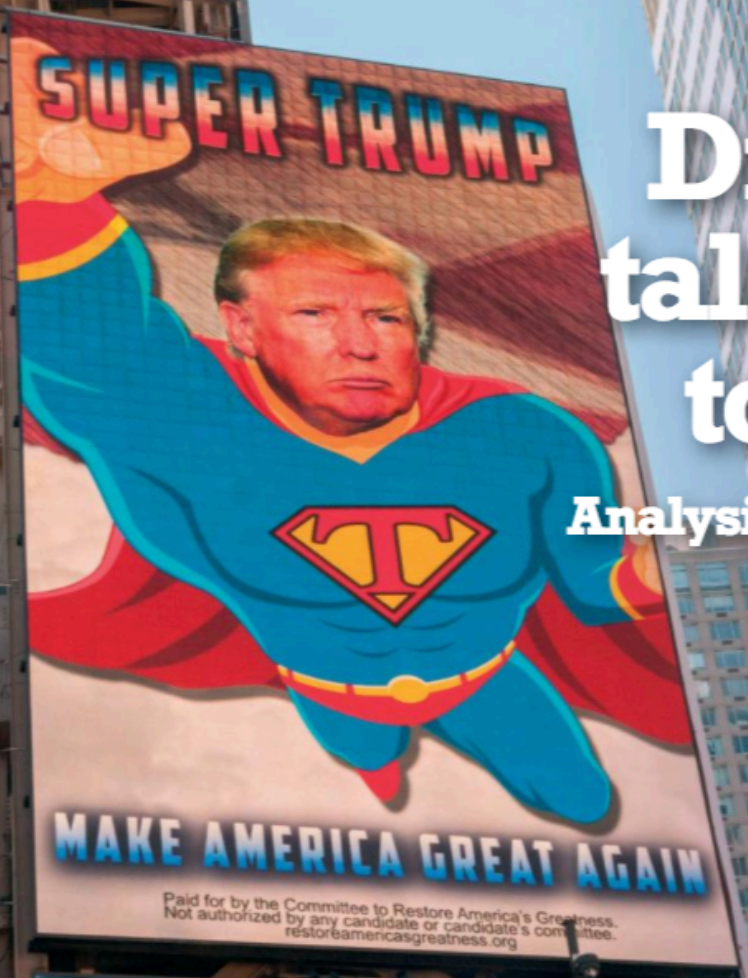
FOR IB DIPLOMA STUDENTS

IB review

September 2017 Volume 4 Number 1



Did Trump talk his way to victory?

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- Writing effectively in language B exams
- How Afrikaner nationalism led to apartheid
- Niels Bohr and atomic structure
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Compare and contrast

Ten tips for language and literature paper 2

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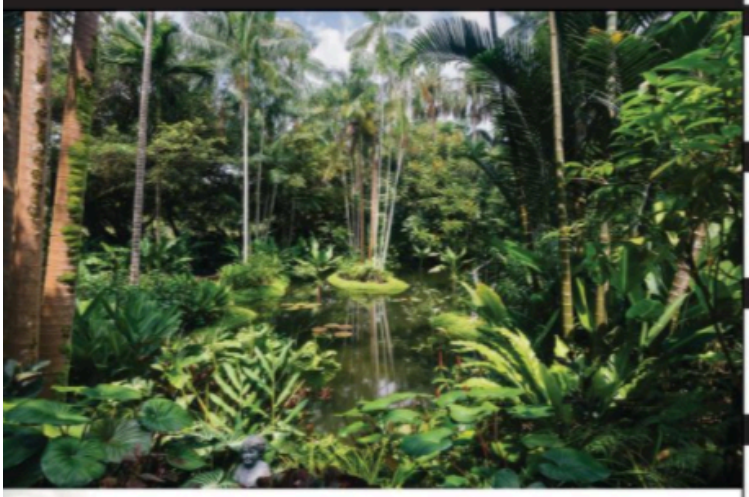

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GROUP 1: ENGLISH

Compare and contrast

Ten tips for paper 2

Whether you're taking literature and language, or just language, you need to write a comparison and contrast paper exploring two works you've studied. Carolyn Henly explains how best to approach these papers

Exam paper 2 tests two main skills: your ability to interpret literature of a particular genre and your ability to write a comparison/contrast essay.

This article presents ten tips on how to demonstrate sophisticated comparison and contrast skills in relation to paper 2, as well as some ideas for what sort of content you ought to be including.

1 Focus on analysis

As with your other language/literature assessments, your focus must be on literary analysis. Plot summary, your personal reaction to the work, discussion of historical context, or analysis of how the author's life influenced his or her work are not appropriate approaches to paper 2. Your job is to demonstrate that you can read a text, assess its meaning, and explain how that meaning is constructed.

2 Know the genre

Genre is important for paper 2. The examiner will expect you to demonstrate that you understand critical elements of the genre about which you are writing, which distinguish that genre from others. This essay focuses on drama, but the same point is true whether you are writing about poetry, novels, or non-fiction: you need to show that you understand the nature of the genre as opposed to all others.

Discussion about general literary features is expected, but if you focus exclusively on features that occur in all literature (e.g. metaphor, symbolism, personification, assonance, metonymy or imagery), you will fail to show that you understand the nature of the genre you studied. If you are writing about poetry, for example, discussion of meter, rhyme and particular poetic structures (e.g. sonnet structure or the use of stanza breaks) would show that you have a good understanding of what makes a poem a poem.

Tip 6 below focuses on specific aspects of drama that you might want to highlight in your paper 2 essay to show that you understand how drama differs from novels, poetry or other literary forms. Don't be afraid to discuss universal literary elements such as the use of setting, symbolism or metaphor. But to earn the highest marks, balance that discussion with an example that focuses on a genre-specific element.

3 Identify relationships

Comparing and contrasting may seem on the surface to be opposite skills, but actually those two actions simply comprise opposite ends of a continuum:

- At one end, imagine an absolute comparison, i.e. two things that are completely identical. This is not possible when you are talking about two different works of literature.
- At the other end of the continuum, imagine an absolute contrast, or to put it another way, a complete lack of comparison: things that have nothing in common. This would be useless in terms of revealing something interesting about the relationship between two works of literature.

IBReviewExtras

See examples of how this relationship between comparison and contrast works in a detailed analysis of elements of a text at www.hoddereducation.co.uk/ibreviewextras

In your essay, you will naturally identify and discuss comparison/contrast relationships that fall somewhere between those two extremes. In order to earn the highest possible marks, you want to identify comparison/contrast relationships between the two works you choose that are:

- pertinent to the question you have chosen to answer
- revealing of creative, insightful thinking and reading on your part.

4 Stick to the question

You must take care to answer the question as asked. Answers that relate only tangentially to the question will result in a reduction of points, and, if your response is too far removed from the question, could even result in your failing the assessment.

In order to effectively answer a question, you must not simply identify and describe elements — you must show that you understand how the elements contribute to your understanding of the author's meaning. Take for example this sort of question:

> **'Setting often explores suggested ideas in a play.' Consider this view and discuss the importance of setting in two or three plays you have studied.**

In order to effectively answer this question, you must not simply identify and describe elements of setting. You must instead show that you understand how the elements of setting contribute to your understanding of the author's meaning.

