

# THE IMPORTANCE OF SLEEP

## LESSON 2 TEACHING PLAN

### MY RELATIONSHIP WITH SLEEP



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## BACKGROUND AND INTRODUCTION

The **importance of sleep** teaching module was developed in response to the findings of the 2020 and 2022 Planet Youth surveys. These surveys have highlighted a very significant issue related to lack of sleep for our teens, and the dramatic impact this is having on their wellbeing. The module's first lesson, **About Sleep**, broached the topic of sleep with the pupils and hopefully got the conversation started about how a lack of sleep affects our daily lives in a lot of different ways.

This **My relationship with sleep** lesson introduces the science of sleep to pupils, highlights some of the factors that affect sleep, and asks the pupils to start examining their own attitudes and behaviours around sleep.

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## ALIGNMENT TO THE SPHE SPECIFICATION FOR JUNIOR CYCLE 2023

### STRAND 1: UNDERSTANDING MYSELF AND OTHERS

- 1.1 Explore the physical, social and emotional changes that happen during adolescence

### STRAND 2: MAKING HEALTHY CHOICES

- 2.1 Consider the multifaceted nature of health and wellbeing, and evaluate what being healthy might look like for different adolescents, including how food, physical activity, sleep/rest and hygiene contribute to health and wellbeing

### STRAND 4: EMOTIONAL WELLBEING

- 4.1 Discuss the fluid nature of emotional wellbeing and ways to nurture and protect it.
- 4.5 Explore how emotional wellbeing can be affected by factors within our control, such as sleep, diet, exercise, substance use and online exposure, and factors beyond our control

## LESSON 2 LEARNING GOALS

At the end of the lesson, participants will be able to:

- Better **understand** the science of sleep
- Be able to **identify** some common sleep problems
- Better **understand** their own relationship with sleep.
- Be ready to **practice** personal sleep analysis

## RESOURCES NEEDED FOR THIS LESSON

- Lesson 2 PowerPoint (Available in ppt and pdf version. The ppt version has slide notes).
- Sleep Questionnaire worksheet (This can be used as Lesson 1 homework or at the start of Lesson 2).
- Sleep Diary worksheet.
- Lesson 2 3-2-1 worksheet.

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## SLIDE NUMBERS, CONTENT AND NOTES

SLIDE	CONTENT AND NOTES
1	<b>My relationship with sleep.</b> Title slide.
2	<b>Lesson introduction.</b> Learning goals and wellbeing indicators identified
3	<b>How much sleep are teens getting?</b> This chart shows the results from the November 2022 Planet Youth survey of 4,339 15 and 16 year olds in all the 91 schools and Youthreach centres in Galway, Mayo and Roscommon.
4	<b>Sleep questionnaire worksheet.</b> This slide shows the sleep questionnaire worksheet. It may have been assigned as homework at the end of lesson 1, or the pupils can take a few minutes to complete it here.  There can be a general teacher-led discussion on the worksheet.  “We know from the slide and from the last lesson that over half of teenagers aren’t getting enough sleep, so this exercise should be useful to help us see how much sleep we’re getting individually.”  Did anyone spot anything interesting when filling in the worksheet? Was there anything that surprised you? Who rated their sleep as average? Or good? Or poor? Did anybody put very good or very poor?  “We might come back to this questionnaire later, but let’s move on for now and look a bit at how and why we sleep.”

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**Sleep tracker images – Discussion.** This is a brief teacher-led discussion with the class about the sleep tracker images.

Ask the class who had the better sleep. Is it the person who had the sleep stages on the left? Or the person on the right? Why?

Just take a couple of minutes to get some idea of what the pupils think, we revisit this slide later in the class.

“Well let’s examine the science of what’s actually happening while we’re asleep, and we can look at these pictures again afterwards when we might have the answer.”

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## **The science of sleep - The two processes that regulate sleep**

This is the first of a series of slides on the science of sleep

### **The homeostatic sleep drive**

This is the body’s self-regulating system in which pressure to sleep builds up based on how long you’ve been awake. This same drive causes you to sleep longer or more deeply after a period of insufficient sleep.

### **The circadian rhythm and internal clock**

These control your timing of sleep and cause you to be sleepy at night and to wake in the morning. Your body’s internal or biological clock, which is based on a roughly 24-hour day, controls most circadian rhythms. These include sleep and wake times but also things such as brain activity, the release of hormone, body temperature and appetite. Daylight exposure is the biggest influence on circadian rhythms.

### **Additional Teacher slide notes**

#### **The internal clock**

There a powerful internal clock in an area of the brain called the hypothalamus. The hypothalamus is a basic, primitive part of the brain and it handles things like hormone release, body temperature, and your fight-or-flight response. Nestled within the hypothalamus is a collection of 20,000 neurons called the suprachiasmatic nucleus, or SCN. This SCN is your body’s master internal clock. It runs on a 24-hour cycle and is sensitive to light. Neurons in the SCN fire more during the day and less at night because light-sensing cells in the retina transmit electrical impulses to the SCN via the optic nerve.

Your internal clock sends messages throughout the 24-hour day influencing sleep-wake patterns and many other biological processes. As bedtime approaches, our temperature begins to go down, and levels of the sleep-inducing chemical melatonin rises in preparation for sleep. Toward morning time, levels of the hormone cortisol rise and help prepare the body to wake up.

