Learners construct, relate and apply knowledge to all domains of life, such as school, home, work, friends, and community.
- Learners see patterns, make connections, and transfer their learning from one situation to another, including real-world applications.
- Learners engage in an inquiry process to solve problems, as well as acquire, process, interpret, synthesize, and critically analyze information to make informed decisions.

Learning Objectives:

- The learner will be able to define, understand, and solve the following terms
 - Net Pay
 - Gross Pay
 - CPP
 - EI
 - Income Tax

Materials:

- Wages, Salary & Deduction Worksheet
- Chart Paper

- Marker
- White Board Markers
- Calculator
- Mobile Device

Before Class:

- Print out one copy of Wages, Salary & Deduction Worksheet for **each** student

Warm-up: 15 Minutes

- Ask students the following question: “What type of jobs do you think are involved in building a house?”
- The point of this question is for students to think about the wide range of careers involved. They will eventually see in the video that there are many different jobs involved in the process like landscapers, plumbers, electricians, general workers, etc.
- After adequate time is given for students to come up with a list of jobs, ask them to share their answers with the class.
- As students are sharing their answers, write the jobs on a piece of chart paper so it can be hung in the classroom. Or, write them on the whiteboard.
- Alternative: If students are able to use technology in the classroom, a Jamboard could be used for students to post their answers for the class to see. The Jamboard can then be saved for future use.
- Hand out the associated worksheet for students to show their calculations. This handout will be handed in at the end of class to be used as a formative assessment tool.

Activity: 35 Minutes

- Before playing the video, remind students to listen to the different jobs involved in building a house. Make sure they realize that there are many more jobs involved that are not listed in the video.
- At minute 3:10, pause the video and have students solve the problem on the screen about the total amount Sandy earns in 4 weeks. This activity should last **approx. 5 min**
 - After a few minutes, write on the whiteboard how the question should be set up on the students’ handout for those who may be stuck
 - Ask for a student to share their answer, either verbally or by coming to the front of the room and solving it on the whiteboard
- At minute 4:00, pause the video and have students solve the problem on the board about the total amount that Erin earns in 4 weeks. This activity should last **approx. 5 min**
 - After a few minutes, write on the whiteboard how the question should be set up on the students’ handout for those who may be stuck
 - Ask for a student to share their answer, either verbally or by coming to the front of the room and solving it on the whiteboard

- At minute 6:00, pause the video and have students solve the deductions for CPP, EI, Income Tax, and total deduction for Sandy. This activity should last **approx. 10 min**
 - Be sure to only pause the video after the 1st example is done for students to refer to
 - All work can be shown in the chart on the worksheet
- At minute 7:03, pause the video and have students solve net pay for Sandy. This activity should last **approx. 3 min**

Conclusion: 10 Minutes

- Introduce the following project to the students.
 - Students will be researching a career of their choice and determining the wages and deductions
 - The project can be done as a written report, or as a poster board to hang in the classroom
 - The project will involve students choosing a career that they are interested in (whether in the construction trades or otherwise). They will research and solve the following information:
 - What are the education requirements for the chosen career?
 - Is the career paid hourly or by salary?
 - Find deduction rates for CPP, EI, and Income Tax and solve using a chart similar to the worksheet
 - **Since these rates vary according to income, you can let students use the rates from the video to keep things consistent.**
 - Solve for Net Pay.
 - A suggested rubric is provided
- Collect the wages, salary, & deduction worksheet

Differentiation:

Content:

- Some students may choose a career that is in the construction field while other students may choose a career that is in the medical field

Practice:

- Some students may struggle with solving the questions in the short amount of time. If they are having trouble, a multiplication chart or calculators could be used to help them work through the problems.
- Students struggling could also use other example problems from their notes to help

Product:

- Some students may prefer showing their work in a written report
- Some students may prefer displaying their work on a poster board and use pictures, numbers, etc instead of words

Extension:

- If the teacher wants a larger project, the students can then take their income each month and show how it will be spent. For example, groceries, rent, bills (phone, cable, electricity), savings, etc

Name: _____ Class: _____ Date: _____

Wages, Salary & Deduction Worksheet

Name Of Worker: _____

Gross Pay: _____

- **Please Show All Calculations**

Deductions	Rate	Calculations	Amount
CPP			
EI			
Income Tax			
Total Deductions			

Net Pay: _____

- **Please Show All Calculations**

Name Of Worker: _____

Gross Pay: _____

- **Please Show All Calculations**

Deductions	Rate	Calculations	Amount
CPP			
EI			
Income Tax			
Total Deduction			

Net Pay: _____

- **Please Show All Calculations**

Lesson Title: Wages, Salary & Deductions **Part Two**

Total Time: 60 Minutes

Brief Description: In this second class, time will be provided for students to complete the project using a career of their choice.

Curriculum Outcomes: Taken from the New Brunswick Geometry, Measurement, and Finance 10

General Curriculum Outcomes: Develop number sense and critical thinking skills

Specific Curriculum Outcomes: N2 - Demonstrate an understanding of income, including wages, salary, contracts, commissions, and piecework to calculate gross pay and net pay.