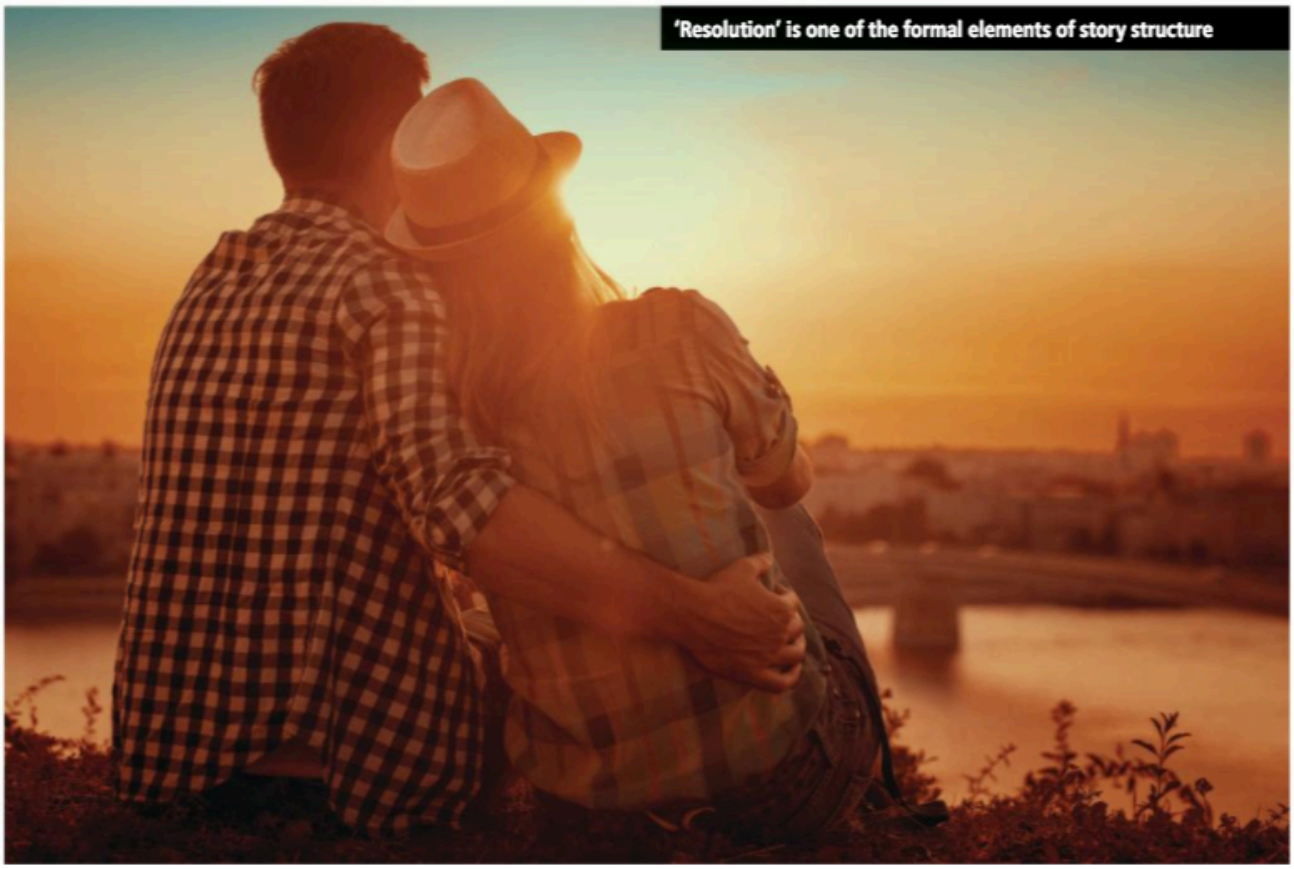
5 Stay sophisticated

Not all literary elements are equal. If you want to demonstrate that you are a sophisticated reader of literature, then you should try to write about sophisticated elements of literary technique. Some of the more sophisticated elements of literature include structure and narrative perspective.

These two elements could be treated in an unsophisticated way — if you can only identify the fact that a narrator is a third-person omniscient narrator, for example, you will not reveal rich understanding. If you can only address structure in terms of the simplistic five-part rising–action–climax–falling–action structure, you will not demonstrate sophisticated understanding.

If, however, you can discuss narrative in terms of the reliability of the narrator and in terms of the narrator's relationship in time and space to the events of the fabula, and if you can identify the narrator's particular perspective in terms of his or her reason for telling the story, then you demonstrate sophisticated understanding of narrative. (This assessment of narrative function does not apply to drama as a rule.)

With structure, if you can discuss structure in terms of the relationship between events and characters, analysing, for example, the initial disturbance and the protagonist's response to it in terms



'Resolution' is one of the formal elements of story structure

of his or her plan for resolving conflict, and if you can identify complications and obstacles and you can trace the inevitable line from opening balance to resolution, then you demonstrate a sophisticated understanding of structure.

'Disturbance', 'protagonist', 'conflict', 'complications', 'obstacle' and 'resolution' are some of the formal elements of story structure. If you want further information about those and other elements, you can consult a source such as *Playwriting: the Structure of Action* by Sam Smiley and Norman Bert. The authors point out the overlap between drama and narrative in terms of structure as they provide their analysis.

6 Know your dramatic elements

If your genre is drama, some elements that you might wish to discuss, and which would demonstrate that you understand the nature of drama as a genre, include:

- Aristotle's unities
- the use of dialogue (as opposed to narrative) to create character and to propel action
- the use of performance elements such as lighting, costuming and props to convey meaning
- the importance of stage directions

You may wish to discuss Aristotle's unities as part of your analysis of a dramatic text

IBReviewExtras

See examples focusing on the use of Aristotle's unities at www.hoddereducation.co.uk/ibreviewextras

7 Three's a crowd

The question mentioned in tip 4 offered the choice between discussing two or three plays. This option is common in questions about drama or novels. However, there is no extra value to your discussing three works, and if you try to discuss three works, you will necessarily deal with each one in less detail and depth than if you only discuss two. This can easily result in lower marks due to the lack of depth of understanding displayed. In almost every case it will be wiser to deal with only two works of literature for your comparison/contrast essay.

Theory of knowledge

Literary analysis is directly related to TOK because, if you are doing literary analysis well, you are examining the means by which the author or playwright created the knowledge that exists within any given text. We can consider that the knowledge in a text is the perspective on human nature.

In *'Master Harold'...and the boys*, for example, Athol Fugard presents to his audience his knowledge of how bad parenting and an unhappy childhood might lead to:

- a person's moral failure as an adult
- knowledge about the degree to which it is possible for someone who is not a person's actual father to influence them
- knowledge of human kindness and cruelty
- knowledge of how rapidly a person's unexamined emotional impulses can lead to self-destruction

These ideas are just some of the insights Fugard gives us through his play.

Having identified the knowledge, your next task in language paper 2 is to identify the means by which that knowledge is constructed. In the case of literature, we are not talking about the means by which the playwright, such as Fugard, himself gained his knowledge, but rather the means by which he constructed his work of literature to convey that knowledge to us. Those means include the literary techniques mentioned in this article and studied in your language/literature class (the use of structure, setting, symbol, metaphor, presentation of character, construction of dialogue etc. to create meaning). This kind of literary analysis is directly related to addressing knowledge questions about how an artist constructs knowledge in a work of art.

8 Analyse the works together

It can be tempting to write your paper 2 by doing all the analysis of one play (or work of literature) and then doing all the analysis of the other one, but that approach is not effective. It tends to result in students' losing track of actually comparing and contrasting the works to each other, even if each section addresses the question for that work of literature. These essays tend to end up as two mini-essays strung together, which is not the point. The examiner will be looking for you to comment overtly on how the two works compare and contrast to each other in terms of providing an answer to the question.

A more effective way of organising your paper 2 essay is to alternate your discussion of the two works. Choose one point and discuss it for both works, then move on to your next point. At the end of each section, make sure that you specifically discuss the ways in which the two works provide an answer to the question, and point out the comparisons and contrasts. If you look at the examples at **www.hoddereducation.co.uk/ibreviewextras**, you will see that the bottom row of each planning chart does that job.

9 Question types

There are two types of question you can expect:

- questions that focus specifically on techniques or conventions of the genre
- questions that focus on themes or ideas

In the cases in which the question focuses on a theme or idea, you still have to show that you understand the role that various literary strategies play in creating the meaning. The examiner will assume that you know to do this, even if the question does not specifically

instruct you to do so. In the case of a question about conflicts between groups, for instance, you would not only need to discuss what ideas about group identity are presented in the two plays you are discussing, but you would also need to show how the playwrights revealed those ideas through the deliberate use of literary strategies.

Also, don't be surprised if your exam question doesn't fit into either category. These two types are typical, but you need to be ready for anything that occurs.

10 Plan

Planning your essay thoroughly before you start writing can make a significant difference in the success of your efforts. In particular, you need to spend time considering your options for which two works you want to compare and contrast with each other. The first idea(s) that you come up with will come to you easily because they are obvious and simplistic. Pushing yourself to find ways in which to use two works that don't, at first glance, seem to be relevant to the question or each other can result in you discovering an exciting, surprising connection that will show off your knowledge of the texts and your ability to think creatively.

Connections to the extended essay

If you are writing an extended essay (EE) in language A (literature), you have two basic options according to the 2018 IB guidelines:

- you can do an in-depth analysis of one work originally written in the language in which you are writing your extended essay
- or you may write a comparison/contrast essay involving one work in the language of the extended essay and one work originally written in another language

The literature extended essay, therefore, differs from your paper 2 essay because the paper 2 essay requires you to write about two works written in the language A you studied. For your extended essay, furthermore, you must choose works that you did not study in your literature program (and which you have not used for any other assessment presented as part of your Diploma).

Finally, for your extended essay, you are expected to undertake a review of the critical literature about your author and/or work(s) of literature, and to examine the literature in context of that review. Keeping those restrictions in mind, you can write an extended essay that will take a similar approach in analysing literature to what you will take in your paper 2 exam.

If you did not study *'Master Harold'…and the boys* in your language A programme, you could write an extended essay in which you examine the literary means by which Athol Fugard creates a social commentary on apartheid. If you did not study either Shakespeare's *The Winter's Tale* or Yasmina Reza's *Art* (which was originally written in French), you might write an extended essay in which you examine their contrasting use of Aristotle's unities in terms of how the use of those structures contributes to meaning. Either of these topics would require you to employ the same kinds of literary analysis skills that you must be able to demonstrate for paper 2.