<p>7</p>	<p><b>The science of sleep - The stages of sleep</b></p> <p><b>NREM Sleep – Non Rapid Eye Movement</b></p> <p><b>Stage 1</b> - Eyes closed on the threshold between awake and asleep. You can be easily awakened</p> <p><b>Stage 2</b> - This is light sleep; your heart rate begins to slow and body temperature goes down.</p> <p><b>Stage 3</b> - Slow wave sleep, now you are in deep sleep. Blood pressure and heart rate go down, and your breathing slows. It is harder to wake you up. A lot of deep sleep happens in the first part of the night.</p> <p><b>REM Sleep – Rapid Eye Movement</b></p> <p><b>Stage 4</b> - Approximately 90 minutes after falling asleep, your brain becomes active, but voluntary muscle movements are inhibited. Brain waves are faster and less organized than in NREM and the eyes scan back and forth under the eyelids. Although dreams can happen during any stage, the most intense dreaming takes place during REM sleep. As the night progresses you experience more REM sleep.</p>
<p>8</p>	<p><b>The science of sleep - Sleep cycles</b></p> <p>Throughout your time asleep, your brain will cycle through the NREM and REM stages of sleep approximately every 90 minutes. From drowsiness, to light sleep and dream sleep, and into more deep sleep again. Four to six sleep cycles every night is about normal.</p> <p>All these stages of sleep are necessary, and none is better than any other. It is understood though that you need a balance of around 25% REM and 25% of the deepest NREM sleep to maintain your health and wellbeing.</p> <p><b>Additional Teacher slide notes</b></p> <p>The structure of a person's sleep stages and cycles is known as their sleep architecture. While deep sleep and REM sleep involve more profound changes in activity levels, experts believe that each stage plays a part in a healthy sleep architecture that generates quality sleep.</p>
<p>9</p>	<p><b>Sleep tracker images</b></p> <p>Teacher-led. This is a brief re-visit to the sleep tracker images.</p> <p>Perhaps ask the class again who had the better sleep. Is it the person who had the sleep stages on the left? Or the person on the right? Why though?</p> <p>The person on the right actually has the better quality of sleep, as they are closer to the ideal balance of around 25% REM sleep and 25% of deep NREM sleep.</p>

<p>10</p>	<p><b>Do teens have more trouble sleeping?</b> Biological factors and psychosocial factors</p> <p>Most teens should get 8 to 10 hours of sleep a night, but teens do naturally have a harder time falling asleep. During the teen years the body's internal clock is reset to fall asleep later at night and wake up later in the morning. This change happens because teen brains make the sleep hormone melatonin later at night than child and adult brains do.</p> <p>Another change is bedtime getting later - parent-set bedtimes become less common and staying up later to study, to train, to spend time on devices etc. all contribute to later bedtimes and less sleep.</p>
<p>11</p>	<p><b>My relationship with sleep.</b> Other factors that can affect your quality of sleep</p> <p>Have a think about some of these and if they could apply to you.</p> <ul style="list-style-type: none"> <li>• Do you prioritise your sleep and have a good routine at night?</li> <li>• Your sleep environment; your bed and bedroom.</li> <li>• Your food and drink choices.</li> <li>• Your physical activity and exposure to daylight.</li> <li>• Screen use and light or blue light exposure late in the evening.</li> <li>• Having devices in your bedroom after lights-out.</li> <li>• How late your friends stay up. Fear of missing out is important.</li> <li>• Stress, anxiety, and worry are also common reasons for sleep problems.</li> </ul> <p><b>Additional teacher notes</b></p> <p>These are all factors that can dramatically influence the amount and quality of sleep that we're getting.</p> <p>There's going to be one more lesson on this called <b>Improving my sleep</b> and we'll be exploring some ideas about that next week. For now though, there's a bit of homework before we get to that. This is called a Sleep Diary worksheet, and you can use it to help track how you're doing for your sleep.</p> <p>We can all do with a bit more sleep, and as we know, some of us aren't getting nearly enough of it. So, if we use this Sleep Diary it can be very useful to help identify ways that we can increase the amount and quality of sleep we're getting. It's particularly useful when coupled with the Sleep Questionnaire.</p> <p>Try and fill in the diary for the week and we can talk about it next time.</p>
<p>12</p>	<p><b>Homework – Sleep diary</b></p>

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### Lesson review and 3-2-1 exercise

This slide is the review of learning goals and there is also a 3-2-1 worksheet exercise.

Students are invited to reflect on:

- Three things I learned today.
- Two things I found interesting.
- One question I still have.

## LESSON 3 PREVIEW IMPROVING MY SLEEP

The next lesson brings the concept of sleep hygiene to pupils and introduces some guidelines for ways they could improve their sleep practices and routines. It also encourages the pupils to take action to improve their sleep and gives them some tools to help do so.

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## FEEDBACK AND SUGGESTIONS

This is version 1 of the module, and I'm open to suggestions for improvements, such as for additional or better content. And please let me know if you spot any errors, as I expect there are some.

These lessons may be a bit content heavy and tight on time, depending on the year group, so feel free to give feedback after you have used them in the classroom.

I hope you find the module useful to the pupils and to the school.

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