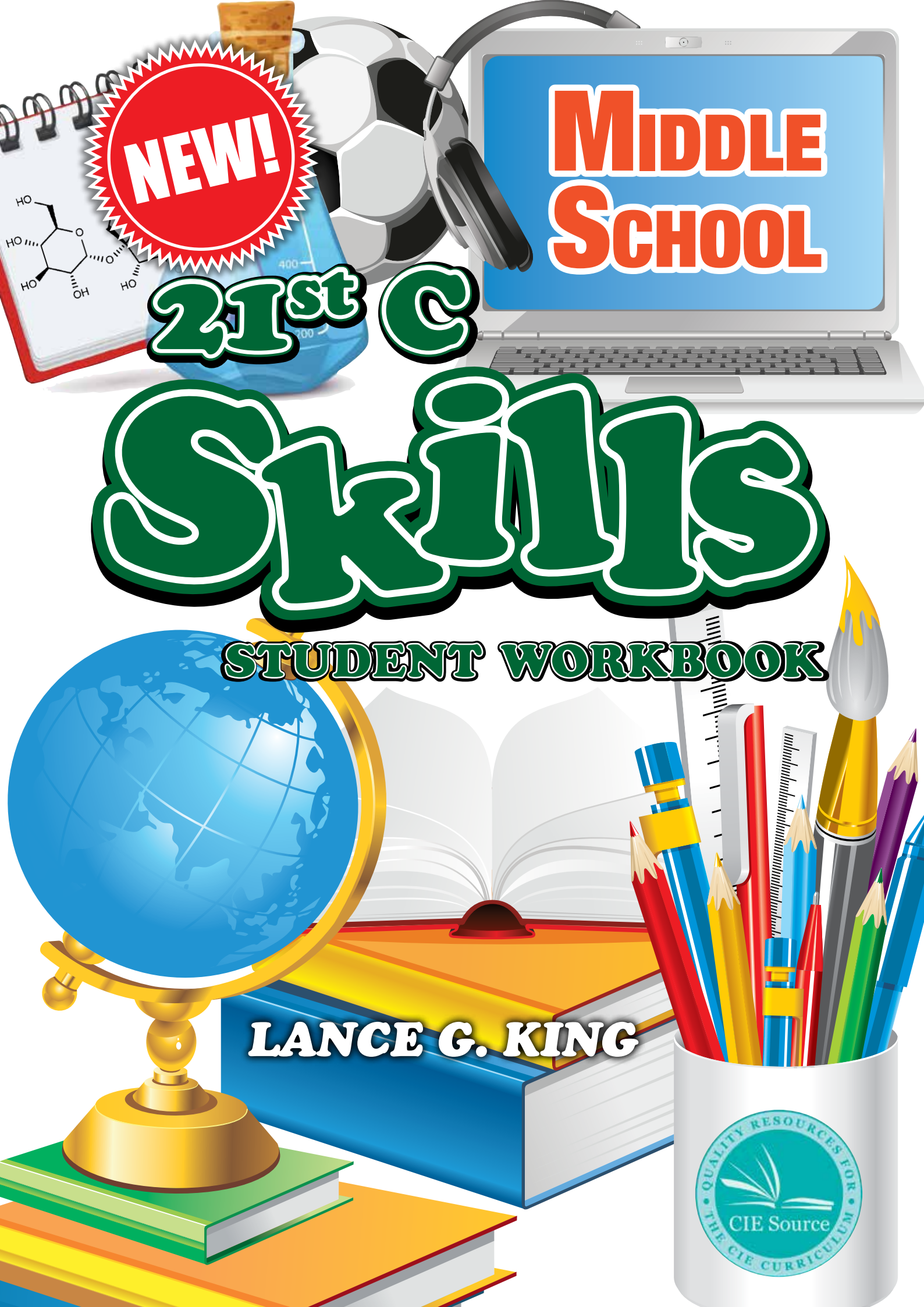




NEW!