Carolyn Henly teaches IB English A1 HL (literature) and TOK at Henrico High School, Virginia, USA. She is an examiner for English and a past examiner for TOK, and has served as an IB coordinator and workshop leader.

GROUP 2: SPANISH

La expresión escrita en español

Prueba 2

Ana Brenes provides tips to help you successfully tackle paper 2 in Spanish at standard level and at higher level (section B). She goes through all the main types of text and explains what you need to do in order to obtain the highest mark in this challenging paper

Exam context

The written component of the language B examination tests your writing skills through a variety of texts in real situations with a specific purpose. This article will help you write effectively for standard level paper 2, and for section A of the higher level test.

El propósito de este artículo es darte unas claves que te ayuden a contestar con corrección la pregunta que elijas para el examen escrito. Si eres estudiante del nivel superior estos consejos te ayudarán solamente para contestar la opción A del examen. Durante una hora y media los alumnos de nivel medio contestan solo esta pregunta, mientras que los de nivel superior contestan además la opción B. Todos los candidatos tienen que escribir entre 250 y 400 palabras.

Las preguntas del examen son situaciones comunicativas tomadas de la vida real y por ello, antes de comenzar a escribir, debes considerar la audiencia a quien vas a dirigir tu mensaje. No es lo mismo escribir un artículo para la revista del colegio, que un discurso para los vecinos de tu barrio, o una carta para el director de un hotel, o la entrada de un blog de viajes en internet. El uso del registro dependerá del receptor de tu texto.

Cada pregunta responde a uno de los temas opcionales: diversidad cultural, ciencia y tecnología, costumbres y tradiciones, salud y ocio. No se evalúa tu conocimiento sobre el tema sino tu expresión escrita.

Registro formal e informal

En español es importante distinguir entre el registro formal e informal dependiendo del destinatario del mensaje. Cuando te dirijas a gente joven o conocida, usa *tú* para el singular. Es el pronombre más común en todos los países. Si te diriges a una audiencia de personas mayores, desconocidas o a quienes debes mostrar respeto tienes que usar *usted*. Cuando la audiencia sea plural, puedes elegir el pronombre *vosotros*. Recuerda que solamente se usa en España. En cambio, *ustedes* se usa en Hispanoamérica, incluso dentro del registro informal.

Los criterios de evaluación

Es fundamental entender los criterios de evaluación para conseguir la nota máxima. En este examen se evalúan tres componentes: **lengua**, **mensaje** y **tipo de texto**. A continuación tienes algunos consejos prácticos.

Lengua

- Necesitas demostrar que usas la lengua con corrección y de una manera eficaz. Para ello debes utilizar correctamente una amplia variedad de vocabulario.
- Asegúrate de que la concordancia entre el nombre, su artículo y los adjetivos que lo acompañan es correcta. Si el nombre es masculino singular, todo el grupo es masculino singular, por ejemplo *el problema nuevo*.
- La concordancia entre el sujeto y el verbo es también muy importante. No te olvides de repasar todos los verbos antes de entregar el examen. Por ejemplo: *la gente está obsesionada con internet* en vez de *la gente están obsesionadas con internet*.
- Si decides escribir una narración, demuestra que sabes las diferencias entre el imperfecto y el indefinido. Recuerda que el imperfecto se usa principalmente para describir y para acciones repetidas, mientras que el indefinido se usa para acciones que consideramos finalizadas y limitadas en el pasado.
- Evita los errores con *ser* y *estar*. El verbo *ser* lo usamos para referirnos a cualidades permanentes, mientras que el verbo *estar* se usa para cualidades transitorias y para expresar la ubicación de algo o alguien.
- Otro de los aspectos que se evalúan bajo este criterio es el uso correcto de oraciones complejas. Para ello utiliza conjunciones: *y, o, cuando, donde, porque, aunque, pero, sin embargo, que* y *si*.
- Demuestra que sabes usar el subjuntivo. Usa expresiones para dar opinión con indicativo: *Creo que/Me parece que/Pienso que…; Según tengo entendido…; En mi opinión…*, o con subjuntivo: *No creo que/No me parece que/No pienso que….*
- Memoriza expresiones para dar consejos: *Es importante que/Es necesario que/Es aconsejable que* + subjuntivo; *Deberías* + infinitivo; *Sería bueno si…; Yo en tu lugar* + condicional.

Mensaje

Para conseguir la nota máxima debes organizar tus ideas de manera coherente y añadir detalles apropiados. Lo mejor es hacer un borrador con la estructura básica:

- introducción
- cuerpo del texto
- conclusión

Conectores

Es importante el uso de conectores para organizar las ideas principales y los detalles. A continuación tienes algunos ejemplos:

- **introducción:** *Para empezar…; Para comenzar…; El objetivo de esta presentación es…*
- **organización:** en primer lugar…; *en segundo lugar…; en tercer lugar…*
- **contraste o comparación:** *por un lado…, por otro…; por una parte…, por otra…*
- **ideas opuestas:** *… pero…; sin embargo…; aunque…*
- **nueva idea:** *en cuanto a…; por lo que respecta a…; según…; con respecto a…; un nuevo punto a considerar…*
- **sumar ideas:** *y…; además…; también…; de la misma manera…*
- **dar ejemplos:** *es decir…; en otras palabras…; lo que es lo mismo…; por ejemplo…; como…*
- **sucesión temporal:** *después…; luego…; más tarde…; posteriormente…; de repente…; inmediatamente…; antes…; mientras…; al mismo tiempo…; durante un rato…*
- **finalizar:** *para concluir…; para finalizar…; como conclusión…; en conclusión…; en resumen…; recapitulando…*

Tipo de texto

El tercer criterio se refiere al uso de las convenciones de un texto específico. Estos son los más comunes.

Artículo para una revista

Estructura:

- título y subtítulo
- introducción: explica el propósito
- cuerpo: en cada párrafo explica una idea y los correspondientes detalles
- conclusión: opinión final del tema, una pregunta retórica, conexión con el lector

Lenguaje: depende de la revista y de la audiencia.

Blog

Estructura:

- saludo a los internautas: *¡Bienvenidos a mi blog!; ¡Hola internautas!*
- elementos visuales: fotos, dibujos, gráficos etc.
- conexión con el lector: *Deja tus ideas aquí.; ¡Mira esta foto!*

Lenguaje: coloquial.

Correspondencia formal

Estructura:

- dirección del remitente o membrete: nombre y apellidos; calle: *C/*; Avenida: *Av.*; Número: *n.*; código postal, ciudad y país
- fecha: lugar, día, mes y año
- dirección del destinatario
- saludo (siempre seguido por dos puntos): *Muy señor mío:; Estimado señor:/Estimada señora:; Estimados Sres.:/Estimadas Sras.:; Estimados Sres. y Sras.:*
- introducción (explicar el objetivo): *Me dirijo a usted para…; El propósito de mi carta es…; Le/Les escribo para…*
- cuerpo: párrafos con las ideas principales y sus detalles
- conclusión: retoma la idea inicial
- despedida formal: *Se despide atentamente,; Quedo en espera de su respuesta,; Atentamente,; Agradeciéndole de antemano su tiempo,*
- firma
- P.S. (post scriptum): se utiliza para mandar anexos, por ejemplo, *adjunto mi currículum vítae* o *adjunto el documento solicitado*

Lenguaje: formal.

Correspondencia informal

Estructura:

- fecha: lugar, día, mes y año
- saludo: *Querido/a… :; Hola…; ¿Qué tal?; ¿Cómo estás?; ¿Qué hubo?*
- cuerpo: párrafos con las ideas principales y sus detalles
- despedida: *¡Escríbeme pronto!; ¡Hasta pronto!; ¡Nos vemos!; !Un abrazo!; ¡Besos!*
- firma

Lenguaje: coloquial.

Diario personal

Estructura:

- fecha: lugar, día, mes y año
- saludo: *Querido diario; Hola de nuevo*
- cuerpo
- despedida: *¡Hasta mañana!; ¡Hasta pronto!; Buenas noches*

Lenguaje: coloquial; expresiones temporales, por ejemplo *esta mañana; hoy; esta tarde; después; más tarde; luego; entonces;* el pretérito perfecto, por ejemplo, *he visto…; hemos comido…* .

Discurso

Estructura:

- saludar a la audiencia
- introducción: explicar el objetivo
- cuerpo: explicar los detalles usando recursos estilísticos, por ejemplo sinónimos y comparaciones
- dirigirse directamente al público con preguntas retóricas
- despedida: dar las gracias por la atención

Lenguaje: registro formal o informal dependiendo de la audiencia.

Ensayo

Estructura:

- introducción: argumento principal
- cuerpo: párrafos con ideas complementarias y detalles
- conclusión: resumen, visión de futuro, idea nueva

Lenguaje: formal; usando expresiones para la opinión.

Entrevista

Estructura:

- nombre del entrevistado
- presentación del entrevistado en el primer párrafo
- preguntas y respuestas sobre aspectos de su carrera y su vida

Lenguaje: registro formal; uso de los tiempos del pasado (imperfecto, indefinido y pluscuamperfecto) para narrar; uso del futuro para proyectos nuevos; uso del presente para el momento actual.

