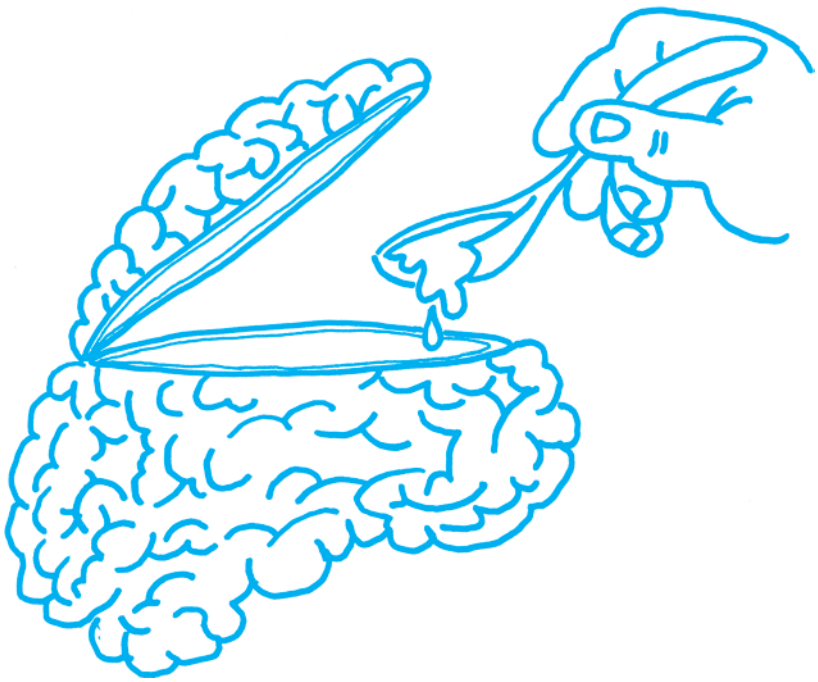
1 Study skills

The proper care and feeding of a human brain



When you have completed this chapter, you should be able to:

- Understand your preferred learning style and the study strategies that support it.
- Have a set of skills that will help you get the most benefit from lectures and your reading.
- Draft a written schedule that includes adequate study time.
- Know how to prepare well for an exam.
- Understand that you are ultimately accountable for your own success or failure.
- Feel ready and more confident to start your course.

YOUR STARTING POINT

Answer the following questions to assess your study habits.

1. How often do you read a course textbook? _____
2. How many days of the week do you study for one course? _____
3. Do you study hard the day before an exam, but rarely between exams? _____
4. Where do you study? _____
5. How long should you spend studying outside the classroom? _____
6. Do you schedule your study time and stick to it? _____
7. Do you study hard or hardly study? _____
8. Do you mostly memorise when studying for a test? _____
9. Do you have a good support group of family and friends who encourage you? _____
10. Do you quiz yourself when studying? _____

Welcome to the exciting and sometimes challenging world of anatomy and physiology! You will quickly discover how amazing the human machine truly is – a curious marvel of complexity that is simultaneously surprisingly simple. You will be fascinated by learning how your own body is built (anatomy) and how it works (physiology), and interest in your subject matter always makes it much easier to learn.

Still, no matter how exciting your anatomical explorations may be, your course may, at times, seem rigorous and demanding. You've taken a great first step by turning to this book to jump-start your studies. This book is meant to help you enter the course with a well-planned strategy for success and with confidence in your basic scientific knowledge.

Answers: Answers will be individualised, except for number 5 – you should spend 2–3 hours studying for each hour of class time.

TIME TO TRY

Are you wondering why you are reading this book?

You have committed yourself to studying science as part of your course. Do you think this is going to be difficult?

Go to the companion website for *Skills for Nursing and Healthcare Students* on your computer.

Enter the web address **www.pearsoned.co.uk/getready**

Take the Diagnostic test. This will help you to see what kind of computer skills you need to be able to study online and also test you on your preliminary knowledge.

The purpose of this chapter is to help you 'train your brain' to make your learning process easier and more efficient.

Why should I study anatomy and physiology?

Most students take anatomy and physiology because it is required for their chosen career pathway. Sometimes when something is required, we do it only because we have to, without considering what benefits the task might hold for us. Unfortunately, some students use that approach for anatomy and physiology, but it is always easier to study something if you understand why it matters, and this course is no exception.

PICTURE THIS

Until recently your car has run perfectly, but now the engine occasionally stops running and is difficult to restart. Assuming you have little knowledge of car mechanics, you are not likely to solve the mystery or make repairs yourself. You take it to a car mechanic, who will consider how your car is malfunctioning – its symptoms, if you like – and then fix it. What knowledge will the mechanic need to accomplish that goal? _____

_____

_____

In what ways are people in health- and medical-related fields similar to the car mechanic? _____

_____

Why do they need to fully understand anatomy and physiology?

Now consider your own future – what is your planned career?

Why will you need to know anatomy and physiology?

Many anatomy and physiology students plan careers in a medical or health field. Others may be heading into physiotherapy, dietetics, sports science, perhaps biomechanics or bioengineering, and many other fields. These career areas share a common thread – anatomy and physiology form the foundation on which they are all built. Now go back to the example. To understand your malfunctioning car, the mechanic must first fully understand the parts of your car – how they fit together and how they normally function, just as you will need to understand the parts of the human body and their normal functions. Finally, there is a simpler reason why you should care about learning anatomy and physiology. The human body is an amazing machine, and you own one. Anatomy and physiology are your owner's manual.

To thine own self be true: **learning styles**

What *is* the best way to learn these subjects? A huge amount of research has explored how people learn, and there are many opinions. One common approach considers which of the senses a learner relies on the most – sight, sound or touch:

- Visual learners learn best by *seeing*, for example, watching a demonstration.
- Auditory learners learn best by *hearing*, for example, hearing an explanation.
- Tactile (kinaesthetic) learners learn best by *doing*, for example, putting your hands on something and feeling it.

TIME TO TRY

Let's uncover your learning style.

1. Look at **Table 1.1**. Read an activity in the first column, then read each of the three responses to the right of that activity.
2. Mark the response that seems most characteristic of you.
3. After doing this for each row, you are ready to total up your score. Add all the marks in each column and write the total in the corresponding space in the bottom row.
4. Next look at your numbers. You will likely have a higher total in one column. That is your primary learning style. The second-highest number is your secondary learning style.

My primary learning style is _____

My secondary learning style is _____

You can also do this at the online companion website. Go to **www.pearsoned.co.uk/getready**

Select Chapter 1: Study skills in the drop-down box. Click Go.

Go to Learning styles and click on the activity What is your learning style?

TABLE 1.1 Assessing your learning style.

Activity	Column 1	Column 2	Column 3
1. While I try to **concentrate** . . . 	I grow distracted by clutter or movement, and I notice things in my visual field that other people don't.	I get distracted by sounds, and I prefer to control the amount and type of noise around me.	I become distracted by commotion, and I tend to retreat inside myself.
2. While I am **visualising** . . . 	I see vivid, detailed pictures in my thoughts.	I think in voices and sounds.	I see images in my thoughts that involve movement.

TABLE 1.1 Assessing your learning style, continued.

Activity	Column 1	Column 2	Column 3
3. When I **talk to someone** . . . 	I dislike listening for *very* long.	I enjoy listening, or I may get impatient to talk.	I gesture and use expressive movements.
4. When I **contact people** . . . 	I prefer face-to-face meetings.	I prefer speaking by telephone for intense conversations.	I prefer to interact while walking or participating in some activity.
5. When I **see an acquaintance** . . . 	I tend to forget names but usually remember faces, and I can usually remember where we met.	I tend to remember people's names and can usually remember what we discussed.	I tend to remember what we did together and may almost 'feel' our time together.
6. When I am **relaxing** . . . 	I prefer to watch TV, see a play, or go to the cinema.	I prefer to listen to the radio, play music, read, or talk with a friend.	I prefer to play sports, do crafts, or make something with my hands.
7. While I am **reading** . . . 	I like descriptive scenes and may pause to imagine the action.	I enjoy the dialogue most and can 'hear' the characters talking.	I prefer action stories, but I rarely read for pleasure.
8. When I am **spelling** . . . 	I try to see the word in my mind or imagine what it would look like on paper.	I sound out the word, sometimes aloud, and tend to recall rules about letter order.	I get a feel for the word by writing it out or pretending to type it.

TABLE 1.1 Assessing your learning style, continued.