**MIDDLE
SCHOOL**

21st C

Skills

STUDENT WORKBOOK

LANCE G. KING



ABOUT THE AUTHOR

LANCE KING is an internationally recognized author, teacher and workshop facilitator who, in the last 22 years, has worked with over 250,000 students worldwide as well as many thousands of their teachers and parents. He is the creator of the Art of Learning programme taught in over 250 schools in 34 countries and is a specialist in the direct teaching of 21st Century Skills. Within the International Baccalaureate Organisation he designed and developed the Approaches to Learning (ATL) framework for both the MYP and DP programmes which is currently being implemented in more than 4000 IB schools in 150 countries. He is a sought-after presenter for his workshops for teachers, students and parents and is also the author of six books on teaching and learning, two of which are now translated into Chinese, French, Vietnamese and Spanish.



HOW TO USE THIS BOOK:

STUDENTS: Find any exercises that look interesting or that you think will teach you a useful 21st C skill and do them by yourself or with a friend.

TEACHERS: Pick one 21st C skill that you most want to develop with your students, find the correct exercise in this book and get as many teachers as possible to have their students practice that same exercise in their subject class. Use student self-assessment to monitor progress. Once you have one skill exercise working well across the student body, pick another. Make a plan. Create a framework.

21st C Skills

STUDENT WORKBOOK

READ THIS FIRST!

In this book you will find 82 21st C skills exercises. Each exercise has been designed to enable you to practice and get better at one small aspect of learning in general. The aim of this book is to help you to improve your own success – however you define success.

21st C skills exercises need to be practiced the same way you might practice a lay-up in basketball or an ollie on a skateboard or a new song on a musical instrument. First you work out exactly how to do it well and then you do it over and over again making small improvements every time until you've got it. And you will know you've "got it" when you can do it without thinking about it and maybe you are even good enough to teach someone else.

NO-ONE NEEDS TO GET GOOD AT **ALL** THESE SKILLS!!!

Your teachers will probably get together and select the exercises that they think will help improve any student's performance at school and then ask you to do these exercises in different classes. That will work fine but you can also do lots of these exercises by yourself or with a friend.

Each exercise gives you an activity to perform to practice the skill and it also gives you what is called a "Mastery" statement. This is a definition of what someone who was really, really good at this particular skill would be able to do. You can use this statement as a goal – something to aim for.

To begin you might like to work out what you want to achieve (see **Achieving Goals** – pages 74-76), and then look for the specific skills that might help with that. If it is school work – what do you have trouble with – what might help you improve? Is it making good notes in class? See page 31 – **Note-making**. Is it meeting deadlines? See page 70 – **Deadlines**. And if that is the case, you might also need to look at page 89 and learn some **Perseverance** skills and maybe page 97 and learn how to deal with **Pressure and Stress**.

Do you get the idea?

This book is a self-help manual for all the skills you need to succeed – however you want to succeed.

And don't forget to send me feedback on which exercises you like the best and which ones were the most helpful – email me directly at lance@taolearn.com

Have fun!

Lance King

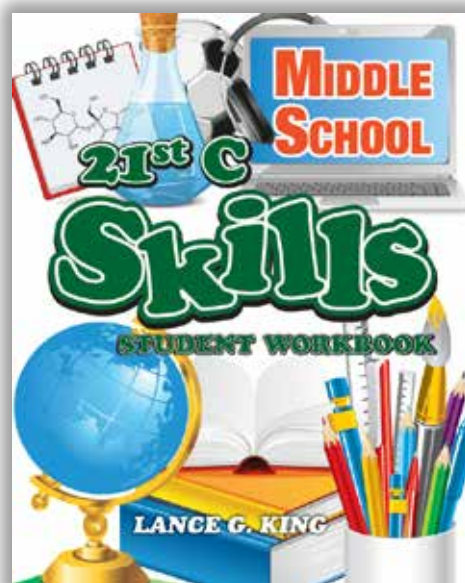


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Note-making

1o – Make effective written notes from written text, from presentations and for studying

Mastery

You will know you are at the **Expert** level in the use of this 21st C skill set when you can record the most significant information from a textbook or from a presentation (teacher talking, video, podcast) in summary form with enough detail to be able to clearly and accurately explain the ideas and concepts in your own words.

