

DK IB collection: Diploma Programme (DP)

Supporting transdisciplinary understanding, inquiry and international mindedness



Note to DP educators

DK's nonfiction, highly illustrated books are filled with expert, thorough, and fact-filled writing. Topics span extensive historical coverage to contemporary global issues such as climate change and the global pandemic. The content is accessible, enjoyable to read, and designed with young readers in mind through pages that clearly chunk information into different visual elements, including full-color illustrations and maps, detailed timelines, inspirational quotes, profiles of famous people, further research sections, directories, glossaries, and more.

DK's goal is to support IB teachers by mapping their existing content to the aims and objectives specific to the DP curriculum to support teaching and learning. This collection is intended as supplementary materials in DP schools and can be used in a variety of ways by creative teachers and inquisitive students on the lookout for quality resources. The following is only a small list of the ways in which teachers can use these resources with their students:

- Specific disciplinary reference material
- Transdisciplinary and interdisciplinary resources (IDUs)
- Resources for integrating theory of knowledge (TOK) into subject groups
- Suggested reading for students seeking internal assessment and extended essay topics
- Suggested reading for exam review
- Encouragement of student agency through creative and critical thinking
- Encouragement of contextual and conceptual thinking
- Encouragement of independent student growth in ATLs and the learner profile
- Options to explore global concerns on development, conflict, rights, and the environment
- Opportunities to link local perspectives to international-mindedness

Note to librarians

This DK collection is meant as a supplement to schools' existing DP curriculums. The collection can be kept in the library or shared out to individual subject teachers. Here are just a few ways librarians can encourage the collection's use to support DP students and teachers:

- Use during library lessons with students
- Make available to students for independent reading and research
- Suggest for lessons when co-planning with subject teachers
- Share with individual departments
- Inform parents on the library website or the blog, and/or in the school newsletter

How the collection benefits DP students

The DP progam is both challenging and exciting, and presents students with a rigorous academic journey with much content to learn and many assessment deadlines to meet. DK resources can help students to better understand a particular subject's complex concepts, as well as provide a starting place for brainstorming inquiry-based research topics. Here are some of the ways DK books might help students in DP courses:

- Brainstorming suitable topics for internal assessments
- Brainstorming personal areas of interest for extended essays
- Independently researching class projects and presentations
- Extra home learning for deeper and wider subject understanding
- Help in understanding TOK core content

What is the Big Ideas series?

This DP collection is a selection of books from DK's *Big Ideas* series. The advantage of using one series means that busy DP students will find the content particularly easy to access, since all books share the same format and design elements. Additionally, while the content is wide-ranging and sophisticated enough for the rigors of the DP, the clear writing conveys complex concepts in a succinct and concise manner that students can quickly understand. The benefits of the *Big Ideas* books for teachers are that the books can serve the following functions:

- "Grab and go" resources for individual subjects
- Contributions to transdisciplinary units and projects
- Support for the teaching and learning of TOK
- Recommended reading for students seeking internal assessment (IA) and extended essay (EE) topics

How this collection supports DP aims and objectives

This guide has been designed to support teaching and learning of the DP aims and objectives through the use of DK books. All tasks are suggestions and aim to incorporate DP core principles with visible thinking tasks (based on Project Zero Harvard Graduate School of Education) particularly emphasized in line with the IB values of fostering student agency, links to ATLs, the learner profile connections, and TOK. Students will find a "menu" of options for each text to suggest different ways of applying their supplementary reading toward their coursework.

Command terms from each subject's DP glossary will appear in bold where the terms appear in suggested activities and within their definitions. These terms are a reminder to students and teachers of key terms students must learn and apply on their assessments and exams.



Language and literature

The Literature Book

This book is organized around significant literary periods, genres, and themes, with several key writers and works cited as examples. Because of its wide selection of world literature, teachers will find many of these titles included in the DP's prescribed reading list. *The Literature Book* can be used to support contextual learning of existing class texts, or for help in linking chosen texts with others for intertextual and transtextual study. The content here is broad enough to support class teaching in the areas of exploration and subject concepts.

Ask students to refer to **Application suggestions I**.