Activity	Column 1	Column 2	Column 3
9. When I **do something new** . . . 	I seek out demonstrations, pictures or diagrams.	I like verbal and written instructions, and talking it over with someone else.	I prefer to jump right in to try it, and I will keep trying and try different ways.
10. When I **assemble something** . . . 	I look at the picture first and then, maybe, read the directions.	I like to read the directions, or I talk aloud as I work.	I usually ignore the directions and figure it out as I go along.
11. When I am **interpreting someone's mood** . . . 	I mostly look at their facial expressions.	I listen to the tone of the voice.	I watch body language.
12. When I **teach others how to do something** . . . 	I prefer to show them how to do it.	I prefer to tell them or write out how to do it.	I demonstrate how it is done and ask them to try.
TOTAL:	**Visual:** _____	**Auditory:** _____	**Tactile/Kinaesthetic:** _____

Source: Marcia L. Conner, 1993–2008 Learning Style Assessment at www.agelesslearner.com

Now that you know your primary and secondary learning styles, you can design your study approach accordingly, emphasising the activities that use your preferred senses. Look closely at your scores, though. If two scores are rather close, you already use two learning styles well and will benefit from using both of them when studying. If your high score is much higher than your other scores, you have a

strong preference and should particularly emphasise that style. Most people use a combination of learning styles.

In addition, information coming in through different senses reaches different parts of your brain. The more of your brain that is engaged in the learning process, the more effective your learning will be, so try strategies for all three styles and then emphasise your preferred style over the others. You'll know which strategies work best for you. Some strategies that you might try are summarised for you in **Table 1.2**.

TABLE 1.2 The three learning styles and helpful techniques to use in your studies.



Source: © Getty Images

	Visual	Auditory	Tactile
Techniques to use	❑ Sit close to the teacher. ❑ Take detailed notes. ❑ Draw pictures. ❑ Make flow charts. ❑ Use flash cards. ❑ Focus on the figures, tables, and their captions. ❑ Try using colouring books and picture atlases. ❑ Use visualisation.	❑ Listen carefully to your teacher's voice. ❑ Read the textbook and your notes out loud. ❑ Record lectures and listen to them later. ❑ Listen during the class instead of writing notes. ❑ Work in a study group. ❑ Discuss the material with others.	❑ Highlight important information while reading. ❑ Write your own notes in class and while reading the textbook. ❑ Transfer your notes to another notebook or type them into your computer. ❑ Doodle and draw as you read. ❑ Build models of anatomical structures. ❑ Create and conduct your own experiments. ❑ Hold your book while reading. ❑ Walk or stand while reading. ❑ Use anatomy colouring workbooks. ❑ Use flash cards.

Visual learners

If you are a **visual learner**, you rely heavily on visual cues. You notice your teacher's mannerisms, expressions, gestures and body language. Seeing these cues is especially helpful, so sit at the front of the classroom, close to the teacher. You tend to think in pictures and learn well from visual aids such as diagrams, illustrations, tables, animations, film clips and handouts. Here are some strategies for you.

- In class, take detailed notes and make sketches.
- When studying on your own, draw pictures that relate to the information, make flow charts and concept maps, use flash cards, focus on the illustrations and tables in your textbook, and read the captions that accompany them.
- Use anatomy and physiology colouring workbooks and online tutorials with animations.
- Use mental visualisation of the material you are studying and imagine yourself acting out processes. For example, to learn major blood vessels, you might imagine yourself swimming through them.

Auditory learners

If you are an **auditory learner**, you learn well from traditional lectures and discussion. You listen carefully to your teacher's vocal pitch, tone, speed and mannerisms. Material that you struggle with while reading becomes clearer when you hear it. Here are some strategies for you.

- Read the textbook and your notes out loud.
- Record the lectures so you can listen to them later. Recording lectures also allows you to listen during class instead of focusing on writing, which is less beneficial for you.
- Work in a study group, and discuss material with your teacher, friends and colleagues.

Tactile learners

If you are a **tactile learner**, you learn best by actively participating and doing hands-on activities. You may become bored easily in class from

sitting still too long and start fidgeting or doodling. You need to do something physical while studying and learning. Here are some strategies for you.

- Try using a marker to highlight important information while you are reading.
- Write out your own notes in class and while reading the textbook. Later, transfer your notes to another notebook or type them into your computer.
- Draw pictures of appropriate material as you read.
- Build models of anatomical structures using clay or other materials.
- Create and conduct your own experiments.
- Hold your book and walk while reading.
- Use anatomy and physiology colouring workbooks.
- Make and use your own flash cards.
- Keep your hands and your mind busy at the same time.

This is just one way of classifying learning styles – there are many other systems. The VARK system, for example, recognises four styles: visual, aural, read/write and kinaesthetic. Another system called Memletics ('memory athletics') identifies seven learning styles. Many other systems, such as the Kolb Learning Style Inventory and the Myers–Briggs Type Indicator are also available, some for free and online. Explore other systems like the BBC Education Study Skills website which you can find in the Web Resources at the end of this chapter. Matching your study approach to your learning preference can help you gain the most from your study sessions. Find out what works for you.

LOOK OUT

Understanding your own learning style allows you to develop more effective and efficient study techniques that take advantage of your sensory preferences. Emphasising your preferred learning style will make the material easier to learn and it will stay with you for longer.

✔ **QUICK CHECK**

Homemade flash cards would be most beneficial to which two learning styles? _____ and _____ .

How could they be used to benefit a learner of the third style?

_____

Answer: They would benefit visual and tactile learners. Reading them out loud would benefit auditory learners.

Putting on your best face: **getting ready**

Many students mistakenly wait until the first lecture to start thinking about what it's like going to college. The key to starting your course well is to be organised and ready when you enter the classroom. This takes advance planning, but the time invested will save you even more time when the course is underway.

Putting it in writing

As the course begins – if not before – you should get organised, and that begins with making a commitment to yourself. Too often we begin a project without setting goals in advance. If you set a goal, you enter with a purpose and a direction. If you do not set a goal, it's too easy to just go along and see what happens. Take time to think about your goals for each term.

Your goals should be **SMART**, which stands for the characteristics to incorporate into your goals :

- ***Specific***. Instead of trying to 'do well', perhaps strive for a specific grade.
- ***Measurable***. How will you know if you achieve your goals? For example, a goal of studying for two hours a day is measurable.
- ***Attainable***. Set goals for yourself that you can achieve through your own effort and accountability. Having the top grade in the class may not be possible, but you may be able to get an 'A'.
- ***Realistic***. If you are a single mother with young children at home, it may not be realistic to set a goal of studying for two hours every evening when your children need you.

- ***Time-frame.*** Set a time-frame for achieving your goals and be realistic about how much time to allow. Let's say you plan to enter a nursing programme. If you need to have passed certain exams before you start, you may not do that in time if you are studying part-time.

Take time to set appropriate goals just for you. They will help you stay motivated by keeping you focused on why you are doing this and where you are going in your life.

Once you've decided on your goals, write them down to give them more importance. Once you've written them, be firmly committed to them. To reinforce these goals, write them on a sticker and place it in a prominent location in your study area so you'll see it every day.

TIME TO TRY

Set three main goals for yourself now and write them below. Explain why achieving each goal is important to you.

Goal 1: _____

It is important to me because: _____

_____

Goal 2: _____

It is important to me because: _____

_____

Goal 3: _____

It is important to me because: _____

_____

Putting it all together

It's amazing how many students show up for a test with no writing equipment! Don't let that happen to you. The more organised you are, the more efficient you will be, so let's organise what you will need for class. Categorise the items by what you take to class every day, what remains at home in your study area, and optional items that are nice, but non-essential, additions. Use the checklist provided for you in **Table 1.3**. Search your house and you'll probably find that you have many of these items already. Most of them can be bought at your university bookshop, but many are available at your local shops. We will discuss some of these items specifically.

TABLE 1.3 Organiser's checklist.

Item	✎✘
To take to class each day:	
Backpack/briefcase/wheelie bag	
Textbooks/workbooks	
Pocket-sized diary	
To Do list	
Separate notebooks for each course	
Copy of class schedule with buildings and room numbers	
Several blue or black ink pens	
Several pencils	
Small pencil sharpener	
2–3 coloured highlighter pens	
Small stapler	
Supply of paper for note-taking	
Calculator	
At home:	
Master calendar	
Separate file or folder for each course	
Loose notebook paper	
Index cards for making flash cards	
Computer paper for printer	
More writing equipment (pens and pencils)	
Stapler	
Calculator	
Scissors	
Paper clips	
Optional:	
Personal organiser	
Colouring workbooks associated with textbook	
Coloured markers/pencils	
Recorder to record lectures/readings	
A means of digital storage	
Extra batteries	
Anatomy atlas	
Medical dictionary	

You'll be going back and forth to college a lot, so it is most efficient to keep all the items you might need in one place. To carry them, most students use a backpack or briefcase. One advantage to this is that you can load it up with the essentials so that they are always ready to walk out the door with you when you leave for college. Let's discuss some of the items to pack.

You need a pocket-sized diary that has plenty of room for writing and that you can keep with you at all times. Or you may opt for a personal organiser or an electronic organiser that can sync with your computer. Select one you like, because you'll use it every day. In it, write all important dates you already know – when classes begin, holidays, when exams begin. Enter your timetable, your work schedule, and any other known time commitments. Try to keep your diary current so you always know how your time is being spent and can plan ahead.