Note-making for Understanding:
The essence of developing understanding and remembering well is being able to **explain things in your own words.**

There are three parts to the development of this skill:

- First you have to learn how to accurately identify key words, concepts and ideas in written and spoken text
- Second you have to learn how to create written summaries several different ways
- Third, you have to practice turning your own summaries back into sentences, in your own words.

Exercise 1 – Finding your best note-making method

- Take a series of four topics from the textbook or from teachers' notes in any subject – with about a half a page of writing per topic.
- Read through each topic and in every sentence, highlight the most important words – keywords, ideas, concepts – aim to only highlight 2-4 words per sentence
- Now write your own notes for each topic using the words you have highlighted and write each topic using a different note-making method as below:

- Idea mapping** – write the first topic in the centre of a clean page (landscape) then add to it all the main headings as branches out from the centre. Out of the keywords in the text that you have highlighted find the main ideas and attach them to the headings as branches. Finally attach all the remaining highlighted words to the ideas as branches.

- Linear notes** – looking at your second topic, create a note summary in the form of:

Topic

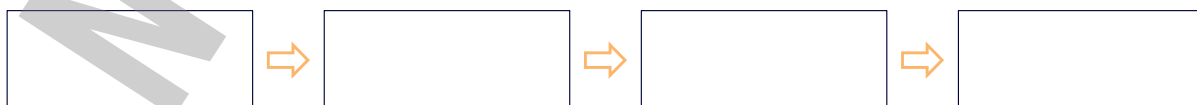
Heading 1

- Idea 1 - keywords ...
- Idea 2 - keywords ...
- Idea 3 - keywords ...

Heading 2

- Idea 4 - keywords ...
- Idea 5, etc.

- Visual note-making** – with your third topic, look at the development of the ideas through the topic and create a flowchart which shows the progression of the ideas:



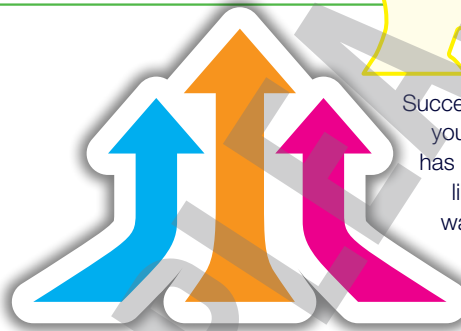
In each box either write the keypoint using your highlighted headings, ideas and keywords or draw small pictures to represent the same or use a combination of words and pictures.

Helping Others Succeed

2d – Help others to succeed.

Mastery

You will know you are at the **Expert** level in the use of this 21st C skill when you can confidently gauge what others see as success and assist them to achieve their success.



Success is about being the best you can be, but every person has different things they would like to achieve and different ways of measuring success. Helping others to be the best they can be is a key leadership skill.

Exercise 1 – What is success?

a. Work with a partner and make a list of all the ways someone could be successful in this world.

.....

.....

.....

b. Imagine it is 20 years from now and you have achieved what you think of as success. What would give you that feeling? How would you measure your own success in 20 years' time?

.....

.....

.....

c. Then think about what would be success for you in 10 years time, in 5 years time and by the end of this year. What would indicate to you that you were successful at these times? At each point also consider what you need to do before then to achieve that success and how anyone else could possibly help you and fill in the following table:

Success	By the end of this year	In 5 years' time	In 10 years' time
How would you know if you had achieved success for you?			
What would you need to have done before then to achieve the success you desire?			
How could someone else help you to achieve what you want to achieve?			

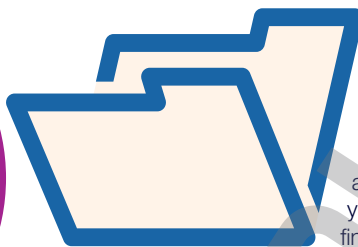
Organizing Files

3e – Organize all your important information.



