

|  |  |  |
| --- | --- | --- |
| **Overall Expectations** | | **Specific Expectations** |
| A1. Demonstrate scientific investigation skills (related to both inquiry and research) in the four areas of skills (initiating and planning, performing and recording, analysing and interpreting, and communicating)  A2. Identify and describe careers related to the fields of science under study, and describe the contributions of scientists, including Canadians, to those fields | | A1.3 Identify and collect a variety of print and electronic resources that enable them to address research topics fully and appropriately  A1.1 Formulate relevant scientific questions about observed relationships, ideas, problems, or issues, make informed predictions, and/or formulate educated hypotheses to focus inquiries or research  A1.2 Select appropriate instruments (e.g., sampling instruments, a microscope, a stethoscope, dissection instruments) and materials (e.g., dichotomous keys, computer simulations, plant cuttings), and identify appropriate methods, techniques, and procedures, for each inquiry  A1.12 Use appropriate numeric, symbolic, and graphic modes of representation (e.g., biological diagrams, Punnett squares), and appropriate units of measurements (e.g., SI and imperial units)  A1.11 Communicate ideas, plans, procedures, results, and conclusions orally, in writing, and/or in electronic presentations, using appropriate language and a variety of formats (e.g., data tables, laboratory reports, presentations, debates, simulations, models)  A2.1 Identify and describe a variety of careers related to the fields of science under study and the education and training necessary for these careers |
| **Concepts** | | |
| **Terminology** | | **Theory** |
| * Microorganism * Taxon * Phylogeny | * Binomial nomenclature * Dichotomous key | * Essential skills * Job families |
| **Material to prepare** | | |
| * Computer for research * Image collection of jobs in the cheese industry | | |
| **Context**   * Present the images of jobs in the cheese industry (***see ppt*** *Scenario - Introduction to the profession-ENG*) * Identify jobs related to the cheese industry * *There are no wrong answers*   + - *The milk processing industry employs over 24,500 Canadians*     - *Saputo is one of the top ten dairy processors in the world, with products sold in over 50 countries. Saputo employs over 17,000 people worldwide.*     - *Canada produces over 1050 different cheeses*     - *Canada exports over 10 million kg of cheese*     - *The average Canadian consumes 14.5 kg of cheese per year* * *What other elements link these different jobs?* * *They are all jobs related to microorganisms.* * *Microorganisms are everywhere* * *We are in constant contact with microorganisms in our environment; the soil, the water, the air, the surfaces we touch, the animals we live with all contain an impressive number of them.*    + - *For example, a tablespoon of soil can contain up to 1 billion bacteria.*     - *Some parts of our body also contain microorganisms: approximately 104 bacteria on our skin, 1010 in our mouth and 1012 in our digestive tract. Each of us carries between 1.5 and 2 kg of microorganisms which represents about forty thousand billion foreign cells.* * Lead a discussion on the jobs behind the objects that surround us. * *Many jobs require technical and scientific knowledge to understand and explain concepts of public interest to the general public. We often forget that a variety of jobs are needed to develop, create, manufacture and promote a product. For example: A cheese maker participates in a cheese creation contest, a journalist will inform us about the winning cheeses. This project will make you aware of this reality, and be open to all possibilities.* | | |
| **Activity**   * Find the jobs required to produce cheese, then find the duties and skills linked to each job. Create a poster that presents the jobs and skills required to produce cheese. | | |
| **Pushing further**   * Two truths, one lie game about jobs. *(*[*https://www.monemploi.com/magazines/jeu-de-verite-mensonge-version-metiers-et-professions*](https://www.monemploi.com/magazines/jeu-de-verite-mensonge-version-metiers-et-professions)*)* * Video: The job of a quality control expert in the agro-food industry *(*[*https://www.youtube.com/watch?v=GoGrv7KBOhs*](https://www.youtube.com/watch?v=GoGrv7KBOhs)*)* | | |
| **Assessment**  Formative — feedback — discussion  Summative — job search | | |
| **Resources**   * Internet * What is dairy processing * *(*[*https://www.dpac-atlc.ca/what-is-dairy-processing/*](https://www.dpac-atlc.ca/what-is-dairy-processing/)*)* * [*Saputo*](https://www.saputo.com/fr-ca/notre-societe/historique) * *(*[*https://www.saputo.com/en/our-company/history-overview*](https://www.saputo.com/en/our-company/history-overview)*)* * [Préparation à l’exercice d’un métier semi-spécialisé](http://www.education.gouv.qc.ca/fileadmin/site_web/documents/dpse/formation_jeunes/PFEQ_Chap_10.5_01.pdf) * *(*[*http://www.education.gouv.qc.ca/fileadmin/site\_web/documents/dpse/formation\_jeunes/PFEQ\_Chap\_10.5\_01.pdf*](http://www.education.gouv.qc.ca/fileadmin/site_web/documents/dpse/formation_jeunes/PFEQ_Chap_10.5_01.pdf)*)* * What are essential skills? * *(*[*https://www.canada.ca/en/employment-social-development/programs/essential-skills/tools/what-aresential-skills.html*](https://www.canada.ca/en/employment-social-development/programs/essential-skills/tools/what-aresential-skills.html)*)* * [Explore careers by essential skills](https://www.guichetemplois.gc.ca/habilitesessentiel?lang=fra) * *(*[*https://www.jobbank.gc.ca/essentialskills?lang=fra*](https://www.jobbank.gc.ca/essentialskills?lang=fra)*)* * [Mon emploi](https://www.monemploi.com/) * (<https://www.monemploi.com/>) | | |