If it's not part of your diary, you need a separate To Do list. Write all assignments and due dates on this list. You want one single To Do list for all of your classes as well as non-college activities, because they must all be done from the same pool of time. Writing them down allows you to view the entire list and review the deadlines for each item so you can easily prioritise, doing the assignments in the order in which they are due.

Maintain a record of all marks you receive (**Figure 1.1**). For each graded item, list what it is, when you handed it in, when you got it back, how many points you received, how many points were possible, and any additional notes. Once you know how your grade will be

Graded item	Date turned in	Date returned	My score	Possible points	Notes
Lab 1	9/6	9/13	10	10	Worked with Emily, Mike, Tom
Quiz 1	9/7	9/9	18	20	Study terms again
Lab 2	9/13	9/16	6	10	Messed up the maths!
Pop Quiz	9/14	9/16	5	5	From yesterday's lecture. I was ready!
Quiz 2	9/21	9/25	19	20	Forgot to answer one question.

FIGURE 1.1 A sample record of your marks for keeping track of your progress.

determined for the course, you can use this to keep track of your progress as you go along. It also provides a back-up in case there is any confusion later about the work you handed in.

Check with your lecturers to see if you should bring your textbook to the lesson. Typically, you may not need it in a lecture, but you may need to refer to it during the day. E-books are really good as they don't weigh so much.

Always carry the basics with you. You need a notebook for note-taking. If you come to a lesson without anything to write with, it says you do not think that anything said is important enough to write down. If you ask for a stapler before handing in an assignment, it says you threw it together with little thought. Pens, pencils, erasers, staples, paper, highlighters, coloured pencils, index cards, paper clips – these are just some items you may find useful. Replenish your supply as needed.

Set up your home study space like a home office. Be sure to have all the essential office supplies on hand – plenty of writing equipment, paper, a stapler, and so on. A critical part of the home study area is the master calendar. There are large desktop versions and wall charts, for example. You could use a calendar feature on your computer, but the more visible the calendar is, the more often you will look at it. This calendar should be large enough to accommodate plenty of writing, so think BIG! Each day, you should add anything that you put in your diary or on your To Do list to this master calendar. All time commitments should be entered, so also add all personal appointments and holidays. This is how you will schedule your life while at college, and the practice will probably stick with you far beyond that.

You may have already started your course before using this workbook. You certainly cannot do all these things in one go, but it is never too late to get organised. So, go and get it all together!

LOOK OUT

To be successful in class, your effort should start before the course begins. What are some tasks you should do before the first lesson?

Set and write down your goals, organise the items you will need for college and at home, pack your bag, start your diary and master calendar, and organise your study area.

I hate to **lecture** on this, but can you hear me now?

Welcome to university! Imagine that it is the first day. You walk into a lesson.

Where do you sit? _____

Why do you sit there? _____

The best seat in the house is front and centre. Obviously not everyone can sit there, but you should arrive early enough to sit within the first few rows and as near to the middle as possible. You want an unobstructed view of the teacher and anything they might show, because anatomy and physiology are very visual subjects. People sitting on the sides or in the back often do not want to be called on, or they want to be in their own space. They are not very engaged in the class. Don't let that be you. To succeed, you need to focus all your attention on your teacher, minimise distractions, and participate actively. Lecturers tend to teach to the middle of the room. In fact, if your teacher is right-handed and uses equipment, such as an overhead projector, that is positioned on the right, their focus shifts to their right. You want to see your teacher and you want your teacher to see that you are present, listening and actively engaged.

Some teachers provide lecture notes so you can sit back and really think about what is being said. Notes or not, you need to get all the information you can from each lecture. Remember your learning style and use techniques that enhance it. We will discuss note-taking later, but consider recording the lectures. That way you miss nothing, and you can listen to the recording repeatedly, replaying it as needed. Another good technique is to write out your own notes while listening to the recording, then listen again while reading your notes and making necessary corrections. This combination strongly reinforces the material.

Always try to preview the material that will be covered before going to the lesson. This is as simple as lightly reading the corresponding sections in the textbook. You may not understand all that you read, but it will sound familiar and be easier to comprehend as your teacher covers it in the lesson. This preview also helps you identify new vocabulary words.

While your instructor is lecturing, don't hesitate to raise your hand to ask a question or get clarification. Many students are shy and reluctant to speak in class – you may be doing them a favour! Avoid discussing personal issues in front of the whole class – that is better done alone with the teacher, outside the classroom.

Note your teacher's gestures, facial expressions and voice tone for clues about what they find most important. That material is likely to show up on a quiz or test. Write down any material that is particularly emphasised, or highlight it in your notes. Listen carefully for assignments and write them down immediately on your To Do list. If you are not clear about the expectations of the assignment or when it is due, seek immediate clarification.

LOOK OUT

Why is it best to sit at the front and in the centre of a class?

Answer: You will be more engaged in the class, have the best view and fewer distractions, and be within your teacher's focal area.

Taking notes

Anybody can take notes in class, but will the notes be good enough to help them succeed in the class? There are many strategies and models for how to take notes, and none of them is necessarily the best. Find what works for you, then use it consistently. Let's review one easy-to-use system (**Figure 1.2**).

Start with an A4 notebook that you will use just for this class. Take your notes on only the front side of the paper and leave about a 5cm margin on the left. The margin will be used for marking keywords and concepts later. At the beginning of the lesson, date the top of the page so you know when the material was covered. During the lecture, use an outline format to get as much information down as you can. Use the main concept as a major heading then indent the information discussed on that topic. When that section ends, either draw a horizontal

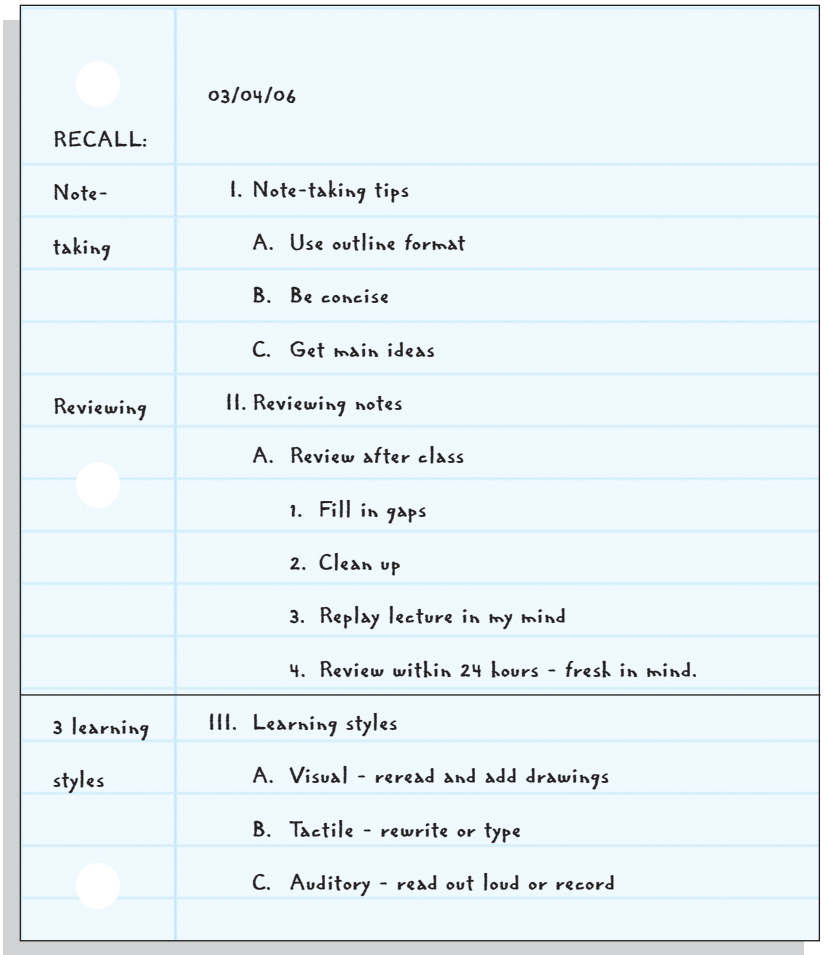


FIGURE 1.2 Sample of lecture notes using the outline style and leaving room in the left-hand margin.

line to mark its end or leave a couple of blank lines. Don't try to write every word – just the main ideas – and put them in your own words.

Instead of writing out every example, give a brief summary or a one- or two-word reminder. Use abbreviations when possible, and develop your own shorthand. You can often drop most of the vowels in a word and still be able to sound it out later when reading it. Write legibly or your efforts will be useless later. Underline new or stressed terms and place a star or an arrow by anything that is emphasised. Be as thorough as you can, but you will need to write very quickly. The teacher will not wait for you to catch up, so speed is essential.