Mastery

You will know you are at the **Expert** level in the use of this 21st C skill when you automatically organize all your information and logically record and file it so you can find it later.



At school every day you get a lot of information given to you and you generate a lot of information. You need to have a way to organize and store it so that you can retrieve what you want when you want it. You also get a lot of information through texts, emails and social media messaging. Most of this is already organized through contacts, but some of it you may need to store in a way that enables you to find what you want when you want it.



Exercise 1 – File trees

On your computer you have many different types of information that you want to be able to store and go back to:

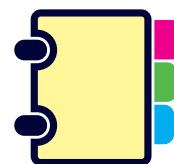
- website addresses - links to useful sites for schoolwork, video clips, useful news services, blogs, documentaries
- emails from school, teachers, parents, friends, subscriptions, etc.

If you just let all these build up in your inbox or in your website history it will be easy to lose them and difficult to find what you want when you want it. The best way to overcome that is to create file trees.

- Set up three file trees – one in your email inbox, one on your web browser and one for all your word processing documents.
- In all three cases think of all the categories or headings under which the information you want to keep could be stored, and set up one folder for each category.
- Break each category down into sub-categories with folders within folders.
- Move all your saved emails, important URLs and all your written documents into the correct folders.
- Make your categorizing system work the way you think. Whenever you want to store something new, think “if I had forgotten where I put this, where would I look first?” and put it there. If there isn’t a place yet, make a new folder in the right place and put it in there.
- Try to process every piece of information just once – find it, use it, store it.

Exercise 2 – Organizing subject notes

- Ask each of your subject teachers for a copy of their course outline or find it on the school website or on-line. Print it out, go through it and highlight all the main topic headings and sub-headings.
- Make up a storage system for each subject that suits the information you gather in that subject – a “ring binder” or series of plastic sleeves for loose pages, labelled exercise books for your own notes.
- Create one file for each main topic in each subject and a categorization system for all the sub-headings – maybe using sticky notes, colored dividers, colored marker pens.
- Store the information in the right place as you collect it.
- Try to process every piece of information just once – find it, use it, store it.

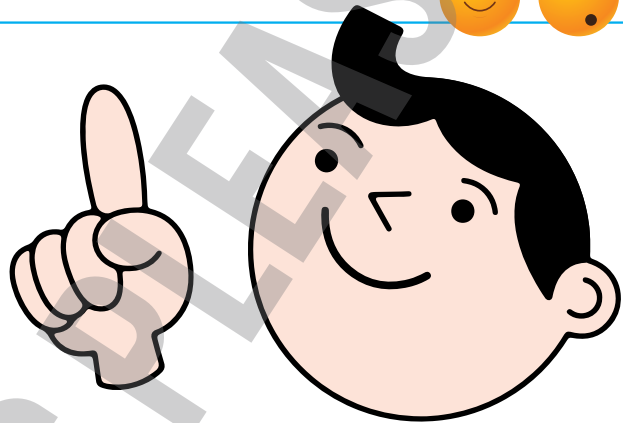


Self-Motivation

4f – Practice strategies for self-motivation.

Mastery

You will know you are at the **Expert** level in the use of this 21st C skill set when you can get yourself to actively and positively do things that you really don't want to do.



Exercise 1 – Purpose

Do you want to succeed at school? If so why? What are your most important reasons?

- a) Put the following twelve ideas into a priority list. Which is first – most important to you – which is second and so on. Write one number from 1-12 next to each point.

- ☐ to get a good job – earn serious money?
- ☐ to feel satisfied, proud of yourself?
- ☐ to get into the right university?
- ☐ to get a feel for your progress to date?
- ☐ because your parents want you to?
- ☐ to test yourself and see what you are capable of?
- ☐ to prove how smart you are?
- ☐ to gain knowledge and skills that will be useful to you in your life?
- ☐ to be better able to mix with other smart kids?
- ☐ to develop your intelligence?
- ☐ to make your parents proud?
- ☐ to practice concentration, determination and the exercise of effort?

Your reasons for wanting to succeed have an influence on your motivation, especially when times get tough. Within this list there are two types of factors and each type has a different influence on motivation.

The two types of reasons are:

- i. those that stem from intrinsic motivators:
 - to feel satisfied, proud of yourself
 - to get a feel for your progress to date
 - to test yourself and see what you are capable of
 - to gain knowledge and skills that will be useful to you in your life
 - to develop your intelligence
 - to practice concentration, determination and the exercise of effort
- ii. and those that stem from extrinsic motivators:
 - to get a good job – earn serious money
 - to get into the right university
 - because your parents want you to
 - to prove how smart you are
 - to be able to mix with other smart kids
 - to make your parents proud.

Extrinsic motivators are very important particularly in helping us turn ideas and ambitions into goals, but research shows that, of the two, **intrinsic motivators are the more powerful.**

The reason being that intrinsic motivators are things that are in your control whereas extrinsic motivators are out of your control.

When times get hard, when you get to the point where you feel like you have had enough and you just want to stop, it is the intrinsic motivators, a sense of pride, a feeling of capability, that are the most powerful in helping you get over the hump and keep going until the job is finished.

Use your external motivators to help you dream and create long-term plans – but cement those long-term plans with internal motivators to get you through the hard work facing you now.

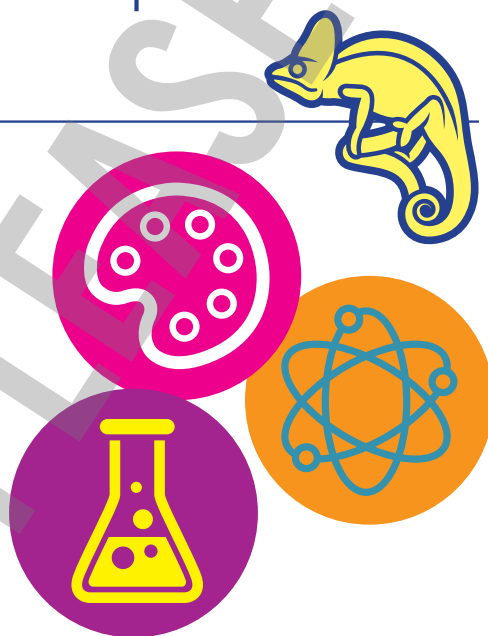
21st C Skills Development

5a – Self-assessment of 21st C skills.

Mastery

You will know you are at the **Expert** level in the use of this 21st C skill set when, anytime you are learning something new, you notice that you are consciously aware of:

- all the 21st C skills that you need to use to learn the new material and
- your own proficiency with each 21st C skill needed and
- which skills you have mastered already and the skill in which you need more practice in using to reach the proficiency you need to learn the new material effectively and efficiently.



Exercise 1 – Checking skill development progress

a) turn to the 21st C self-assessment framework at the end of the chapter you are working on at present – it looks like this:

Student Self-Assessment of 21st C Skills Proficiency							
21st C Skills	Novice Watch	Learner Copy	Practitioner Do				Expert Share
			Starting	Practicing	Getting better	Got it!	

- look in the first column and find the name of the 21st C skill on which your teachers are currently having you work.
- turn to the page in this book where that 21st C skill is described and look at what is written at the top of the page under the heading, Mastery. This describes the performance level that you would have to reach to consider yourself an Expert in the use of that particular 21st C skill.
- using the following checklist, work out where you are right now in your development of that particular 21st C skill and put a check (or a cross) and today's date in the correct box in your self-assessment.

Effective Searching

6a – Improve search effectiveness.



Mastery

You will know you are at the **Expert** level in the use of this 21st C skill when you can find exactly the information you want at any time and verify its accuracy.

While much research in the 21st century is done using search engines, it is also important to understand how to research using hard copy resources such as books and journals. You need to be aware of how all libraries use the Dewey Decimal Classification System to organize information – including electronic resources, documents and books – into classes and subjects.

For online resources, you need to be able to select the best words to narrow your search, understand the results you find, search for evidence and check the accuracy of the data found. The data sourced from the internet is not always credible. Keep in mind that almost anyone can publish on the internet and it is often difficult to find out who created what information and to separate opinion from facts. It is the user's responsibility to evaluate and verify any data collected.

Exercise 1 – The library – Dewey Classification

- Either go to a library yourself or ask one of your teachers to invite your librarian to your class to explain how the Dewey Decimal Classification System works.
- What are the ten classes into which that information is organized?
 1.
 2.
 3.
 4.
 5.
 6.
 7.
 8.
 9.
 10.
- For each of the following knowledge types write in the Dewey classification code.
 1. Physics topics
 2. "Gone With the Wind"
 3. Peru
 4. Leonardo Da Vinci
 5. Computer coding
 6. Mental health
 7. Pyramids
 8. Frisbees
 9. Buddhism
 10. The psychology of learning
- Ask your librarian what are the best ways to check the accuracy and credibility of the data you research.

Exercise 2 – Internet search

- How do you currently search for anything on the internet?
- How many results do you usually get – on average?
- How many results do you usually look at?

Effective internet searching is a combination of picking the right search terms, narrowing your search, understanding the results you get and verifying the credibility of what you find.



Media Formats

7d – Selecting the right media.



Mastery

You will know you are at the **Expert** level in the use of this 21st C skill set when you can effortlessly represent your message through many media and “translate” your message accurately between them.

How many ways are there to find information or get a message across to someone? Does the form of the message alter its meaning at all? If you are working on this 21st C skill as part of creating a presentation then it would be a good idea to do these first:

Multimedia Communication on page 10.

Presentation Skills on page 5.

Digital Collaboration on page 42.

Then try the following exercises:

Exercise 1 – Finding information in different media formats

Work in pairs – one person researching, one person writing – swap often.

- Find one idea or one fact in any subject, preferably something you are not quite understanding properly yet
- See if you can find a representation of that fact, or a link to that fact, in all the forms suggested
- Analyze each representation and see if the message is the same or if a different aspect is being focused on
- Decide which form helped you understand the fact best
- Do the same for a second fact.

	Fact 1...		Fact 2...	
	Reference – where did you find it?	What is the focus of the message?	Reference – where did you find it?	What is the focus of the message?
Can you find that fact...				
In a paper book?				
In an e-book?				
On a website?				
In a blog?				

Evaluating Assumptions

8b – Recognize unstated assumptions and bias.



Mastery

You will know you are at the **Expert** level in the use of this 21st C skill set when you can easily recognize the assumptions behind statements and distinguish between valid and invalid arguments.

Assumptions are beliefs upon which we base the logic of our argument. They are the things we presume to be true without evidence. Our assumptions depend on our particular point of view, frame of reference and cultural perspective (e.g. is Canada at the top or the bottom of the world?) Does that depend on where in the world you live?

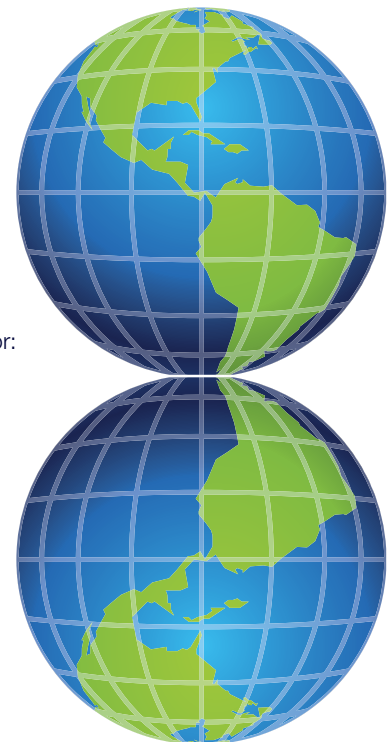
Our assumptions are made up of pre-suppositions – what needs to be true to make sense of our argument – axioms – what is self-evidently true and does not need to be proved, and things we take for granted – “common sense” or educated guesses about reality.

Exploring the assumptions within arguments helps us to determine the validity of the argument.

Exercise 1 – Recognizing assumptions

To understand the different parts of any argument, find a discussion of a controversial local or international event or an editorial in a newspaper in which the author is making a case for a certain conclusion, and then work your way through the following analysis:

- a) Identify and separate out the premises, the evidence for each premise and the conclusion
- b) Analyze each sentence or each statement separately, looking for stated assumptions like:
 - i. global statements – as we all know...
 - ii. group identifiers – well educated people would all agree...
 - iii. generalizations – it is safe to assume...
- c) Also look for unstated but assumed connections between statement or ideas. Look for:
 - i. necessary conditions – in order for that to be true this has to be true as well
 - ii. sufficient conditions – this always means that
 - iii. cause-and-effect connections – this brings about that
 - iv. sequential connections – if this happens then that happens
 - v. assumed examples – this is an example of that
 - vi. opinions stated as facts – “I think it is obvious that...”
 - vii. consistent bias or particular point of view
 - viii. any hidden agenda.
- d) For each premise, see if you can think of something which, if it were true, would contradict the stated premise
- e) Decide how valid or true you think each premise is
- f) Can you think of a different conclusion to the one the author has stated which would better fit the facts as you see them
- g) How do you think your own unstated assumptions or bias has affected your analysis of the argument?



Improvements

9f – Design improvements to existing machines, media and technologies.



Mastery

You will know you are at the **Expert** level with this 21st C skill set when you automatically view all machines, media and technology from the point of view of form, function and possible improvements, and you can generate ideas for machines, media and technology that have never existed before.



This skill requires the application of two different types of thinking. One is a logical, analytical type of thinking required to break existing things down into their functionality and form. The other is a more creative type of thinking required to generate new purposes, new uses, new applications or improvements to existing things.

Two key, creative practices are making novel connections between existing things, and generating ideas that did not exist before. Both are skills that can be practiced and improved.



Exercise 1 – Mixing parameters to generate creativity

- Work in pairs. Think of two existing machines (e.g. cars, washing machines, photocopiers, phones, etc.), two media (e.g. newspapers, TV, social media, etc.) and two technologies (e.g. email, messaging, face-to-face video, etc.) and write them in column 1.
- Then analyze each one first by working horizontally across the table.

	How does it operate?	What is its function?	Who uses it?	What do these three have in common?
Machine 1:				
Media 1:				
Technology 1:				
Machine 2:				
Media 2:				
Technology 2:				

- Then connect Machine 1 operation with the other two functions and see if you can think of a way that might be possible. Do the same for Media 1 and Technology 1.
- Then connect Machine 1 functionality with the other two user groups and see if you can think of a way that might be possible. Do the same for Media 1 and Technology 1.
- Do the same for Group 2.
- Identify one possible new function or user group for each and write it in the next table.
- Discuss how each would need to change to provide the new function or attract the new user group.
- Describe the nature of the improvement and how you would know if it was a successful improvement.

Connections

10c – Make connections between subject groups and disciplines.



Mastery

You will know you are at the **Expert** level in the use of this 21st C skill when you automatically notice connections between ideas occurring in different subject areas.

At school, you tend to learn all your subjects separately. But in order to make sense of the world around you, you need to be able to put all your different subject knowledge together. The important skill is in being able to view any concept, any idea or anything in the real world from the point of view of each of your subject disciplines. Learning to make connections between different subject concepts and ideas is a good way to practice this skill.

Exercise 1 – Connections between subjects

- Write in all of your school subjects.
- From each subject choose one big concept and one big idea and write them in.
- Draw lines in column 3 connecting any concepts and ideas between which you can see a connection. Write an explanation of the connection along the line.
- Can you see any pattern in these connections, any overarching concept? Do these connections generate any new ideas for you?



Subject	One big concept and one big idea	Connections and Explanations	New overarching ideas or concepts
1.	Concept: Idea:		
2.			
3.			
4.			
5.			
6.			
7.			
8.			

To get your copy of the **NEW**
**21st Century Skills
Middle Student
Workbook**

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