Folleto o anuncio

Estructura:

- título atractivo
- eslogan
- ilustración que aporte significado al texto
- registro formal o informal según el posible lector; uso del imperativo; uso de estructuras para dar consejos como: *deberías/ tendrías que* + infinitivo; *es bueno/conveniente/necesario/aconsejable que* + presente de subjuntivo

Lenguaje: acorde con el contenido; estructuras para dar consejos, por ejemplo *deberías/tendrías que* + infinitivo.

Noticia de actualidad

Estructura:

- título y subtítulo
- introducción
- cuerpo: responder las cinco preguntas *¿qué pasó?; ¿cuándo?; ¿dónde?; ¿quiénes son los involucrados?; ¿por qué pasó?*
- conclusión

Lenguaje: objetivo.

Informe oficial

Estructura:

- introducción: explicar el propósito del informe
- cuerpo: ideas seguidas de detalles
- conclusión

Lenguaje: formal.

Guía o manual de instrucciones

Estructura:

- título
- introducción: descripción del producto o servicio
- cuerpo: instrucciones

Lenguaje: registro formal; verbos en el modo imperativo en la forma *usted;* organizadores del discurso como por ejemplo: *en primer lugar; en segundo lugar; en tercer lugar; después; más tarde; luego; finalmente.*

Reseña de libro o película

Estructura:

- introducción: resumen en el presente o pasado
- cuerpo: detalles peculiares y opinión
- conclusión: recomendación o no

Lenguaje: registro formal, uso de estructuras para la recomendación como *recomiendo esta película o este libro porque …/no recomiendo esta película o este libro porque …; Creo que …; Me parece que …; Pienso que…*

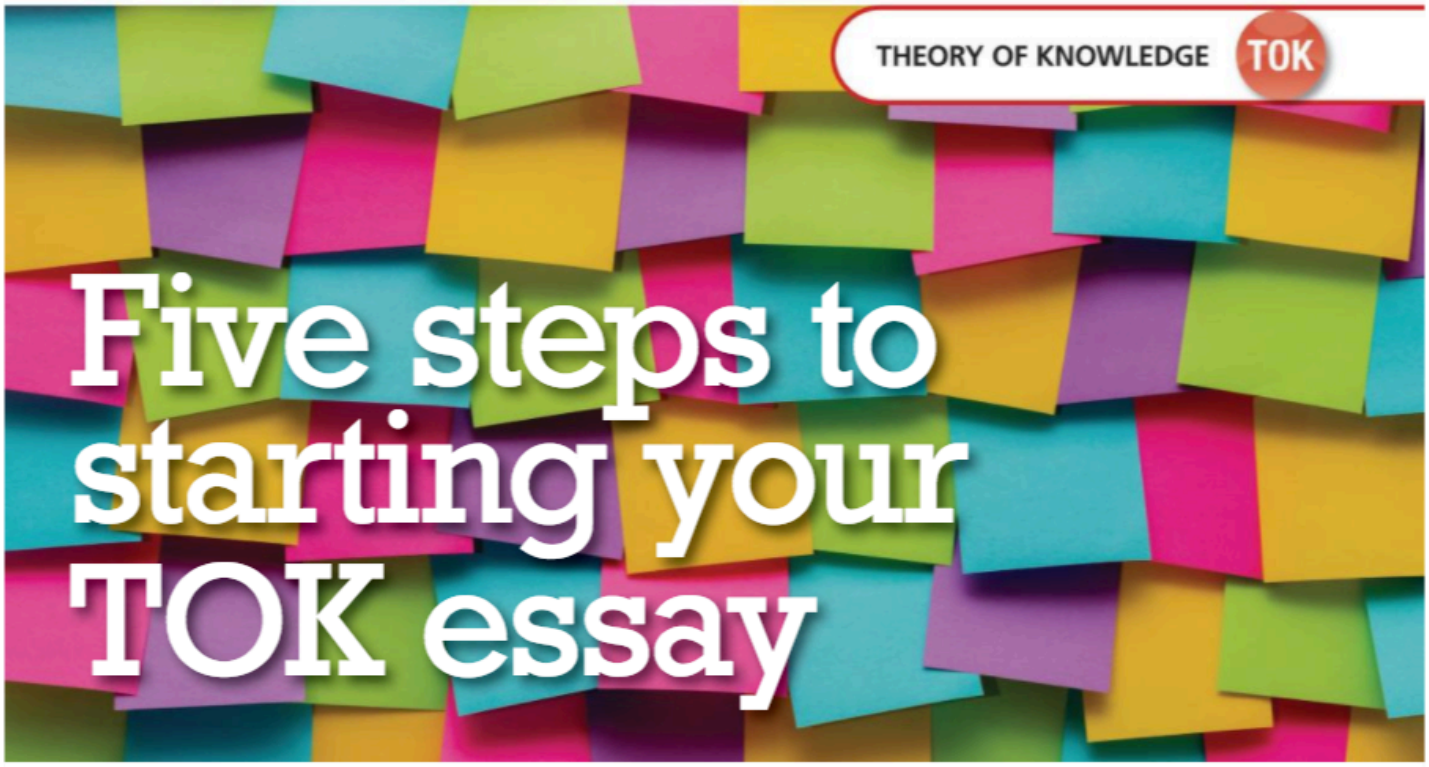
Conclusiones

- La prueba escrita supone el 25% del total de la evaluación de la asignatura.
- Elige con cuidado la pregunta que vas a contestar. Asegúrate de conocer bastante vocabulario del tema al que se refiere. Sin vocabulario será imposible escribir. Cada pregunta responde a uno de los temas opcionales: diversidad cultural, ciencia y tecnología, costumbres y tradiciones, salud y ocio.
- Para estudiar puedes hacer grupos de palabras del mismo campo semántico según las opciones. Puedes formar listas, crear tarjetas con imágenes, i-flash, mapas mentales o compartir en un documento Google tus palabras con compañeros de clase.
- Practica todos los tipos de texto considerando diferentes temas opcionales. Recuerda que no se evalúan tus conocimientos sobre el tema en sí, sino la expresión escrita en español.

Consejos para los profesores

- Lo más importante para preparar a los alumnos es la práctica constante durante todo el programa del vocabulario de cada uno de los temas opcionales. La lectura de textos relacionados con estos temas es la mejor manera de aprender vocabulario nuevo.
- También es aconsejable ver vídeos que promuevan discusiones y que animen a la escritura sobre cualquiera de los temas, pero siempre con un objetivo específico. De esta manera se aprende la gramática en contexto.
- Es fundamental que los alumnos escriban al menos un ejemplo de cada uno de los textos para que se sientan seguros.
- Una actividad muy práctica consiste en analizar textos escritos por otros alumnos y evaluarlos todos juntos. Así se familiarizan con los criterios de evaluación.

Ana Brenes completed her PhD in Spanish as a Foreign Language in Arizona State University. She collaborates regularly for the magazine *ECOS de España y Latinoamérica* and teaches Language B for MYP and DP in Munich International School.



Five steps to starting your TOK essay

Now that the May 2018 prescribed titles have been released, how do you begin the process that will result in a successful essay? John Sprague takes you through the beginning of the writing process, from exploring your initial ideas to preparing to present them in an essay

For both the essay and the presentation, the best advice I can give you is to consider the assessments as a five-step process:

- step 1: brainstorming task
- step 2: beginning to write
- step 3: making decisions
- step 4: the argument plan
- step 5: deciding how to present your arguments

What do you think?

First, you have to make decisions about what you think about the topic. The essay won't write itself, but too often students think of the process as being a single focused effort that results in a completed product. If you take your time to first plan your work and develop your ideas before showing them to your teacher, you are on the right track. The process requires a step that first brainstorms ideas, plays with alternatives, and explores a variety of approaches before settling on the set of ideas that you genuinely want to explore.

Your first attempts at articulating your ideas should not be thought of as part of the final essay. IB students are busy and interesting people with a lot on their plates, so the temptation to sit down and think 'I am now going to write my essay' is a strong one.

However, you should remember that generally, the first ideas are not the best ideas. When movie directors finish filming, they have to craft and mould what they've filmed into a final product, changing the order of scenes, and perhaps cutting up shots and placing other shots in between. They never simply link the film together in the order that they shot it.

The same can be said for your essays or presentations: you might spend a lot of time writing as you think, but don't confuse the work you've done while thinking with the final product. You must craft your ideas into a final product. So if you are firing up the word processor or presentation programmes and hope to get to your word or time limit and then hit 'print', you are going to end up giving the examiner your first ideas, which is never a good idea.

Target questions

Ask yourself these questions to help decide what you think about a topic:

- What is the title actually asking me to do? What are the command prompts?
- What key terms do I not understand?
- What ideas do I have initially? (e.g. brainstorming or mind mapping)
- What might my conclusion, thesis or answer be? What are my initial intuitions about what my response will be?
- What could my argument for this be? What will I have to establish in order for my argument to be well supported? (e.g. argument plan)
- What real, concrete examples can I use to illustrate my points?
- What are the questions about knowledge that I can address to help answer the title?

A structured approach which divides the thinking from the presenting is meant to alleviate the suffering that comes with a sudden realisation

Brainstorming and mind mapping will help you make decisions about what to include in your essay

that after a thousand words the wheels have come off the cart. I don't suggest that this will necessarily make the process *easier* (though I think it does), but it will probably make it more of an enjoyable journey.

So how can you proceed in a way that ends in an essay you can be proud of? The steps below can be used as a guide. Keep in mind that the steps will likely overlap in places. You might be making choices about sequencing of ideas while you are simply articulating the key ideas of the essay — this is fine, it's all part of the process. The other point to remember is that this is time-consuming and so represents the ideal situation. In reality you will be subject to deadlines for your writing and a whole wealth of other pressures on your time.

The five steps

Step 1: brainstorming task

What are your initial impressions? In the first part of this stage, you don't want to throw out any ideas, just get them out of your head. 'The more and the messier is the merrier' is my mantra. Ideally you want more ideas, so you can start making decisions about what to include. Brainstorming and mind mapping are ideal for this sort of free thinking.

I think of the prescribed title as a mystery box and the 'unpacking' of it as literally breaking open parts of it (concepts, areas of knowledge, command prompts, key words etc.) and seeing what is there. In some cases, if the prescribed title addresses a certain concept bias or a way of knowing (WOK), then this gives you the opportunity to apply a whole range of ideas, if relevant. Simply writing a short paragraph about these ideas might be a way to start writing if you are stuck.

You are done brainstorming when you start to formulate hypotheses about how you will actually construct a response. At this point you might use different coloured pens and highlighters to identify which ideas you like or which examples you think might be fruitful, or which elements of the knowledge framework you'd like to focus on.

When considering the knowledge questions you've identified, you *must* be able to explain clearly and explicitly why *that* knowledge question is going to help you answer the title. Do not engage with knowledge questions unless they are clear stepping stones to developing a response to the title.

Step 2: beginning to write

Write to find out what you think. Often you can begin the next stage by just writing words on paper or into a word processor, but not by writing the introduction. For some titles you will have to address certain issues, so start by writing them out.

The May 2016 title number 2, for instance, requires you to discuss and explain the biological notion of natural selection. You might start by writing out a paragraph about your understanding of natural selection. At some point you will have to articulate in writing this concept no matter how you approach the title, so you might as well just start writing that part out. You might not yet know how best to present it or where in the essay it will go (that's a 'deciding how to present' question), but you will have to engage with it, so just start writing. The secret is, after you've done it, you put it away and come back to it later, and don't think of it as anything like a final product.

The best ideas you will have during this stage are the ideas about what sorts of knowledge questions you come across while thinking about the title. Remember not to let your knowledge questions draw you away from staying focused on the prescribed title. One section in your drafting of ideas at this point should be an articulation of why the knowledge question you've uncovered is relevant to the title. Just a sentence or two will suffice.

As you continue, you will find that you are building a general approach to the title, or ideas about what you think about the issues contained in the title. If you're lucky, you will have a number of different approaches or ideas to choose from. Work through some of the details for each of the approaches to see which are more fruitful (or which you have the most ideas for). Your challenge in the latter stages of this thinking phase is to make decisions about which ideas you prefer to explore.

Step 3: making decisions

What are your best ideas? Now that you've written a few words, you can start reflecting on what you think about the title. You can think strategically about this by asking these questions (but not necessarily in this order):

- Which of your ideas do you actually think are correct? It's far easier to justify a position which you believe to be the correct position.
- Which ideas do you think are best justified? You might find that you are not sure what you think, but that you have a couple of good arguments for one idea or another.
- Which ideas have enough content to fill an essay? You don't want to choose a topic and spend a lot of time on it, only to find that you don't really have a lot to say about it.
- Which ideas do you think are most surprising or interesting? Often you can capture the imagination (and approval) of the examiners if you can develop an idea that challenges the status quo or explores something in a unique and surprising way.
- Which of your ideas are a genuine response to the prescribed title as set (not some subsidiary knowledge question you've associated with the prescribed title)? You must make sure that all of your ideas are relevant to the prescribed title. I always have a copy of the main essay title to hand when working on essays — keep going back to the title and ask 'is what I'm writing directly relevant as a response to that title?'

Step 4: the argument plan

What is your overall argument? The final outcome of this process should be a clear understanding of what your response to the prescribed title is going to be. After you've made your decisions about which of your ideas you are going to develop and which you think best answer the title, you should try to organise them into an argument.

One way of capturing this argument is with an **argument plan**. This is not an essay plan — the *essay* plan is a paragraph-by-paragraph outline of the order of your ideas. That comes next.

The argument plan is an overview of what your ideas actually are and how they relate to one another. This would include your overall thesis, or a general statement that is the most direct response to the prescribed title, and then the various premises or claims that you will use to support the final claim and what sorts of examples you will use to illustrate those points.

As the final essay should consider counter-claims and counter-arguments, you should identify these elements in your argument plan and have an idea of what you are going to say in reply to them (since you don't want to leave objections to your argument unanswered).

Once you have identified your arguments, you can start thinking about how best to present your work in the form of an essay.

Step 5: deciding how to present your arguments

Questions you can ask yourself to decide how you should present your ideas in the form of an essay include:

- What are the command prompts and how best can I show that I've met them?
- In what order will I present my ideas? Which ideas need to be discussed early, so later ideas will make sense?
- How should I present my counter-claims and counter-arguments?
- How should I construct my introductory paragraph?
- What needs to go into my concluding paragraph?
- Which definitions do I need to include?
- How can I make the essay engaging? How will my reader respond to the way I am presenting the ideas?

These questions are quite different to those that you asked yourself when you were thinking about your initial ideas, and require different types of skills. Keeping them separate will help you manage the process with less worry and help you create a stronger essay.

IBReviewExtras

Get a form to help you prepare your argument plan at www.hoddereducation.co.uk/ibreviewextras

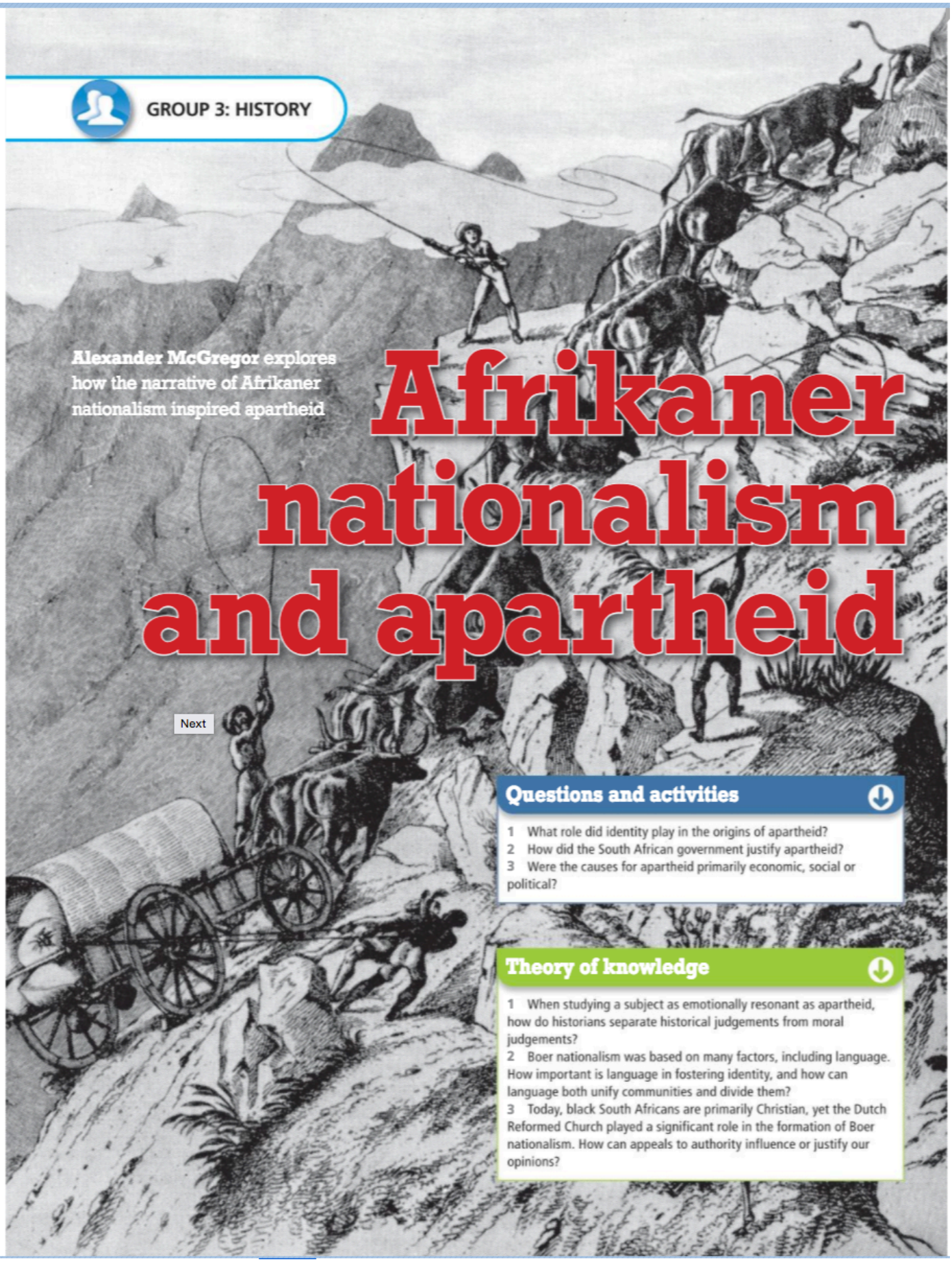
Questions and activities

Look at the prescribed titles. For each, make a list of the ideas that you think you'll have to engage with. Before you make your final choice, you might compare those lists and even practise writing a paragraph for some of the key ideas you've identified.

Do you feel comfortable writing about those ideas? Do you have things to say about those concepts? If not, then that title might not be for you.

John Sprague is the lead editor of IB Review, teaches IB philosophy and is TOK coordinator at the Tanglin Trust School, Singapore, and is an examiner and an IB workshop leader. His *TOK: Skills for Success* is published by Hodder Education.

GROUP 3: HISTORY



Alexander McGregor explores how the narrative of Afrikaner nationalism inspired apartheid

Afrikaner nationalism and apartheid

Next

Questions and activities

1 What role did identity play in the origins of apartheid?
2 How did the South African government justify apartheid?
3 Were the causes for apartheid primarily economic, social or political?

Theory of knowledge

1 When studying a subject as emotionally resonant as apartheid, how do historians separate historical judgements from moral judgements?
2 Boer nationalism was based on many factors, including language. How important is language in fostering identity, and how can language both unify communities and divide them?
3 Today, black South Africans are primarily Christian, yet the Dutch Reformed Church played a significant role in the formation of Boer nationalism. How can appeals to authority influence or justify our opinions?

Exam context

This article relates to the IB history paper 2 topics 'evolution and development of democratic states (1848–2000)' and 'authoritarian states (twentieth century)'.

Glossary

Afrikanerdom The nation that emerged from the Boer settlers, who began to identify as Afrikaners.

Apartheid The policy of post-Second World War racial discrimination in South Africa that segregated whites from blacks and so-called 'coloureds' (non-whites who were not black South Africans).

Barbarism A chauvinistic term referring to the absence of culture among another people and/or the violence and cruelty of another people.

Boer Afrikaans word for 'farmer'. Used to denote the Dutch-speaking settlers, and their ancestors, of the eastern frontier of South Africa during the eighteenth century.

Great Trek An exodus of Afrikaners from British-controlled regions. Between 1835–1845, approximately 14000 people departed for the interior by ox wagon.

Khoikhoi Group of Khoisan people native to southwestern Africa who were traditionally engaged in pastoral agriculture.

Ku Klux Klan (KKK) A white supremacy movement formed after the American Civil War, mostly located in former Confederate states.

Liberalism The dominant ideology of the nineteenth century that promoted free trade and equality under the law.

Voortrekker Afrikaners who participated in the Great Trek.

Zeitgeist A term for popular culture, trends or beliefs; 'the spirit of the times'.

Imagine if the Confederacy had won the American Civil War. What kind of nation would have resulted? Mechanisation may have rendered slavery obsolete eventually, but with no ideological basis for its removal, laws would have been written to ensure that black Americans remained in indentured service. Those who did not remain in the countryside would have flocked to cities seeking unskilled jobs, exchanging plantation for factory without exchanging poverty for prosperity. Segregation would have thrived. Black political representation would have been non-existent. Groups such as the **Ku Klux Klan** would have still developed, sworn to the promise of upholding black ghettoisation as a means of protecting white supremacy. This is a hypothetical vision of isolation in which black children would grow up witnessing the routine humiliation of their parents.

From 1948 to 1994 this vision was reality in South Africa, where the policy of **apartheid** created a complex legal structure to entrench white rule throughout all avenues of power.

Under apartheid the minority white population (20%) held absolute power. Black South Africans, resolutely at the bottom of a racial pyramid, were forbidden to enter cities unless in possession of a pass, which permitted them access to urban areas solely as labourers in the service of whites. Failure to show a pass to a police officer on request was a criminal offence. Blacks were forced to attend separate, desperately under-resourced schools, in which the curriculum was designed to infantilise them. They were forced to use separate entrances to buildings. Lacking basic sanitary infrastructure, homes in black areas were constructed from mud and scrap metal.

This system was maintained through fierce state repression. Blacks were denied a political voice and groups offering representation, such as the African National Congress (ANC), were made illegal. The Suppression of Communism Act 1950 allowed any black resistance or equality movement to be labelled Marxist and therefore criminal. The government increasingly militarised the police, leading to massacres such as Sharpeville and Soweto. As a system, apartheid was a regressive design of the twentieth century, inspired by Nazism, and opposing civil rights movements. However, as an identity, apartheid was a construct of the eighteenth and nineteenth centuries.

The Battle of Blood River

Next

Roots of Afrikaner nationalism

Apartheid was rooted in an intellectual framework that articulated the way **Afrikaners**, the descendants of seventeenth-century Dutch settlers, understood the world as it was and what they wished it would become.

In the second half of the seventeenth century, the Dutch East India Company (*Vereenigde Oost-Indische Compagnie*, VOC) decided to establish a permanent settlement in what is now Cape Town. The VOC had no intention of colonising the territory but rather wished to protect what was then the only shipping route to the east. The first commander of the VOC colony was Jan van Riebeeck, who arrived in April 1652 and thereafter showed no interest in exploring the region or understanding the culture of the indigenous **Khoikhoi** people. So steadfast was van Riebeeck's determination to remain separate from the indigenous peoples that he planted a bitter-almond hedge around his settlement so as to provide a wall between Europe and Africa. In the analysis of anti-apartheid journalist Allister Sparks, this hedge represented the deep cultural origins of apartheid.

The VOC was determined to maintain as inexpensive a settlement as possible, and van Riebeeck was told by his superiors to cut the number of settlers. A plan was hatched. Nine families were allowed to leave the settlement in order to claim vast swathes of African land on which to farm, and theoretically make a fortune supplying food to the Dutch colony. A narrative soon developed that mythologised these farmers (or **Boers** in native Dutch). Far from being abandoned to their fate on an inhospitable continent, the heads of the nine families believed they had instead become **free burghers**, or wealthy landowners. The myth soon spread and the original nine families were joined by many others arriving from the Netherlands.

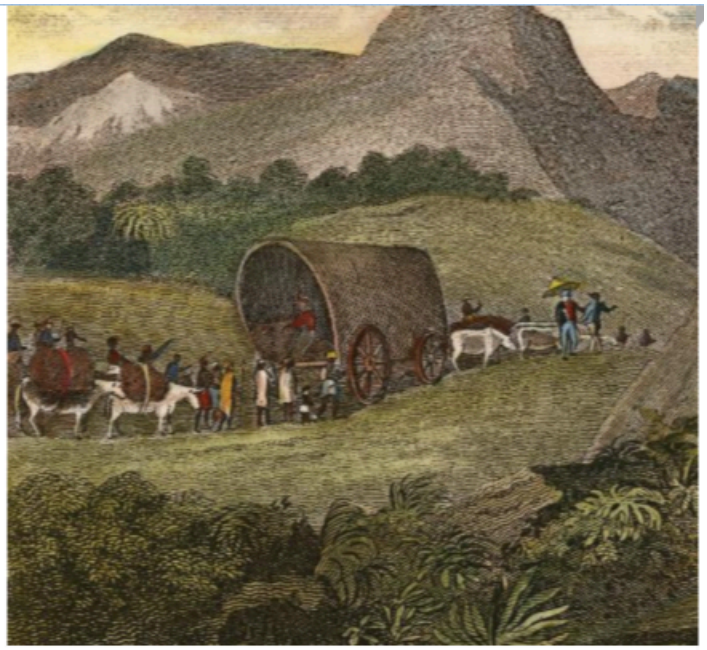
Afrikanerdom

So began the powerful narrative of the Boer, who journeyed hundreds of kilometres into the wild interior of Africa. Initially they traded peacefully with the tribes they met. However, this promised land proved a mirage. The soil would not support the growth of crops and soon, facing starvation, the Boers were forced to graze cattle instead. This caused greater conflicts to develop with the native peoples, as the Boer stole Khoikhoi cattle.

Meanwhile, a Boer identity was being formed out of the struggle. Boers came to identify themselves with the land, with their independence, with their isolation and with their whiteness. Eventually these farmers began to identify as a nation of people known as Afrikaners. Importantly, over the decades, a new language, Afrikaans, emerged that became one of the most potent symbols of **Afrikanerdom**. It was as a form of Dutch intermingled with the languages and dialects of the migrants and slaves that came to or were forced to work on the enormous cattle farms, including black South Africans, Malays, Indians and other ethnic groups. The irony should not be lost that the language of white supremacy in South Africa was invented because of an injection of ethnic and cultural diversity.

The Dutch Reformed Church

Afrikaner nationalism was formed as both inescapably European and undeniably tied to African land. This contradiction may account for Afrikaner separateness, but not necessarily for their feeling of racial superiority. What formed this impulse was the profound sense of religious certainty inculcated by the Dutch Reformed Church. In 1665, Wouter Schouten, a Dutch settler, wrote that:



> Although descended from our Father Adam, the Khoi have so little of humanity that truly they are no more reasonable than the unreasonable beasts, having no knowledge of God. Miserable folk, how lamentable is your pitiable condition. And, Oh Christians, how blessed is ours!

The Afrikaners adopted a sense of their own biblical mission. Alone and isolated (a trip to the Cape settlement would take 3 months), they came to believe that they were the descendants of Moses, and God's newly chosen people. In 1948, following his election as South Africa's prime minister, Daniel Malan demonstrated that this paradigm still electrified the Boer soul:

> Our history is the greatest masterpiece of the centuries. We hold this nationhood as our due for it was given to us by the Architect of the universe… . Indeed, the history of the Afrikaner reveals a will and a determination which makes us feel that Afrikanerdom is not the work of men but the creation of God.

British vs Afrikaners

These essential elements of Afrikaner nationalism were threatened by the arrival of the British in 1795. Though the British were also white Europeans, they were determined to bring **liberalism** to South Africa. The Afrikaners deeply resented being forced to learn English, the introduction of taxation and the proliferation of British law. Afrikanerdom, white and patriarchal, considered itself affronted and imperiled. The Afrikaners felt trapped by the liberalism of the British on one side and the perceived **barbarism** of the natives on the other. Having defined themselves according to their master–servant relationship with the blacks, the British abolition of slavery in 1833 was the last straw.

In 1835 came the defining moment in the development of the Afrikaner identity. Since 1806 the British had controlled the original Cape colony. Many of the Dutch-speaking Europeans felt under threat, if not under occupation. Following the example of the original Boers, they packed up their wagons and decided to leave. The **Great Trek** saw thousands of Afrikaners leave the Cape colony in search of their own dominion.

Using case studies in exams

Kenneth Tang explains how to analyse and apply business case studies

When reading through case studies, look for clues about the financial health of the business

Exam context

- Reading strategies for the unseen case studies in paper 2 and additional unseen materials in paper 1 (pre-issued case study).
- Making full use of the 5-minute reading time to comprehend a case study.

IB Diploma business management is a case-intensive course which often demands that you understand and analyse business problems and ultimately offer recommendations or a judgement. Whether you are writing for paper 1 (the pre-issued case study) or paper 2 (unseen case studies), these tips will guide you in deciphering the case studies in the exam.

Sherlock skills

When students are reading case studies in business management, they often find it difficult to connect themselves to the case, and are confused with what role they should take when responding to the questions in the exams. This becomes more apparent when students tackle the 10-mark questions, which demand higher order skills of analysis and depth.

The minute you open your exam paper and start reading through the case studies, you take on two important roles — you are a detective and a business consultant. Sherlock Holmes is a fictional detective who uses wit and meticulous skills to unwrap pieces of scattered evidence in an organised manner. While you read your business case studies, you are also a detective, trying to gather and dig out the business problems on hand and gathering small pieces of evidence from the stimulus material to propose and resolve the issue. Reading a case study in business management is no different to reading a Sherlock Holmes novel, trying to piece together the clues to help you find a solution to the problem.

When you have gathered enough evidence, you take on the role of a consultant, helping your client (the organisation in your case) to resolve certain issues that they are facing. Essentially you are a 'consulting detective', just like Sherlock Holmes.

Not DEAF

In TOK, you learn about how one acquires knowledge. One method is through sensory perception. As you read your case studies, you are relying on your eyes, but don't forget to keep your other senses alert. '**N**(ot) **DEAF**' is a useful mnemonic which can be used to remember the key items to look for and consider while reading a case study:

- **N**ature of the business: determine the industry, size and legal form of ownership of the organisation in the case study. This becomes important when you are discussing or evaluating a business proposal. For example, it is unlikely that you will propose that a sole trader increases brand awareness through above-the-line promotions using television commercials. Being a sole trader implies he or she may not have the financial resources to do so. Remember, your proposal and explanations should be relevant and applicable to the organisation you are discussing.
- **D**ecisions to be made: this is where you try to spot any decisions that the business needs to make. For example, the decision might be about whether to outsource manufacturing or whether to engage in an investment project. The context given in the case study gives you clues that you should keep in mind about what your client may be pursuing. As a consultant, you should exercise your professional judgement.
- **E**xisting problems and issues: some case studies may explicitly tell you that the organisation is facing 'a crisis', 'liquidity or cash flow problems' or 'general low employee satisfaction'. Again, these are hints that you should be alerted to, as they tell you something about the current problems faced by the business and possibly something that you, in your role as a business consultant, need to resolve. Moreover, clues like these should also tell you which syllabus topic(s) and specific business content you may need to make reference to.
- **A**ims and objectives: clues for this may be less apparent in some business case studies. However, you should be on the lookout for them because everything a business does should correspond to its aims and objectives. Having this information is important in order to support whether your discussions are relevant and aligned with what your client wants. For instance, you should look for phrases such as 'aim to…' or 'hope to…', which tell you what the business wants to achieve either in the long run or short run.
- **F**inancial situation: it is unquestionable that a good solid discussion of any recommendations in business management should consider both the quantitative (financial) impact and qualitative factors affecting business decision making. Understanding the financial health and position of the business is another clue that you should look for when reading through case studies. Be on the lookout for phrases such as 'cash flow' and 'liquidity', and make sure you are able to interpret final accounts (i.e. balance sheets and profit and loss accounts) for the business. For example, there is little point in recommending that your client pursue a bank loan as a source of finance if they already have a high gearing ratio.

Strategic reading

Given the length of the case studies in business management, 5 minutes reading time is insufficient. It is therefore important that you read strategically in the exams. 'Not DEAF' is by no means a comprehensive list of hints to look out for, nor are you expected to find evidence for every single point within a case study. However, this technique serves as a good framework for you to dissect a case study into smaller pieces as you tackle the more demanding questions in paper 1 and 2.

It could be useful to note the mnemonic somewhere on your exam paper before you start answering any questions. This will help ensure you are responding, proposing and discussing solutions that are relevant and applicable to the organisation.

Sole traders are unlikely to use television commercials to raise brand awareness

Transferable skills

As an IB alumni, I can attest that the skills you learn in other subjects can be transferred to the business management course. For instance, in your language and literature course, you are taught to make commentaries and annotate poems, prose or plays. The skills you acquire from group 1 subjects are transferable to group 3 subjects, since you need to display the same level of analysis, be it reading source documents or analysing case studies.