APPLYING THE THEORY

It is important from the start that you are able to write clearly, as the documentation you will use in your profession may be legally binding, e.g., care plans, drug charts, pre-op and post-op care. Care plans need to be written concisely, giving detailed and relevant information only. You need to develop the ability to précis and be discerning. Record keeping needs to be factual, consistent and accurate: written in such a way that the meaning is clear, and it should be written contemporaneously, *not* a long time after the event.

As soon as possible after the lesson, read your notes and improve them as necessary. Add anything that's missing. Make them clearer and cleaner. Put the concepts in your own words. Next, use the left margin to summarise each section – the main concept, subtopics, and key terms. This column will be your 'Recall' column. Once you are sure all of the key ideas are in the left column, you can cover the right side of the page – the meat of your notes – and quiz yourself on the main points listed in the left column. It makes an easy way to review.

But you are not finished – if you are a tactile learner, rewrite your notes in another notebook or type them into your computer.

Using word processing is good practice for your essay writing. It allows you to combine information from the lesson with textbook notes and anything you get from study sessions. It is helpful to store word-processed work electronically as this allows additional material to be added and further changes to be made with ease.

LOOK OUT

Copy and back up your work on a compact disc, memory stick or external hard drive – just in case! A useful way is to email it to yourself. That way you get an extra copy somewhere else.

Visual learners might type and reorganise their notes. Auditory learners can read the notes out loud or record them. You can make

flash cards from the key points and terms by writing the term on one side of an index card and its definition or use on the other side. You can also add drawings. Review your notes as much as you can during the next 24 hours while the lecture is still fresh in your mind.

TIME TO TRY

Look at the sample notes in Figure 1.2. Now practise: take notes using this style while listening to a half-hour TV programme. Capture the conversations and action in words. You can't get every word down, so paraphrase – put it in your own words so the meaning still comes across. When you're finished, assess how you did.

Can you tell who was talking? _____

Do your notes make sense? _____

Did you capture the main ideas? _____

Did you keep up or fall behind? _____

Do you have breaks in your notes to separate the main conversations and action? _____

What can you do better while taking notes in a lesson? _____

_____

You can also do the *Taking Notes* activity on the companion website. Click on *How good are your notes?*

✔ **QUICK CHECK**

What should you do with your notes afterwards? _____

_____

_____

Answer: Review them within 24 hours, fill in anything missing, clean them up, put them into your own words, add key concepts and terms to the Recall column, add drawings, make flash cards, record them, rewrite or type them.

Looking for somebody special **in practical classes**

Learning in anatomy and physiology classes doesn't just happen in lectures. Many students put most of their effort into the lecture material and disregard practical classes and the skills lab component. Avoid this. Practicals are the hands-on part of the course, and most people learn better by seeing demonstrations and actually doing the work themselves. Always go to practical classes prepared to take notes and equipped with your textbook if it will be needed.

When in practicals, you may work with a partner or in a group. You will be expected to contribute equally to the team effort, so it is important that you arrive prepared. If you know in advance what the subject will be, read through it and think about what you will be doing. Pay attention to the instructions and especially note any safety precautions. At times you will be working with very expensive equipment and specimens, and perhaps potentially dangerous materials, so always use great care.

Some students try to take shortcuts in practicals so they can leave a bit early. You should value the time to further explore the material covered in lectures. You get to hold the bones, microscopically examine various tissues, use models and charts, and perhaps see real organs or cadavers. It is a unique aspect of your education that reinforces everything else that you are learning. You will spend a lot of time learning structures, and the more you go over them, the better you will recall them. Remember that lectures and practicals are both part of the same class, and try to see how they fit together. Never leave early – there's always more to learn.

APPLYING THE THEORY

Much of the work in your chosen profession will be hands-on practical activities and developing clinical skills. Be aware that you need as much practice as possible before you qualify as you will be working in real-life situations with real people.

QUICK CHECK

What are some of the learning advantages gained from attending practical sessions? _____

_____

Answer: Practical classes allow time for exploration, hands-on learning, collaboration and discussion.

The more time you spend in a practical class or skills lab, the better you will learn. ■

Your secret life **outside the classroom**

REALITY CHECK

Answer True or False to each of the following statements:

1. I study the day before a test but rarely study on a daily basis.

   T F

2. I mostly review my notes and don't read the textbook.

   T F

3. I am too busy to study each day.

   T F

4. When I finally get around to it, I study pretty hard for a long time.

   T F

5. I get by fine with cramming.

   T F

JUST FOR FUN

Let's see how good a studier you REALLY are! Take a few moments to learn these terms. We will come back to this exercise a bit later.

1. **Frizzled greep**. This is a member of the *Teroplicanis domesticus* family with girdish jugwumps and white frizzles.
2. **Gleendoggled frinlap**. This is a relatively large fernmeiker blib found only in sproingy sugnipers.
3. **Borky-globed dungwinger**. This groobler has gallerific phroonts and is the size of a pygmy wernocked frit.

Stay tuned!

You made it through the day and are ready to head home. Finally! College is done for the day, right? Not if you plan to be successful! The real work begins after the lessons, because most of your learning occurs outside the classroom on your own. This is often the hardest part, for many reasons. We schedule many activities and set aside time for them, but studying tends to get crammed into the cracks. Too often, studying becomes what you do when you 'get around to it'. It is an obligation that often gets crowded out by other daily activities, and the first item dropped from the To Do list.

Too many students only study when they have to – before a test or exam. A successful student studies every day. The goal is to learn the material as you go along rather than frantically try to memorise a large amount at the last minute. Here is something you need to know and really take to heart.

You should study for at least two to three hours for every hour spent in class. ■

Simple maths shows you that if you have three lectures on Monday, for example, you should plan to spend from six to nine hours studying that same day!

Schedule your study time

Writing assignments on your To Do list makes them seem more urgent, but that does not cover the daily work that must be done. You must take charge of your time and studying. In addition to specific assignments, each day you should:

- go over that day's notes,
- read the corresponding sections in the textbook,
- test yourself,
- review your notes again, and
- preview the next day's material.

All of this takes time. You must build study time into your schedule or you either will not get around to it or you will put it off until you are too tired to study effectively. The first thing to do is to write your study time into your diary and master calendar, and regard that time as sacred – do not borrow from it to do something else. Be sure to allow break time during study sessions as well – if you study for too long, your brain gets tired and your attention starts to wander, and it takes much longer to do even simple tasks. Plan a 10- to 15-minute break for every hour of studying.

LOOK OUT

If a job seems too large, we put it off, but if we have many small tasks, each alone seems manageable. Break your workload into small chunks. Write them down, partly so you do not forget any, but especially because you will get a great feeling of accomplishment when you complete a task and cross it off your To Do list! Completing a task is also a convenient time to take a mini-break to keep your mind fresh. Many students try to read a whole chapter or cover a few weeks of notes in one sitting. The brain really dislikes that. When studying a large amount of material, divide it into subcategories, then study one until you really understand it before moving to the next.

APPLYING THE THEORY

Try using mnemonics to help you remember a concept. Some of these are acronyms like the one for making student-led learning agreements:
SMART = **S**pecific **M**easurable **A**ttainable **R**ealistic **T**ime-frame.

Study actively

Merely reading your notes or the book is not learning: you must think about the material and become an **active learner.** Constantly ask yourself, 'What is most important in this section?' While reading, take notes or underline key terms and major concepts. Make flash cards. Consider how what you are studying relates to something with which you are already familiar. If you can put the information in a familiar context, you will retain it better. Link what you are learning in theory to what you see in practice.

APPLYING THE THEORY

Watch out in practice for links to the theory you are studying at university. Organise lists of new terms you come across in practice – and make links to the theory in your textbook. Absorbing knowledge can happen in both places.

The best preparation for quizzes and tests is practice. Develop and answer questions as you read. Try to anticipate all the ways your tutors might test you about that material. Recall which specific items your lecturer stressed. Outline the material in each section and be sure to understand how the different concepts are related. Check yourself on the meanings of the key terms. Say the key words out loud and look carefully at them. Do they remind you of anything? Have you heard them before: at home, at work, at college?

Move past memorising

This is one of the hardest study traps to avoid. In anatomy and physiology, it may at times seem like there is so much to learn and so little

time. Most students at first attempt to just memorise terms and concepts. If you only read your notes and the book, you are using this approach without realising it.

At the beginning of this section, I gave you three items to learn. Without turning back, write down the three names I asked you to learn a few pages ago:

1. _____

2. _____

3. _____

Did you remember them? Now, also without looking back, can you explain each of them to me? _____
(I am betting not)

These three 'things' are fictitious, but my point is that you may, indeed, have memorised the names – it doesn't take much to learn parrot-fashion – but it takes a lot more to understand, especially if the words are unfamiliar, as they often are in your course. If you find that you study hard but the wording of the quiz or test confuses you, I can almost guarantee that you are memorising. The question is worded a bit differently from what you memorised, so you don't realise that you know the answer. You must get past memorising by looking for relationships between the concepts and terms, and really strive for full understanding. Reading often produces memorisation. Active studying produces understanding.

APPLYING THE THEORY

Look for connections – how things are related to one another. The secret to understanding anatomy and physiology is connecting the whole of the body together. If you are anaemic, you don't just have a low red blood cell count, you are also very tired. Think: Why? What? and How? to link it all together.

The concept map

A very useful technique for learning relationships is drawing a **concept map**. This is somewhat like brainstorming and similar to a mind map. Here is the general process:

1. Start with a blank piece of (preferably) unlined paper.
2. Near the centre, draw a circle and, inside it, list the main concept you will explore.
3. Around that circle, and allowing some space, draw more circles and list in each anything that pops into your mind related to your main concept. Do this quickly and don't think about the relationships yet. Just get your ideas down.
4. Once you've added all your secondary concepts, look at them and think about how they are related, not just to the main concept but to each other as well.
5. As relationships occur to you, draw arrows connecting related concepts and add a brief description of the relationship between each of the concepts.
6. Examine the relationships and you will start to understand how these concepts fit together.

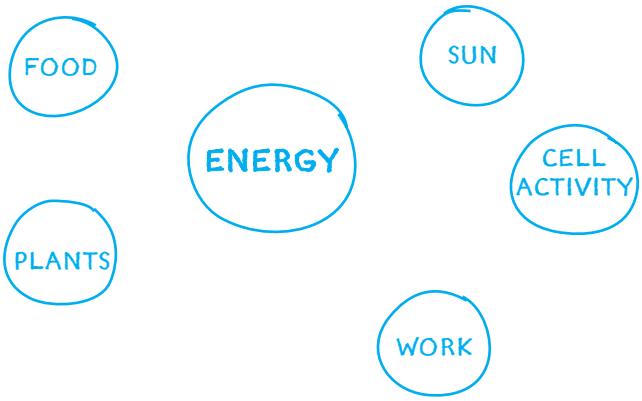
TIME TO TRY

There is a good tutorial on concept mapping on the companion website. Go to Outside of class and click on the web link An introduction to concept mapping. Here you will learn how to make concept maps for yourself and what they are good for.

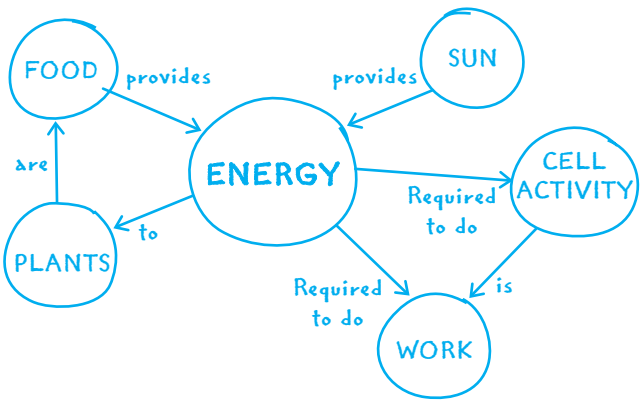
Construct a concept map around the main concept of energy by adding arrows to show relationships between the following concepts:

- cell activity, food,
- plants,
- the Sun, and work.

When you are finished, look at **Figure 1.3**, below.



First draw a circle or 'node' for each concept, keeping the main concept, if there is one, near the middle.



Next, add arrows linking the different concepts to each other, then add brief descriptions of how they are linked. In this example, the arrows show that the Sun provides energy to the plants, plants are food that provides energy that is required to do cell activity, which is a type of work.

FIGURE 1.3 Drawing a concept map.

Review

OK, you've been at this study thing for a while and you think you're starting to understand the material. You did all of the above; can you stop now? Almost, but once you think you have the material under

control, review it one more time. Repetition is the key to your long-term memory – the more you go over the material, the longer it will stay with you. There is a physiological basis for this – you are stimulating and reinforcing neural pathways in the brain. It is always recommended to have a minimum of three passes, even for easy stuff – read your notes, read the text, reread your notes – and that assumes you understand the material. Always slow down and go through it more thoroughly if you are struggling with a certain section. Use **active learning** with each pass, then finish with one more review. If you are alert enough to review material right before bed, once you are asleep your brain often continues going over the material without bothering you too much (although one of my students reported a dream in which she was chased by a herd of giant bones!).

The website for your textbook also provides a good way to review subject matter. The address is in your book – see Time to Try below. It offers a wide variety of activity options, including online animations, flash cards, puzzles, objectives, vocabulary lists and quizzes. When taking online quizzes, be sure to do so without looking in your book or your notes – after all, you don't use them for quizzes in class. Not using them provides a better simulation of the classroom experience, and if you do well on the online quizzes without using your notes, you will have confidence in the classroom knowing you have already passed one quiz!

TIME TO TRY

Go to the *Skills for Nursing and Healthcare* companion website associated with this book, **www.pearsoned.co.uk/getready**

Click on the drop-down box and click on Chapter 1: Study skills. Then press Go.

Determine your starting point by doing the Pre-test quiz.

Can you relate this to what you have just read in your textbook?

No cramming allowed!

Life is busy so your house occasionally gets a bit cluttered. If visitors drop by and it is a 'bad house day', you might quickly grab some of the clutter and cram it into a spare cupboard. After the guests leave, you open the cupboard door to pull out a quilt. What happens _____

_____

Now imagine what you do to your brain when you cram for an exam. You are essentially opening the cupboard door and cramming stuff in, then slamming the door. When you are taking the test, you open the door to pull out the answer you need, but anything might tumble onto your paper. Cramming at best allows partial memorisation. At worst, it causes the information to get mixed up and you fail. It is a desperate act of superficial studying guaranteed to NOT get you through anatomy and physiology. If you study on a daily basis instead of doing a panicky cram session before a test, you will be calmly reviewing what you already learned well and smiling at the crammers in class.

No vampires allowed!

*Do you think you can pull an all-nighter and really do well?*_____

What do you think are some of the reasons this will not work? _____

_____

If you normally live your life by day, you cannot suddenly override your natural biological clock and expect your brain to stay alert and focused when it knows it is supposed to be asleep. Sleep deprivation impairs focus and attention. Much of what we try to learn is consolidated in our brains (moved to long-term memory) while we sleep, so without adequate sleep you do not retain what you tried to learn. Your exhausted neurons cannot coordinate the information. Even sleep deprivation of as little as one hair can impair mental function for the next day, so give your brain what it needs – a good night of sleep. Your eyes may skim the pages, but you'll struggle to comprehend the words and you'll retain only a tiny amount of the very little that you absorb. Caffeine may temporarily keep your eyes open and you may be a bit more alert but will still mentally drift away from the task at hand. Caffeine may also prevent sleeping later on.

An all-nighter is basically a marathon cram session held at the worst possible time. It simultaneously robs your brain and body of what they need – restoration before the next day. You may be able to stay awake all night, but if you doze off you may oversleep and miss your exam. Or, if you do arrive (I hope you weren't driving with no sleep!), you may get part of the way into the test only to have your brain freeze up on you. If you are prone to 'test anxiety', your defences will be down and you may get a mental block and fail. Ah, if only you had been studying all along . . .

For your brain to be kind to you, you have to be kind to its home. You must take care of yourself physically – eat, sleep, exercise and RELAX. ■

✔ **QUICK CHECK**

Why should you study every day if the test is not for two weeks?

Answer: Studying on a regular basis breaks the material into smaller, more manageable pieces that you can master; the material is fresh in your mind, and you will only need to review it before the test.

Strength in numbers: **the study group**

One of the best ways to learn anything is to teach it to someone else, so form a study group or discuss the material with others around you. Although this may not be the best option for everyone, it is highly effective for many students. As soon as possible, start asking your classmates who wants to be in a study group – you *will* get people to join. You can quiz each other, discuss the material, help each other and, importantly, support each other. If you study solo, you may not be aware of your weaknesses. Your study partners can help identify them and help you overcome them. A good way to work in a study group is to split up the material and assign different sections to different members, who then master the material and teach it to the group.

Each member should also be studying it all on their own – that ensures better effort from everyone, and allows other members to correct any errors in a presentation.

Scheduling joint study sessions can be challenging. Many students find that scheduling group sessions before or after a lesson works best. You may want to establish some ground rules, including agreeing to use the time for studying and not for gossiping or just socialising. And although it may be tempting to meet over a pizza, you do want a quiet location where you can freely discuss the material with few distractions. Check with your tutors to see if there are any places that might be available for this.

APPLYING THE THEORY

Communication skills are key to being successful in your chosen profession. This does not just apply to your writing but also to developing the ability to give clear explanations to your clients/patients about their care. You can practise these skills with your peers.

SQRHuh? **How to read a textbook**

The name may sound odd, but **SQR3** is an effective method for studying your textbook. Science textbooks do not read like novels, so you need to approach them differently. This method also works well for reviewing your notes. It stands for:

- **S**urvey
- **Q**uestion
- **R**ead
- **R**ecite
- **R**eview.

During the **survey phase**, read the chapter title, the chapter introduction, any other items at the beginning of the chapter, and all of the headings. This gives you the road map of where you will be going in

the chapter. As you skim the chapter, also read all items in bold or italic. Next, read the chapter summary at the end of the chapter.

During the **question phase**, look at the heading of each section and form as many questions as you can that you think may be covered in that section. Write them down. Try to be comprehensive in this step. Ask What? Why? and How? as you read the chapter. By having these questions in mind, you will automatically search for answers as you read and develop critical thinking skills.

Now **read** the chapter for details. Take your time. Adjust your reading speed to the difficulty of the material. Also, keep in mind the questions you developed and try to answer them. Look for the main ideas and how the chapter is organised, linking to this the tables and diagrams.

The next phase is to **recite**. You are working on your ability to recall information. After reading each section, think about your questions and try to answer them from recall. If you cannot, reread the section and try again. Continue this cycle until you can recite the answers: it can help to do this out loud.

Finally, you want to **review**. This helps reinforce your memory. After you complete the previous steps for the sections you're studying, go back to each heading and see if you can still answer all of your questions. Repeat the recite phase until you can. When you have finished, be sure you can also answer the questions at the end of the chapter.

SQR3 is one way to read a textbook. There are many others. A similar method is called **PORPE**, where after reading a section you:

- ***P**redict* possible essay questions.
- ***O**rganise,* summarise and synthesise the major points in your own words.
- ***R**ecite* the information and quiz yourself.
- ***P**ractise* your answers to the essay questions you identified.
- ***E**valuate* your work for accuracy and completeness.

There is also a three column note-taking system:

What I know	What I want to know	What I learned

In the first column, list what you already knew before you read the topic. In the second column write questions about the content that you want to answer. To do this, preview the section by reading titles and sub-headings and examining tables and figures. Finally, read the material thoroughly and use the third column to answer your questions from the second column.

Each method is effective but the best method for you is what works for you. Try each method and modify it to suit your needs. Incorporate your learning style preferences. Visit the companion website at **www.pearsoned.co.uk/getready** for some specific activities to try out. Go to the Study Skills Chapter 1 then *How to read a textbook* and click on *Tips for actively reading a textbook assignment*. Active reading is truly an effective way to learn the material.

A scientific textbook is not like a novel – so you won't learn by just reading it through once. Scientific writing is different and can be rather challenging. Break the reading into sections and do at least three passes as before – pre-reading, in-depth reading and final review.

Here are some final tips:

- Read within 24 hours of the lecture while the lecture is still fresh in your mind.
- Read slowly – comprehension and retention matter, not speed. If you don't understand something, take a deep breath, slow down and reread it until you do.
- Don't skip unfamiliar words – look them up and write them down. You must learn the language to understand the concepts.
- If you're stuck or your mind is not focused, do a quick review of what you just covered and then take a break. This allows you to process what you learnt so you can return later ready for new material.
- Don't underestimate the importance of reading assignments – they are a major component of your course and can be the key to mastering course content and succeeding in your course.

✔ **QUICK CHECK**

What is the minimum number of passes you should make for each section you read in your textbook?

Answer : Make at least three passes : preview, read in detail and review.

APPLYING THE THEORY

Always link what you are reading to what you see in real-life situations. If learning about respiration, do some breathing exercises and try to visualise how your diaphragm, rib cage and lungs are all working together.

A place to call my own: **the study environment**

Briefly describe the location where you plan to do most of your studying.

Now you know *how* to study effectively do not overlook *where* to study. Your options may be limited, so you need to make the best of what you have. Ideally your study spot will be isolated and free of distractions like TV, music and people. At the least, you should minimise these distractions.

Do you study in front of a TV that is on? Even if you try hard to ignore it, you will be drawn to it, especially if the material you are studying is tough. Music can be tricky – songs that you know, especially catchy ones, may get you tapping and singing along with them while you think your mind is actively engaged in learning. Soft or classical music can keep you calm and more focused, unless you really dislike it.

Thinking about your favourite study site, what distractions might you face? _____

_____

How can you minimise them? _____

If you cannot, what might make a better place to study? _____

For studying, you really need a space that is your own. A desk is a good place (unless it is also the computer desk at which you spend hours playing computer games for fun!). Ideally it will be a place where you do nothing but study, so that when you are seated there you know exactly what your purpose is. If you are having trouble focusing on the task in hand in your study area, get up and walk away briefly. The mental and physical break may help you 'come back' to work, and you won't begin associating this place with struggling. Your study area should be quiet and it should have good lighting to avoid eye strain, a comfortable chair, good ventilation and temperature, and a work surface on which you can spread out.

You will spend a lot of time studying here, so take time initially to set up your study space. The area should be uncluttered and well organised. It should also be inspiring and motivational. Perhaps frame a sign that says '*I WILL be a* _____*(your career)*_____ *by* _____*(your goal date)*_____'. Try the same approach for the goals you set at the beginning of this chapter, and display them boldly and prominently. Consider displaying a photo of your hero, or of someone in the family whom you want to make proud. Parents, you might display a photo of your children with a caption saying something like 'You are my reason', or 'I will teach by example'. Realise that you are their role model – your children's attitudes toward education will be formed by what you do now. With these treasures surrounding you, you're a mere glance away from being reinvigorated if a study session starts to fizzle.

LOOK OUT

Most of your learning is done outside of the classroom. The more efficiently you study, the better you will learn. Your study spot affects your attitude and concentration. The more seriously you take your study location, the more seriously you will study there.

If you live with family or a roommate, you absolutely must stress to them the importance of respecting your study time and study space. Be sure they know your career goals and why they are important to you, and ask them to help by giving you the time and space you need to succeed. Ask them not to disturb you when you are in your study space. If you have small children who want time with their mother or father while you are studying, assuming they have adequate supervision, try getting them to play or study on their own until 'the clock hands are in these positions', then do something fun with them at that time. They will learn to anticipate your time together and to leave you alone if the reward is worthwhile. If you have too many distractions at home, the solution is to study elsewhere. Whether on campus, in the local library, or at a friend's house, you need a distraction-free setting, and if you can't get it at home, remove yourself, instead of trying to cope with a poor study space.

✔ **QUICK CHECK**

What are some of the main considerations in selecting your study area? _____

_____

Answer: Few distractions, own space just for studying, comfortable, good lighting/ventilation, sufficient work space, and welcoming.

My, how **time** flies!

You know you need to study and that it takes a lot of time, but how will you fit it in? Let's discuss a few ways to budget time for studying. First, be consistent. Consider your schedule to see if you can study at the same time each day. Studying will become a habit more easily if you always do it at the same time. Some students adhere to one schedule on weekdays and a different one on weekends. When scheduling study time, consider your other obligations and how distracted you might be by other people's activities at those times. Don't overlook free hours you might have while on campus: head to the library, study room, or a quiet corner. This is the ideal time to preview for the next lesson or to review what has just been covered.

TIME TO TRY

This is a two-part exercise designed to help you find your study time.

Part A: Each week has a total of 168 hours. How do you spend *yours?* **Table 1.4** on page 39 allows you to quickly approximate how you spend your time each week.

1. Complete the assessment in Table 1.4 to see how many hours are left each week for you to study.
2. Enter that number here: _____ hours

You can also do this online at the companion website – In Chapter 1 go to *Study Time* and do the activity *Where does your time go?*

Part B: Next, turn your attention to **Table 1.5** on page 40.

1. Enter your timetable, work schedule, and any other activities in which you regularly participate.
2. Now look for times when you can schedule study sessions and write them in.
3. Are you able to schedule 2 to 3 hours of study time per hour of class time? _____

It can be difficult, but it is essential to make the time. Writing it into your schedule makes it more likely to happen.

LOOK OUT

The most efficient use of your study time is in half-hourly segments: most people cannot concentrate on one topic for more than 20 minutes. If you make a timetable for yourself, you are more likely to stick to a regular study routine.

Don't overbook! Be sure to build in break time during and between your study sessions, especially the longer ones. Allow for flexibility – realise that unexpected events occur, so be sure you have some extra time available. Also, be sure you plan for and schedule recreation, too. You cannot and should not study all the time, but these other activities do take time and need to be in your schedule as well so that you do not double-book yourself.

TABLE 1.4 **Assessing how your time is spent.** For each item in this inventory, really think before answering and be as honest as possible. Items that are done each day must be multiplied by seven to get your weekly total. One item may be done any number of times a week, so you'll need to multiply that item by the number of times each week you do it. After you have responded to all the questions, you'll have an opportunity to see how many hours remain during the week for studying.