New Brunswick Global Competencies Achieved:

https://www2.gnb.ca/content/dam/gnb/Departments/ed/pdf/K12/curric/competencies/NBCCompetencies.pdf?fbclid=IwAR1ldrZs1gFgiNm8rC4oz7Fmx6mSn-6t_QJkenev0eD33rZ-foYYn6bmdmc

Critical Thinking and Problem Solving

- Learners construct, relate and apply knowledge to all domains of life, such as school, home, work, friends, and community.
- Learners see patterns, make connections, and transfer their learning from one situation to another, including real-world applications.
- Learners engage in an inquiry process to solve problems, as well as acquire, process, interpret, synthesize, and critically analyze information to make informed decisions

Learning Objectives:

- The learner will be able to define, understand, and solve the following terms
 - Net Pay
 - Gross Pay
 - CPP
 - EI
 - Income Tax

Materials:

- Wages, Salary & Deduction Worksheet
- Pencil/Pen
- Loose Leaf Paper
- Mobile Device

Warm-up: 15 Minutes

- Show the students ***The House That STEM Built*** video titled “*Wages, Salary and Deductions*” without any pauses. This will be the second time they have viewed the video.
- Ask students if there are any questions about solving for deductions or anything else outlined in the video
- Explain the requirements for the wage, salary, and deduction project again
 - The project will involve students choosing a career that they are interested in. They will research and solve the following information:
 - What are the education requirements for the chosen career?
 - Is the career paid hourly or by salary?
 - Find deduction rates for CPP, EI, and Income Tax and solve using a chart similar to the worksheet
 - **Since these rates vary according to income, you can let students use the rates from the video to keep things consistent.**
 - Solve for Net Pay
- Pass out the handout titled **Wages, Salary & Deduction Project** and the associated rubric to students. This handout outlines the project so all students will be able to keep track of requirements

Activity: 30 Minutes

- Students will be using this time to work on their project
- Students should be allowed to use resources such as textbooks, notes, and their mobile devices if they would like to rewatch the video again
- While students are working, the teacher should be circulating the room ensuring that students are staying on task and answering any questions
- If students are finishing early, they can find another student who is also finished and they can quietly present their career/project to each other

Conclusion: 5 Minutes

- Collect any work that is completed
- Ask students if there are any final questions
- Provide students with the due date of the teacher’s choosing

Differentiation:

Content:

- Some students may choose a career that is in the construction field while other students may choose a career that is in the medical field.

Practice:

- The teacher can choose a few careers themselves and provide the information needed, such as whether it is paid hourly or by salary? The teacher can provide this information to the students. The student can then

take the information and solve the required calculations

Product:

- Some students may prefer showing their work in a written report
- Some students may prefer displaying their work on a poster board and use pictures, numbers, etc instead of words

Extension:

- An extension can be added to the final project by asking students to demonstrate how they would spend their monthly income

Wages, Salary & Deduction Project

Project Requirements:

- Choose a career
- Research the education requirements for the chosen career
- Research if the job is paid hourly vs by salary
- Find deduction rates for CPP, EI, and Income Tax. Create the same chart that was used in the worksheet handout. Solve for CPP, EI, and Income Tax
- Find and solve Net Pay
- Extension: Take the net income for the month and show how it will be spent. (Groceries, electric, rent, bills (phone, cable, car), savings, etc)

Wages, Salary & Deduction Report Rubric

This is a suggested rubric. Teachers may create their own if they choose

- Rubric was adapted from Emily McGary Allman for distribution on www.TeachersPayTeachers.com, 2012

	1- Working Below	2- Approaching	3- Meeting	4- Excelling
Mathematical Content	<ul style="list-style-type: none"> -The evidence shows limited understanding of the mathematical concepts. -There are significant mathematical errors -Few of the problems are not attempted 	<ul style="list-style-type: none"> -The evidence shows some understanding of the mathematical concepts -There are minor mathematical errors -Most of the problems are attempted 	<ul style="list-style-type: none"> -The evidence shows a nearly complete understanding of the mathematical concepts -There are minor mathematical errors but all problems were attempted 	<ul style="list-style-type: none"> -The evidence shows a complete understanding of the mathematical concepts -There are no mathematical errors -All problems were attempted and solved correctly
Problem Solving	<ul style="list-style-type: none"> -There is little identification of the important elements of the mathematical problem - An inappropriate strategy was chosen for solving the problem 	<ul style="list-style-type: none"> -Some of the important elements of the mathematical problem are identified -The chosen strategy for solving the problem was not used properly 	<ul style="list-style-type: none"> -Most of the important elements of the mathematical problem are identified -The chosen strategy for solving the problem was generally used correctly 	<ul style="list-style-type: none"> -All of the important elements of the mathematical problem were identified -The chosen strategy for solving the problems as consistently used correctly
Communication	<ul style="list-style-type: none"> -The written components are minimal 	<ul style="list-style-type: none"> -The written components were vague 	<ul style="list-style-type: none"> -The written components are nearly 	<ul style="list-style-type: none"> -The written components were all

	and do not align with project requirements	and difficult to follow	completed and align with project requirements	completed and align with project requirements
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Comments: