

Use PEN System Content in Learning/Training Materials

PEN System Content Overview:

The PEN system is an evidence-based decision support resource developed by Dietitians of Canada. It is designed to help dietitians keep pace with food and nutrition research. The PEN system provides knowledge pathways on a variety of topics relevant to everyday practice, where PEN authors identify relevant literature from various sources, and then critically appraise, grade and synthesize that literature into key practice points to answer specific practice questions.

The practice question information is supported with related tools and resources which can be sorted by country, language and type (client or professional), along with practice guidance toolkits for health disease/condition related topics and are based on the nutrition care process terminology (NCPT).

RESOURCE | Learn more

- Visit [PEN Terminology and Features](#) to learn more about knowledge pathways
- Watch these 4-5 minute videos:
 - [PEN and Knowledge Pathways](#)
 - [Getting to Know Knowledge Pathways](#)

Assignment Learning Outcome

Students will **know how** evidence-based practice informs their learning through the application of knowledge.

Assignment

Educators can use PEN System content / knowledge objects (e.g., Practice Questions, Related Tools and Resources, Backgrounds and Practice Guidance Toolkits) to support course learning and training materials (e.g., lecture slides and course readings).

1. Process

Go to either the [general search](#) section in the PEN System on the home page and type in the topic of interest, or go to the PEN System [Table of Contents](#) to find the topic information they are looking for to use for developing a particular lecture.

2. Once the particular topic is found, review all the parts of the Knowledge Pathway related to the topic area. This may include:
 - Background
 - Practice questions, and their summary (summary of recommendations and evidence (SRE))

- Related tools and resources (client and professional)
 - Practice guidance toolkit
3. Using the information retrieved, begin to create lecture notes and assign readings to their students, as long as the university has a PEN System site license (most do).

EXAMPLE | Using PEN Content to develop Course Content

PEN System sustainability content used for developing a food security lecture:

- a. Review the Sustainable Food Systems Knowledge Pathway which includes the [Sustainable Diets and the Environment Background](#) and [related practice questions](#).
- b. Develop a couple of PPT slides from these knowledge objects along with developing some discussion questions for their students.
- c. The class could be divided into groups of 2 to 4 students who can discuss the questions in small groups and then the class can come back together to review the questions and answers together for a more fulsome discussion.

Sample Learning Objectives

- Understand the definition of sustainable diets/eating patterns.
- Review and discuss how environmental impact is measured.
- Review and discuss potential benefits of sustainable eating patterns.

Sample PPT slides

To set the stage for the class discussion exercise developed using information from the [Sustainable Food System Knowledge Pathway](#):

Slide 1: What are sustainable diets?

A commonly recognized definition from the Food and Agriculture Organization of the United Nations (FAO):

“... those diets with low environmental impacts which contribute to food and nutrition security and to healthy life for present and future generations. Sustainable diets are protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, economically fair and affordable; nutritionally adequate, safe and healthy; while optimizing natural and human resources.”

From: Burlingame B, Dernini S. [Sustainable diets and biodiversity – directions and solutions for policy, research and action](#). FAO. 2010.

Slide 2: What are the measures used to ‘low environmental impact’?

The most frequently used indicators of food environmental impact are:

- Greenhouse gas emissions (GHGE);
- Water use; and
- Land use.

Other indicators include: energy use, biodiversity, pollution (e.g. water), nitrogen release and soil degradation.

Slide 3: Why are sustainable eating patterns important?

- Growing global population
- Earth is undergoing an environmental sustainability crisis.

Discussion Questions

Three sample discussion questions developed from the [Sustainable Food Systems Knowledge Pathway practice questions](#):

Discussion question 1: Do dietary eating patterns that are lower in animal products as compared to usual population-level diets lower environmental impacts?

Key answer: Eating patterns low in animal products has been shown to produce greater environmental benefits (e.g. reduced greenhouse gas emissions, land use, water use) than diets generally considered ‘healthy’.

Discussion question 2: What are the potential health benefits of following sustainable dietary patterns?

Key answer: Health benefits that are related to reduced mortality (death) and chronic disease risk (such as coronary heart disease, diabetes and colorectal cancer)

Discussion question 3: Why do researchers find it challenging to measure diet sustainability?

Key answer: There is a need for common methods for measuring diet sustainability and for high quality studies with valid nutritional and environmental outcomes.

4. If your university has a site license to the PEN System (most do), you can direct your students to read the [Sustainability Diets and the Environment Background](#) as follow-up homework.

RESOURCE | The PEN Team is here to help!

The PEN Team can support this assignment to incorporate the PEN System content into learning/training materials in the following ways:

- Help in the selection of PEN content to support learning/training materials.
- Act as a resource for the student / intern / educator.

QUESTIONS?

Contact the PEN Resource Manager at jane.bellman@dietitians.ca