Where does your time go? Record the number of hours you spend:	**How many hours per day?**	**How many days per week?**	**Total hours per week: (hours × days)**
1. **Grooming,** including showering, shaving, dressing, make-up, and so on.			
2. **Dining**, including preparing food, eating, and cleaning up.			
3. **Commuting** to and from college and work, from door to door.			
4. **Working** at your place of employment.			
5. **Attending college**.			
6. **Doing chores** at home, including housework, mowing, laundry, and so on.			
7. **Caring** for family, a loved one, or a pet.			
8. **Extracurricular activities** such as clubs, church, volunteering.			
9. **Doing errands.**			
10. **Recreation**, including TV, reading, games, working out and so on.			
11. **Socialising**, including parties, phone calls, chatting with friends, dating and so on.			
12. **Sleeping** (don't forget those naps!).			
Now add all numbers in the far column to get the total time you spend on all these activities.			
	Hours/week		**168**
	Total hours spent on other activities		−
	Hours left for studying =		

TABLE 1.5 My study schedule.

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6:00 a.m.							
7:00 a.m.							
8:00 a.m.							
9:00 a.m.							
10:00 a.m.							
11:00 a.m.							
Noon							
1:00 p.m.							
2:00 p.m.							
3:00 p.m.							
4:00 p.m.							
5:00 p.m.							
6:00 p.m.							
7:00 p.m.							
8:00 p.m.							
9:00 p.m.							
10:00 p.m.							
11:00 p.m.							
Midnight							

APPLYING THE THEORY

Healthcare practitioners need to be good at managing time so they can prioritise workloads on the wards or caseloads in the community.

Putting it to **the test**

If I had a pound for every student who said they have test anxiety . . .

Some people really do suffer from true test anxiety, but the majority of students who claim to have this condition believe it to be true not because of an actual diagnosis, but rather because they get very nervous and may go blank during tests. If I ask a class who among them suffers from test anxiety, many hands go up. By the end of the course, with some coaching, the number is far less. Why? They have learned how to take tests and how to stay calm. If you do suffer from true test anxiety, consult with your personal tutor right away so they can put you in contact with the support services you need to understand your condition and learn how to conquer it. **Table 1.6** offers some tips on ways to reduce your anxiety about tests.

Most people dread taking tests and experience some anxiety when taking them. Not surprisingly, the better prepared you are for an exam, the less worried you will be. The best remedy for the stress you associate with taking tests is to be very well prepared. If you know you understand the material, what is there left to worry about?

Some people get very anxious before tests because they fear they will not do well. This may be because they know they are not prepared. Again, the remedy is simple: study well. Anxiety can also arise from a bad past experience. If you have done poorly on tests in the past, your self-confidence may be lacking, so you anticipate doing poorly. That may lead to cramming and memorising instead of truly learning, and may cause you to become excessively nervous during the test, which can cause poor performance. All you need is a couple of good grades on tests to get your confidence back!

TABLE 1.6 Ways to minimize your test stress.

When	Actions
While preparing for the test	■ Study daily to avoid last-minute cramming. ■ Start reviewing several days before big tests. ■ Quiz yourself on terms. ■ Review concept maps. ■ Review the questions you developed while reading the material. ■ Read your notes for anything the instructor emphasized. ■ Consider possible essay questions and write out thorough answers. ■ Review materials and practice quizzes on your textbook's website. ■ Meet more often with your study group; focus on reviewing and quizzing. ■ Counter negative thoughts ("There's too much!") with positives ("I've studied hard and I know this stuff!"). ■ Remind yourself this is just one grade—it won't determine your worth or your future. ■ Take adequate study breaks. ■ Eat well and exercise (a great stress reliever). ■ Avoid sleep deprivation, especially the night before the exam.
On the day of the test	■ Eat moderately; don't skip meals; don't eat anything too heavy to make you groggy. ■ Avoid excessive caffeine—it increases anxiety and makes you jittery. ■ Stop studying at least an hour before exam time and do something to relax. ■ Stretch out somewhere comfortable. Focus on fully relaxing your muscles—from your head to your toes—savoring the feeling of relaxation. ■ Listen to calming music before arriving in class. ■ Arrive early to get your seat and organize your thoughts (do NOT look at your notes!); put your head down and relax until test time. ■ Avoid discussing course content or listening to classmates before the exam.
During the test	■ Take five slow, deep breaths just before you begin. ■ Browse the whole test so you know its layout and length. ■ Budget your time, allowing more time for harder sections. ■ Carefully read all directions twice. ■ Start with the easiest part of the test. ■ Check the clock regularly to assess your progress and adjust your speed as needed.

▶

TABLE 1.6 Ways to minimize your test stress; continued.

When	Actions
During the test (continued)	■ If you start to feel anxious, close your eyes, focus on relaxing as you take slow, deep breaths, and remind yourself how well you prepared. ■ Focus on one question at a time—read it carefully, underline key words, and think before answering. ■ Ignore students who finish before you—often the first people to leave had little to write. Take your time and be thorough and careful. ■ If you run short on time, answer what you can quickly and just leave the rest.
After the test	■ Reward yourself regardless of how you feel you did. ■ Don't obsess over how you think you did—you'll know when the test is returned, and your "second" guesses are likely not accurate. ■ Review any material that you still feel unsure about. ■ Once returned, record your score and how many points the test was worth. ■ Examine your test. Note what you missed and why, and ask for clarification if you're not sure. Review that material again. ■ Let it go—it's finished and you can't change it now. Move on.

If you are a nervous test taker, don't study for about an hour immediately before your exam. Students who complain of test anxiety are frantically reviewing their notes right up to the moment they go in to the test. They have been trying to quickly glance back over everything while racing against the clock. No wonder they are stressed! Remember that your brain needs time to process the information. When you cram information into the 'cupboard', who knows what will fall out when you open the door during the test.

If you have studied well in advance and don't get very nervous at exam time, you might want to glance quickly through your notes beforehand, but only if you have time to do so and still allow *at least* half an hour to relax and mentally prepare for your test. The half-hour off allows your brain to process the information while you relax. Try having a light snack so you are alert – a heavy meal could make you drowsy during the test. Walk around to release nervous energy. Listen to music that makes you happy. Sit comfortably, close your eyes, and breathe deeply and slowly while you picture yourself in a very relaxing setting – maybe on a tropical beach, curled up on your couch with a good book, or out on a boat fishing. Focus on how relaxed you feel and

try to hold that feeling. Now, staying in that mood, concentrate on how well you have studied and keep reminding yourself that:

- I have prepared very well for this test.
- I know this material very well and I answered all questions correctly while studying.
- I can and *will* do well on this test.
- I refuse to get nervous over one silly test, especially because I know I am ready.
- I am ready and relaxed. Let's get it done!

Test-taking tips

There are also strategies you can use while taking the test. Let's see what your current strategies are. Complete the survey in **Table 1.7**.

During an exam, be careful – read each question *thoroughly* before you answer. This is especially true of multiple-choice and true/false questions. We know the answer is there, so our eyes tend to get ahead of our brains. We skim the question and jump down to the answers before even trying to mentally answer the question. Slow down and think before moving to the answers. Otherwise you may grab an answer that sounds familiar but is incorrect. An easy way to slow down and focus on the question is to underline key words as you read it. If you have trouble keeping your eyes off the answers, cover them with your hand or a ruler until you finish reading the question and think of the answer on your own. Then reveal the answers one by one to decide which is correct.

If you do not know the answer initially, take a deep breath and think of all you do know about the words in the question. Often this is all you need to recall the answer. This is when those concept maps you made will really help you.

Use the process of elimination. If you are not sure which answer is correct, can you eliminate any you know are incorrect? Narrow down your choices. Don't make a guess unless the process of elimination fails you; however, guessing is usually better than leaving a question unanswered, unless you lose points for wrong answers. On short-answer, fill-in-the-blank questions and essays, always write something. Whatever you write just may be correct but an empty space is always wrong.

TABLE 1.7 **Self-evaluation of test-taking skills.** For each of the following valuable test-taking skills, mark if you do each one always, sometimes, or never. Highlight any that you do not currently use that you think might help you be more successful.

Test-taking skill	Always	Sometimes	Never
1. While studying my notes and the book, I think of and answer possible test questions.			
2. I use online practice quizzes when they are available.			
3. I avoid last-minute cramming to avoid confusing myself.			
4. I scan the whole test before starting to see how long it is and what type of questions it contains.			
5. I do the questions I am sure of first.			
6. I budget my time during a test so I can complete it.			
7. I answer questions with the highest point values first.			
8. I read all the answer options on multiple-choice questions before marking my answer.			
9. I know what key words to look for in a multiple-choice question.			
10. I use the process of elimination during multiple-choice or matching tests.			
11. I know what key words to look for in essay questions.			
12. I look for key words like *always, never* and *sometimes*.			
13. When I am unsure of an answer, I go with my first answer and fight the urge to change it later.			
14. I try to answer everything even if I am uncertain, instead of leaving some questions blank.			
15. I check my answers before turning in a test.			

After you answer a question, read your answer to be sure it says what you want it to, then leave it alone. Once you move on, resist the temptation to go back and change your answers, even those of which you were unsure. Often we have a gut instinct to write the correct answer: perhaps we are recalling it at some subconscious level, but the

very act of going back is a conscious reminder of uncertainty, and we often choose something different only because we doubt ourselves.

When answering multiple-choice or true/false questions, ignore any advice that suggests you should select one answer consistently over others. Also, don't worry if you choose the same answer several times in a row, thinking the teacher would not structure a test that way. No teacher gives much thought to the pattern the answers will make on the answer sheet and the computer is often programmed to shuffle the answers around.

TIME TO TRY

Go to the *Skills for Nursing and Healthcare* companion website on your computer.

Enter the web address **www.pearsoned.co.uk/getready**

Go to Chapter 1: Study skills – test taking. Click on the download Ways to minimise your stress about taking tests.

Here are a few more pointers:

- Note the wording of the questions. Key words to look for that can change an answer are *always, sometimes, never, most, some, all, none, is* and *is not.*
- Glance over the exam as soon as you receive it, so you know what to expect, then budget your time accordingly.
- Look for questions on the backs of pages so you don't miss them.
- Tackle easy questions first. They may provide hints to the tougher ones.
- Be aware of point values and be sure the questions with the greatest point values are done well. Often essay questions – which are usually worth more points – are at the end, and some students run out of time before reaching them, losing significant points and seriously losing marks.
- If you have trouble writing essays, recall all you know about the topic, organise in your mind how you would explain it to someone,

then write down your thoughts as if you are writing yourself a letter about what to say.

- If a question has multiple parts, be sure to answer each part. This is especially true for essays.
- For multiple-choice questions read the directions carefully – you may have to choose more than one answer.
- Look for answers elsewhere in the test.
- If you are asked for a *definition,* give a book explanation of what the term or concept means. If you are asked for an *example,* list an example and explain why it is an example of the concept. If you are asked to explain a concept or term, approach it as if you are trying to teach it to a 6-year-old. Assume the reader has no prior knowledge.
- Be very thorough and specific in your answers. The marker cannot get inside your head to decide if you knew it or not, so your words must very literally convey your meaning.

When a test is returned, record your grade. Be sure to review the test to see which questions you got wrong and why, and then make notes to go back and review that material. Remember – it may come back to haunt you on a bigger test or on the final exam, and you should know it anyway.

LOOK OUT

Remember you are not learning this just to pass a test, but so that you are better able to carry out your chosen profession.

QUICK CHECK

How can you slow yourself down when taking a multiple-choice or true/false test? _____

_____

Answer: Cover the answers with your hand while you read the question, and don't look at them until you think of the answer.

Through the looking glass: **individual accountability**

New strategies to improve your success, not just in anatomy and physiology, but in all of your subject areas, and insight into the learning process should now have been developed. One more area needs to be discussed, though, and that is your responsibility and attitude. When we get frustrated, we often look elsewhere for the cause, even when it may be right in front of us. Poorly prepared students can transform themselves into really good students, and good students can drop out as they start getting really bad grades. Many factors can contribute to these changes, but a common thread is always attitude and accountability. Here are three facts you need to firmly implant in your mind:

1. ***You,*** and nobody else, chose to pursue this academic and career path.
2. ***You,*** and nobody else, are responsible for attaining the success you desire.
3. ***You,*** and nobody else, earn the grades you get.

You must do everything you can to guarantee your success – nobody will do it for you. That means always accepting responsibility for your own effort. No excuses. To stay on track, you must know exactly what you want and always stay focused on where you are going. Remember that you always get the mark that you earn through your hard work (or lack of it). At times, you may not feel that you can keep up, but instead of giving up you need to refocus on where you are going and why it matters to you. Always set short-term and long-term goals. Write them down and put them up where you will see them often. You are responsible for keeping yourself motivated. Learn to visualise your success – see yourself in your future career. Think about how your life will be. Dream big then go after that dream with all you have.

An important part of any journey is to anticipate roadblocks before you hit them. Think carefully about any possible obstacles to your success, then plan around them. You have an unreliable car? Find someone you can ride with in emergencies. You have small children at home? Have day care lined up and a back-up plan for when your child is ill. You have a learning disability? Immediately contact student support services or your personal tutor to find out what services are available to assist you. Make a list of anything that might get between you

and success, then write down at least two possible solutions so you have a main strategy and a back-up plan.

Finally, consider those around you. Family and friends must know your goals and understand how important they are. But do they support you? I have had women whose husbands burned their books because they felt threatened that their wives might no longer need them once a degree was attained. And there are certainly more subtle means of sabotage. Perhaps your friends needle you because you don't go out as much, or they say you're no fun anymore. Your significant other complains that you don't get enough time together. Relatives accuse you of thinking you are better than them because you are getting some education. Realise that when someone changes, whether through education or something else, those who know them may feel excluded, threatened, left behind, even envious. You can try to assure them how much you still value and need them in your life, but don't let them distract you from your mission.

You must surround yourself with supportive people who are happy and proud of you, who celebrate your victories, and who want for you what you want. They will help you succeed. It may be your study group or others around you who will help you study. Perhaps they will watch your children so you get some quiet time. On the other hand, anyone who ridicules you or is upset by your new schedule and goals is really not a friend you want around. Make new friends in class who share your goals and guard yourself from those who would derail you. Stay on track, and you will soon be living your dream. Good luck!

FINAL STRETCH!

Now that you have finished reading this chapter, it is time to stretch your brain a bit and check how much you have learned. For online tests, animations, activities, web links and a customisable eText, visit the *Skills for Nursing and Healthcare Students* companion website at **www.pearsoned.co.uk/getready**.

RUNNING WORDS

At the end of each chapter, be sure you have learned the language. Here are the terms introduced in this chapter with which you should be familiar. Write them in a notebook and define them in your own

words, then go back through the chapter to check your meaning, correcting as needed. Also try to list examples when appropriate.

Visual learner	Active learner
Auditory learner	Concept map
Tactile learner	SQR3
SMART	PORPE

TIME TO TRY

Now look at the online Glossary on the *Skills for Nursing and Healthcare Students* companion website (**www.pearsoned.co.uk/getready**). Make a list of your new vocabulary and check out the meanings. Making a list like this is a good skill to develop for all aspects of your work. Use the Flashcards to test your knowledge of each of the terms and definitions.

WHAT DID YOU LEARN?

In the left-hand column below, write your approach before reading this chapter. In the right-hand column, list any changes you plan to make to ensure your success in this class.

What I have done before this chapter	What I will do to improve
During lectures:	
Note-taking:	
Study habits:	
Textbook reading:	
My study place:	
Time management:	
Test-taking:	

List the three areas in which you think your study skills are the weakest, and ways in which you plan to improve them.

1. _____

2. _____

3. _____

TIME TO TRY

Go to the *Skills for Nursing and Healthcare Students* companion website (**www.pearsoned.co.uk/getready**):

Go to Chapter 1: Study skills.

Find out what you learned by doing the Post-test quiz.

APPLYING THE THEORY

Academic writing skills and critical thinking skills are required in order to become a professional and use an evidence base to convey your work to others.

WEB RESOURCES

Here are some additional online resources for you:

- *Study Skills Website of the University of Surrey*

http://www.surrey.ac.uk/Skills/pack/contents.html

Try clicking on the Communications link and look at the Gathering Information link underlined at the bottom of the page.

- *Skills4Study*

http://www.palgrave.com/skills4study

Look at this free website – especially at the Study Skills icon in green on the home page. There are also MP3 audio downloads about Tricks of the Writer's Trade, Exam skills and Presentation skills.

- *INTUTE*

http://www.intute.ac.uk

The **Nursing, Midwifery and Allied Health** pages of Intute are a free online service providing you with access to the very best web resources for education and research, evaluated and selected by a network of subject specialists.

There are free Internet tutorials to learn to help you develop Internet research skills for your university course.
Click on **Virtual Training Suite** at **http://www.vts.intute.ac.uk/**

- *BBC Education Study Skills website*

http://www.bbc.co.uk/schools/studentlife/revisionandskills/

Select a link from the Revision, Exams and Skills sections. Choices include: 10 Steps to revision success, How to have a good exam and How to speed read.

- *Cook Counseling Center Study Skills Self Help Information*

http://www.ucc.vt.edu/stdyhlp.html

This is to help you find out about your own study habits, attitudes and skills.

- *Concept Mapping*

http://www.surrey.ac.uk/bioskills/biomap/concept/frame.htm

This is a tutorial about **concept mapping**. Here you will learn how to make concept maps for yourself and what they are good for.