Individuals and societies

The Business Book

This book presents a wide range of business topics, including how to start and grow a business, leadership and human resources, managing finances, marketing, operations, and production. Students will find the content supports the following core structure in the DP business management course: content (business management tools, techniques, and theories); contexts (case studies and examples); and concepts (change, culture, ethics, globalization, innovation, and strategy).

Ask students to refer to **Application suggestions 2**.

The History Book

This book is organized around multiple time periods ranging widely from historical to contemporary events. Teachers will find ample material to address all six key concepts of the DP history course: change, continuity, causation, consequence, significance, and perspective. The book's content can also be linked to the variety of prescribed subjects and world history topics covered by the DP history curriculum.

The Economics Book

This book is organized around significant economic periods ranging widely from historical to contemporary events. It starts with early trading in 400 BCE, goes through the industrial revolutions, war and post-war issues, and finishes with chapters on contemporary economics. Teachers will find ample material to address all nine key concepts of the DP economics course: scarcity, choice, efficiency, equity, economic wellbeing, sustainability, change, intervention, and interdependence.

Ask students to refer to **Application suggestions 3**.

The Religions Book

Students will find detailed content in this book to support their DP world religions course, whether it be Hinduism, Buddhism, Judaism, Christianity, Islam, or other belief systems. Teachers and students will be able to use *The Religions Book* as a starting place for in-depth research and subject exploration in support of the DP course's themes, key concepts, and key questions. It can also be used as a wealth of knowledge for interdisciplinary study with other courses.

Ask students to refer to **Application suggestions 4**. These suggestions apply equally well to both *The History Book* and *The Religions Book*.

The Politics Book

The DP global politics course consists of four obligatory core units: power, sovereignty and international relations; human rights; development; and peace and conflict. In addition, higher level students can choose case studies from a choice of six global political challenges: environment, poverty, health, identity, borders, and security. The course also relies on local and global contexts, as well as several different concepts for student learning. Since *The Politics Book* spans political history from ancient political times through to key contemporary issues, students and teachers will find much of the content complementary to their classroom study.

Ask students to refer to **Application suggestions 5**.

The Psychology Book

The DP course integrates the study of ethics, biology, cognitive development, and sociocultural developments in psychology. The course emphasizes the value of quality research to allow students to widen their appreciation and understanding of the subject. *The Psychology Book* can support and encourage student learning through its extensive coverage of the development of psychology and its different approaches through time.

Ask students to refer to **Application suggestions 6**.

Sciences

The Science Book

This book complements the nature of science (NOS) philosophy of the DP curriculum in the way it is written, where different scientific disciplines both complement and sometimes overlap one another, thus allowing an emphasis on issues common to them all. *The Science Book* discusses scientific methods, historical and contemporary issues, and the progression of scientific ideas through an exploration of biology, chemistry, and physics (and even some math).

The Ecology Book

This book works well in conjunction with *The Science Book*, the DP ESS (environmental systems and societies) course, and the NOS philosophy, as well as bringing attention to the core IB value of international-mindedness.

Ask students to refer to **Application suggestions 7**. These suggestions apply equally well to both *The Science Book* and *The Ecology Book*.

Mathematics

The Math Book

This book explores the chronological timeline of mathematics—the historical journey of how humans discovered and classified math, ranging back from the ancient and classical periods through to modern mathematics today. While it doesn't attempt to cover all the mathematical topics that students might encounter in their DP course, the book can serve as a useful tool for teachers and students seeking a more holistic and conceptual understanding of the subject.

Ask students to refer to Application suggestions 8.

The Arts

The Art Book

This book spans the development of key artistic movements, painters, and art objects over time, from prehistoric and ancient art to the modern age. The DP visual arts course challenges students to explore their own creative and cultural expectations and boundaries, and to closely analyze art objects from a variety of perspectives. *The Art Book* can supply students with additional factual knowledge to support their coursework.

The Movie Book

This book covers the history of movies starting with the first visionaries in the early 1900s through to the present day. Through its combination of genres and movie exemplars, *The Movie Book* can support the DP film course and adapt well to the flexibility that the syllabus allows. Whether students are contextualizing, exploring, or producing films, *The Movie Book* can support student learning through its detailed and wide-ranging content.

Ask students to refer to **Application suggestions 9**. These suggestions apply equally well to both *The Art Book* and *The Movie Book*.

Philosophy and the theory of knowledge

The theory of knowledge (TOK) course at the core of the DP curriculum is not called a philosophy class, but its content addresses many principles that stem from the study of philosophy. Since TOK is such a highly abstract class, many students will struggle to understand its concepts. Therefore, this collection contains *The Philosophy Book* to serve as an additional teaching resource and supplementary reading for students seeking to better understand course concepts, make relevant links to other subjects, and find inspiration for assessments and further research.

The Philosophy Book

The Philosophy Book shares extensive coverage of foundational ideas that will complement much of TOK, including: debate and dialogue, existence and knowledge, critical thinking skills, and reasoning skills. Its detailed chapters provide inspiration for transdisciplinary links to several subjects, such as art, politics, religion, languages, math, and science.

Ask students to refer to **Application suggestions 10**.



Language and literature

These suggestions can be used for *The Literature Book*.

Application suggestions I

- I Finding content: Use the index and table of contents to help you identify one or more chapters in *The Literature Book* that correspond to a particular author, literary form, or period you are currently studying in class.
- 2 Areas of exploration: Read the chapter(s), paying particularly close attention to the "In context" box. To what extent does information in *The Literature Book* help to deepen your understanding of an area of exploration related to your current class unit of study? Take notes on any additional facts you've learned.

to what extent: consider the merits or otherwise of a concept; present conclusions and opinions clearly and with the support of appropriate evidence and a sound argument

ACTION

analyze: break down information to extract the essential elements and ideas

- 3 Concepts: The DP language and literature concepts are identity, culture, creativity, communication, perspective, transformation, and representation. Analyze how the chapter you read relates to one or more course concepts that you have studied. For example, how has your reading helped to deepen your conceptual understanding of a bigger idea or key theme within your current class text?
- 4 Learner portfolio: Take notes on any ideas that come to mind from your reading, which you could put toward the compilation of your portfolio. Remember to record the source of this information using your school's reference style.
- 5 Critically assess: Use visible thinking questions to read and explore your reading.
 - a Make a claim of something you think you already know or believe about a class text you're studying.
 - **b** While reading the chapter, identify any further support you find for this claim.
 - c Then record any questions you may still have about the text, which you can ask your teacher about in class, or research further on your own.
- **6 TOK connection:** Consider whether it is useful to classify texts according to specific periods. To what extent does this classification further your own understanding of literature?

ATL focus: thinking and communication skills

Learner profile connections: inquirer, open-minded



These suggestions can be used for *The Business Book*.

Application suggestions 2

I Finding case studies: Use the index and table of contents to help you **identify** one or more chapters within *The Business Book* that correspond to a particular case study you are currently learning about in class.

identify: provide an answer from a number of options

comment: give a judgement based on a given statement

- 2 Areas of exploration: Read the chapter(s), paying particularly close attention to the "In context" box. To what extent has the chapter's information helped deepen your understanding of your current case study? Take notes on any additional facts you've learned.
- 3 Concepts: The DP business concepts are change, culture, ethics, globalization, innovation, and strategy. Comment on how the DK chapter you read deepens your knowledge of one or more concepts of a case study you're learning about. Can you apply this chapter's knowledge to other case studies you've explored?
- 4 Research skills: Research skills are particularly important in the DP business management course. Find the "See also" box in the chapter you read and follow the suggestions there to read further on your topic. Take careful notes on any ideas that come to mind, which you could put toward a current assessment or your general study notes. Remember to record the source of this information using your school's chosen reference system.
- **5** Business models: Use visible thinking to imagine the opportunity a particular business model presents. In what ways could this model be more:
 - a effective?
 - b efficient?
 - c ethical?
 - d beautiful?
- **6 TOK connection:** Does globalization unify our beliefs and values, or lead to their greater fragmentation?

ATL focus: research, thinking skills

Learner profile connections: knowledgeable, inquirer



These suggestions can be used for *The Economics Book*.

Application suggestions 3

- I Finding content: Use the index and table of contents to help you identify one or more chapters within *The Economics Book* that correspond to a particular economic theory, model, idea, or real-world issue you are currently studying in class.
- 2 Context: Read the chapter(s), paying particularly close attention to the "In context" box. Evaluate how this content adds to your knowledge of a unit you've studied in class. What did this chapter teach you about a particular economic theory, model, idea, or tool?

evaluate: make an appraisal by measuring the strengths and limitations of information

ACTION

apply: use an idea, principle, or theory in relation to a given problem or issue

- 3 Concepts: The DP economics concepts are scarcity, choice, efficiency, equity, economic wellbeing, sustainability, change, intervention, and interdependence. Reflect on which concept your chapter best relates to. How has the knowledge gained in this chapter helped you to care more about a topic you're studying in class?
- **4 Economic principles:** Use visible thinking to **apply** your reading from *The Economics Book* to determine how true you think an economic principle may be.
 - a Identify a topic and state whether you think it's clearly true, false, or somewhere in between.
 - **b** What makes it so in your opinion?
 - c How important is this topic and its economical impact overall?
- **5 Critical thinking:** Economics is a subject that people often debate. Consider a topic of your choice in *The Economics Book* that can be debated and think about the following:
 - a What do you perceive is being conveyed by this economic model or theory?
 - **b** Who has decided to convey this idea and why?
 - c How else could this model or theory be interpreted?
 - **d** What do you personally believe is the most factual version of this topic? What makes you think that?
- **6 TOK connection:** Which factors affect how reliable or valid different economic models are?

ATL focus: reflective, caring

Learner profile connections: knowledgeable, thinking skills

These suggestions apply equally well to both *The History Book* and *The Religions Book*.

Application suggestions 4

I Prescribed subject: Use the index and table of contents to help you identify one or more chapters to read within *The History Book* (military leaders, conquest and its impact, the move to global war, rights and protest, conflict and intervention) that correspond to a particular prescribed subject you are currently studying in class. Take notes.

2 World history or religion topic: To independently find and read more information about the world history or religion topic your teacher has chosen, use the table of contents and index. Also useful are the timelines at the start of every new section in the

section at the back of the book.

compare and contrast: give an account of similarities and differences between two (or more) items or situations by referring to both (or all) of them throughout

justify: give valid reasons or evidence to support an answer or conclusion

3 Comparing case studies or world religions: Once you've identified chapters in *The History Book* or *The Religions Book* that correspond to class topics, add notes to a reflective journal where you **compare and contrast** two different events or religions.

books (for example, "Human origins," "Ancient civilizations"), as well as the "Further events"

- **4 Investigation:** Use visible thinking to research and build your knowledge bank for your historical or religious investigation.
 - **a** After reading through a chapter, make a claim (either an explanation or interpretation) about the topic.
 - **b** Justify this claim with evidence from the book or other course materials.
 - c Lastly, ask any questions you still have about your claim. What will you need to do further research on? Where can you find what you need?
- 5 TOK connection: What methods do historians use to gain knowledge?

ATL focus: self-management, research

Learner profile connections: open-minded, reflective

These suggestions can be used for *The Politics Book*.

Application suggestions 5

I Theoretical foundations: Find DK content relevant to your current classroom unit by searching through the book's index and table of contents. Read the chapters and take notes on what you've learned about the topic's theoretical foundations. Find the "See also" section in the chapter, which will take you to further reading for extended learning. Describe your learning and thoughts in your notes.

describe: give a detailed account

distinguish: make the differences clear between two or more concepts or items

ACTION

- 2 Interpretations and varied perspectives: After you've done further reading in *The Politics Book* about a current class unit, use visible thinking routines to **distinguish** and question opposing views.
 - a Start by noticing what your own first impression was on this topic.
 - **b** Then, consider how the topic could be perceived from other points of view. What could you say about these different perspectives?
 - **c** Lastly, how are your views and the views of the other perspectives that you identified both the same and different?
- **3** Engagement activity: As a way of initially engaging with new course topics, find and read about a class topic in the *The Politics Book*. Copy the chapter's quote into your notebook and annotate it, to better understand its meaning. Record any new personal understandings in your notes.
- 4 Significant political issues: Scan through the various sections of *The Politics Book* to help you find relevant content and significant political issues of personal interest that you can use for your global politics internal assessment or your extended essay. For example, look through the index, table of contents, glossary, and directory for inspiration. The directory includes key figures that have not been written about as extensively in the chapters, but whom you could easily research further using other sources.
- 5 TOK connection: Why do some individuals believe they know what is right for others?

ATL focus: social skills, communication skills

Learner profile connections: caring, reflective



These suggestions can be used for *The Psychology Book*.

Application suggestions 6

Critical thinking and research: Find DK content relevant to your current classroom unit by searching through *The Psychology Book*'s index and table of contents. Read the chapters and take notes on how this chapter has expanded your personal knowledge of the class unit. Find the "See also" section in the chapter for further reading. Record areas for further research and where you can find the information you need.

predict: give an expected result

discuss: offer a considered and balanced review that includes a range of arguments, factors, or hypotheses; opinions or conclusions must be presented clearly and supported with appropriate evidence

2 Core content: What core content are you currently studying in class (biological, cognitive, or sociocultural approaches)? Use *The Psychology Book* to practice visible thinking by projecting this topic across time.

- a What do you think you already know about this topic?
- **b** How has this topic changed over the last 10, 100, or even 1000 years? (The chapter "In context" and "See also" boxes are useful for finding this information.)
- c Reach forward in time to **predict** how you think this approach will develop over the next 10, 100, or even 1000 years.
- d Lastly, map out how your thinking on this approach has changed after reading further about it.
- 3 Optional content: What option are you currently studying in class (abnormal psychology, developmental psychology, health psychology, psychology of human relationships)? After reading about this option in DK's *The Psychology Book*, **discuss** it with a classmate, or with your peers in class. How does talking about a topic you've independently researched help you to better understand, remember, and apply it to your coursework?

4 Further reading of key works: Choose an important person you've studied in your psychology class. Find them in *The Psychology Book* and see if there is a separate highlighted box with their biographical profile (for example, Ivan Pavlov is on page 61). You'll also see a list of key works next to their profile. Use this list as follow-up independent research in order to explore more deeply into the topics related to this person. The internet, your teacher, or a librarian can help you find the texts.

5 TOK connection: To what extent is the study of psychology "scientific"?

ATL focus: thinking skills, research skills

Learner profile connections: inquirer, balanced

ACTION

Sciences

These suggestions apply equally well to both *The Science Book* and *The Ecology Book*.

Application suggestions 7

Finding content: Whether you're studying biology, chemistry, physics, or ecology, look through the index and table of contents (TOC) for information on a current unit of study. Extend your knowledge by reading all the relevant content you can find. Add to your class notes for general knowledge, for assessments, or

outline: a brief account or summary

explain: give a detailed account including reasons or causes

ACTION

topics for further research. This can be in the form of an **outline** of your knowledge gained.

- 2 International-mindedness: Choose a unit of study in your science course that has global repercussions (for example, climate change, animal extinction, weather patterns). Find and read a chapter (use the index and TOC) related to this topic. Use visible thinking questions to unveil different layers to the story.
 - **a** What is the main story?
 - **b** What is the human impact in this story?
 - c What is the global impact?
 - d What is the untold story that we don't yet know?
- 3 Ethical considerations: Choose a unit of study in your science course where its ethics can be debated and discussed. Brainstorm a list of the various perspectives on this topic. Write one or two sentences to express what the viewpoint is of each perspective. Which one do you agree with more? Explain.
- 4 Understanding through images: Science is a subject where diagrams, graphs, and other images are very helpful in conveying information. Choose a topic in your current science unit. Use a creative, visible-thinking activity to deepen your conceptual understanding of this topic and challenge yourself to appreciate scientific concepts in new ways.
 - a Choose a color that you feel represents or captures the essence of this key idea.
 - **b** Next, choose a symbol that represents its essence.
 - c Lastly, choose an image that best represents or captures the essence of this key idea. The "color-symbol-image" approach can be used as a study aid or in presentations.
- 5 TOK connection: How does scientific knowledge progress?

ATL focus: self-management, research

Learner profile connections: principled, caring



Mathematics

These suggestions can be used for *The Math Book*.

Application suggestions 8

Concepts: The DP mathematics course covers the following concepts: approximation, change, equivalence, generalization, modeling, patterns, quantity, relationships, representation, space, systems, and validity. Students may deepen their understanding by finding content in *The Math Book* by searching the index and the table of contents that relate to specific concepts they are studying in class.

investigate: observe, study, or make a detailed examination to establish facts and reach new conclusions

ACTION

suggest: propose a solution, a hypothesis, or another possible answer

- 2 Interdisciplinary connections: Students also studying business management or economics, for example, might find the content here useful for contextualizing key mathematical historical figures and events. **Investigate** ways where math applies to other courses. Use a visible thinking strategy to take your thinking further, and compare and contrast how math applies to two different courses. Consider how math is the same and different in these subjects.
 - a Notice your first impressions of how math applies to two different subjects. What are your first impressions?
 - **b** Try to see if math is used from a different point of view or perspective in another subject (for example, economics, business, computers). What would you say about any different points of view on math?
 - c What are the similarities and differences about how math is used in the two subjects?
- **3** International-mindedness: Since math is based on universal principles, you may find content in *The Math Book* that is relevant to other course discussions, projects, or assessments.
- 4 Internal assessment or extended essay research: Should you wish to investigate math topics for DP-required coursework, then review *The Math Book* for inspiration and to **suggest** ideas for further research on topics that you find of personal interest.
- **5 TOK connection:** Is all knowledge concerned with identification and use of patterns? Was mathematics invented or discovered?

ATL focus: self-management, thinking

Learner profile connections: inquirer, open-minded

The Arts

These suggestions apply equally well to both The Art Book and The Movie Book.

Application suggestions 9

I Cultural contexts: After you've studied at least two different topics in either your visual arts or film class, look through the index and table of contents in the corresponding *Big Ideas* book to read further on these topics. Then, using a Venn diagram (draw two overlapping circles in your notebook), compare and contrast the two areas by brainstorming their similarities and differences. **Apply** your thinking to a relevant course assessment.

apply: use an idea, principle, or theory in relation to a given problem or issue

ACTION

show: give the steps in a calculation or derivation

- 2 Interdisciplinary study: Both art and film are impacted by their economic, geographical, historical, institutional, political, social, and technological contexts. Use visible thinking to inspire ideas for creative coursework.
 - a Choose one film or significant piece of art from the *Big Ideas* books.
 - **b** Imagine how it would be different if one or more of these contexts were to change (for example, imagine *Jaws* as a black-and-white film in a different decade). You can also refer to other relevant *Big Ideas* books in this collection for context (for example, historical).
 - **c Show** your vision by sketching a few panels of how this new film or piece of art might look.
- **3 Exhibition help:** In preparing for the visual arts exhibition, pay close attention to the various drawings shown in *The Art Book*. To help you find your own artistic voice and creative style, use visible thinking to analyze different images.
 - **a** What beauty do you see in the images?
 - **b** What truth do the images contain for you?
 - c In your opinion, how does beauty both reveal and conceal truth?
- 4 TOK connection: Do the arts have a social function?

ATL focus: social skills, self-management skills

Learner profile connections: risk-taker, communicator



Philosophy and the theory of knowledge

ACTION

These suggestions can be used for *The Philosophy Book*.

Application suggestions 10: True for Who activity

TOK often discusses the nature of knowledge and truth from different perspectives. Try this visible thinking routine to develop your TOK critical thinking skills:

- I Discuss: Think of a claim, or idea, you read about in *The Philosophy Book*. What situation was the claim made in? Who made it? What was their particular interest in it? Why did they make it?
- **2** Brainstorm: Make a list of all the different viewpoints from which you could look at this claim.
- **3 Dramatize:** Choose one of the viewpoints you listed and imagine taking on this viewpoint yourself. Would this viewpoint consider the initial claim to be true, false, or uncertain? Why? Go through the list of viewpoints and consider each one carefully in turn.
- 4 Stand back: Look at the big picture of all the viewpoints once again. Now that you've investigated them more deeply, which one do you personally believe in? What new questions or ideas may you have?





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