Theory of knowledge

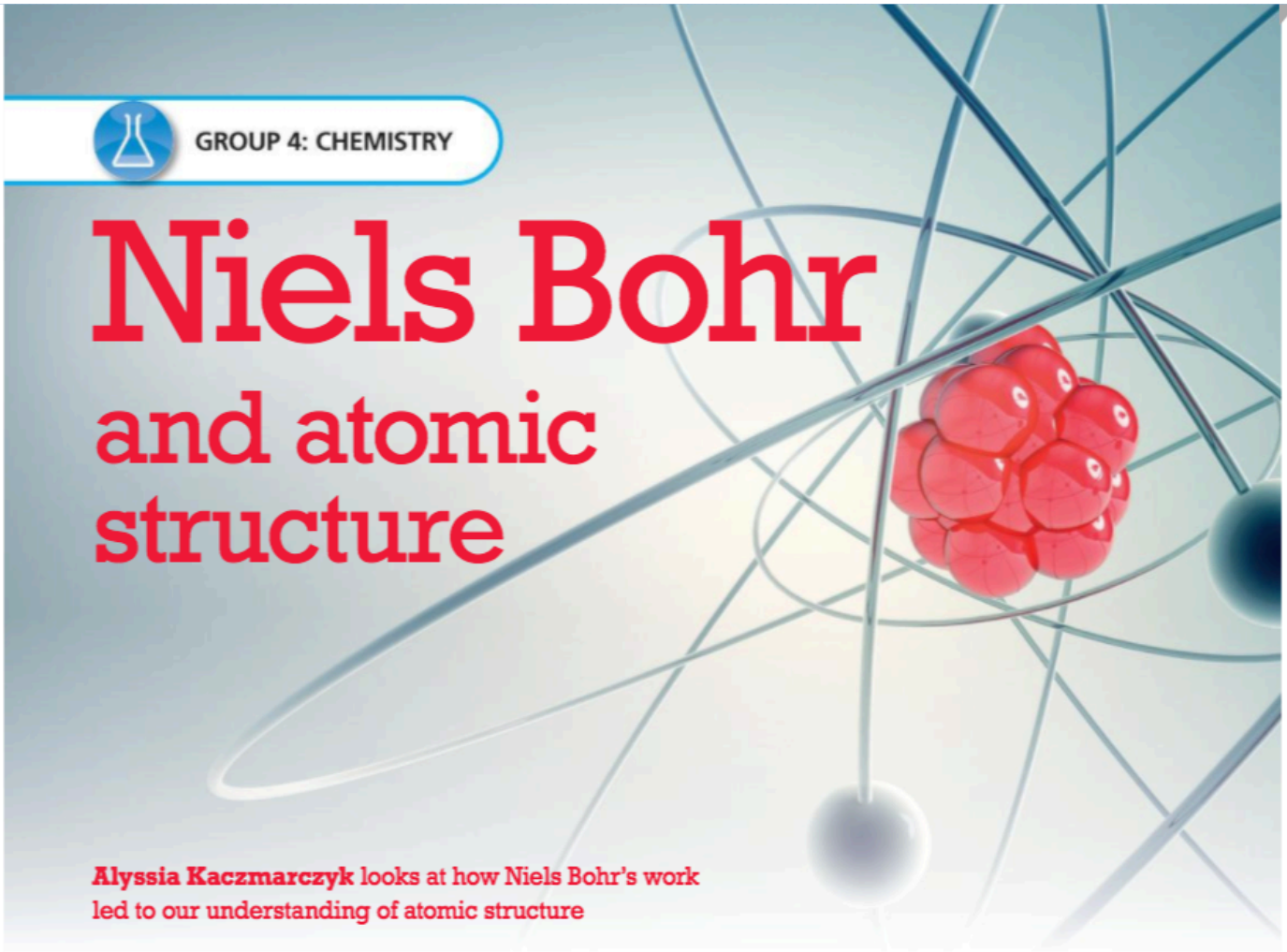
1 To what extent should sensory perception play a role in resolving business problems?
2 Which way of knowing that you acquire and develop in other IB subjects is most transferable to business management?
3 Can a business consultant's role be truly free of subjectivity?

Key points

- Make full use of your 5 minutes reading time in the exam to decide on the case studies and questions that you will respond to.
- Use the 'Not DEAF' mnemonic to remind yourself what to look for in the case studies contained in papers 1 and 2.
- Use the 5 minutes reading time strategically to look for key points using the 'Not DEAF' mnemonic, instead of reading the entire case.

Kenneth Tang is an is an MYP and DP business management teacher at the Canadian International School of Hong Kong.

Niels Bohr and atomic structure



Alyssia Kaczmarczyk looks at how Niels Bohr's work led to our understanding of atomic structure

Exam context

After reading this article you will be able to:

Chemistry

- describe the Bohr model of the atom. This is the model that is used in IBDP chemistry
- discuss the quantisation of energy in the Bohr model
- relate the experimental evidence for quantisation of energy (absorption and emission spectra) to the theoretical model

Theory of knowledge

- describe an example of the construction of new knowledge in the natural sciences, via collaboration, experiment and peer review
- describe an example of a scientist adopting an ethical position on the use of their work

In 1913 Danish physicist Niels Bohr published a trilogy of papers titled 'On the Constitution of Atoms and Molecules'. These articles revealed the **Bohr model of the atom**, leading to the rapid advancement of quantum mechanics and sparking a revolution in the world of science. But who was Bohr? What did he do? Why was it so important?

Who was Bohr?

Niels Bohr was born in 1885 in Copenhagen, Denmark. The Bohr family was intellectually distinguished: Bohr's father was a professor of physiology and his younger brother, Harald, was a mathematician. Niels enrolled as an undergraduate at Copenhagen University, taking a major in physics with minors in philosophy, astronomy and mathematics, all of which contributed to his findings later in life. He gained his masters degree in physics in 1909.

After earning his doctorate in physics in 1911, Bohr travelled to England where he met and worked with J. J. Thomson and Ernest Rutherford. Bohr's ideas did not agree with those of Thomson, but Rutherford and Bohr worked together successfully for many years, exchanging and developing ideas surrounding atomic structure.

By 1913 Bohr had submitted the three papers that would ensure his enduring success as a physicist. This trilogy combined all of

Useful sites

Biography of Bohr on the Nobel prize website: **www.tinyurl.com/3wa9bhl**

Follow the link from the Royal Society of Chemistry's Chemsoc timeline for Bohr's atomic model: **www.tinyurl.com/bm6uqze**

Bohr's influences and work with Rutherford and presented the Bohr model of the atom. Bohr was awarded the 1922 Nobel prize in physics for:

> his services in the investigation of the structure of atoms and of the radiation emanating from them.

Einstein, Rutherford, Bohr

Bohr continually built and refined his knowledge and understanding of atomic structure. His work corroborated that of many other well-known scientists, including Henry Moseley, whose work supported the Bohr model of the atom.

From this understanding of atomic structure, Bohr explored and explained other fundamental areas of quantum physics, including nuclear fission. This was particularly significant, as he lived through both the First and Second World Wars. Bohr was recruited to the Manhattan Project in 1943, sought out for his physical understanding of nuclear fission and its applications in atomic bombs. In 1944 he advised Roosevelt and Churchill on the great dangers and destructiveness of atomic weapons, advocating peace rather than nuclear warfare.

Bohr was popular among his peers and worked closely with many other scientists of note, Rutherford and Einstein among them. He became the first director of Copenhagen's Institute of Theoretical Physics, which is now known as the Niels Bohr Institute. He was involved in politics and peace treaties and he and his brother also played football to a professional level.

The Bohr model of the atom

Figure 1 shows the Bohr model of the atom (sometimes called the Rutherford–Bohr model). The model suggests that there is a central positively charged nucleus consisting of protons and neutrons, which is surrounded by electronic orbitals containing negatively charged electrons. This central nucleus was also present in the Rutherford model of the atom. However, in the Rutherford model, the positively charged nucleus was surrounded by a 'cloud' of negatively charged electrons.

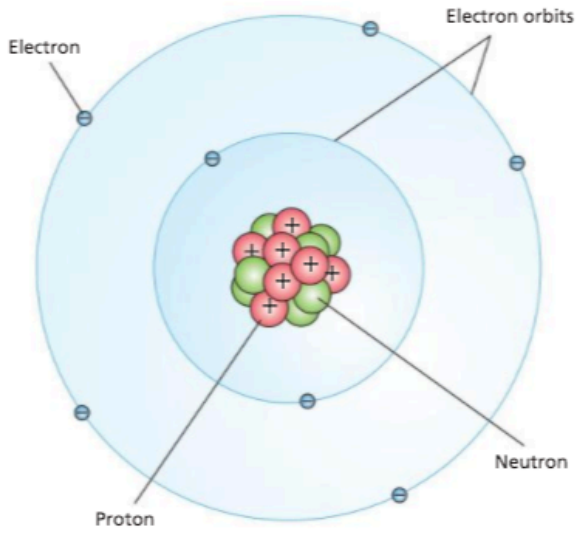


Figure 1 Bohr's model of the structure of a nitrogen atom

The Bohr model of the atom, developed from the Rutherford model, used the principles of quantum mechanics to suggest that the orbital angular momentum of the electrons was only able to adopt certain discrete or *quantised* energies. From this, Bohr suggested that the negatively charged electrons occupied set, quantised orbitals at set distances from the nucleus. This suggestion, although eventually proven to not be entirely correct, explained observations and theories through a thorough examination of the orbitals of the hydrogen atom. Based on his theory of quantised electron orbitals, Bohr was able to calculate the emission and absorption spectra of atomic hydrogen. His predicted spectra were remarkably closely matched to those found experimentally.

Over the years since Bohr's proposal of atomic structure, experimental methods and techniques have advanced greatly. Although some flaws have been found in the Bohr model, it is still believed that his idea of quantised electron orbitals is correct.

What is the significance?

The world of science is fast paced and constantly changing, developing and advancing. For this reason, to have produced a piece of work that has stood the test of time is a phenomenal achievement. Not only does it illustrate how intricate and intelligent Bohr's theories were, but it also demonstrates the power that theory has in science to shape and sculpt the way people think and the role it plays in the different paths explored. More than anything, Bohr's model marks a landmark in our scientific understanding of the world around us and acts as a reminder of the endurance and evolution of scientific discoveries.

Theory of knowledge

1 The Bohr model is not a perfect representation of the atom. Nonetheless, the data it provides match closely with the empirical data obtained from emission spectra. How important is it that models in the natural sciences accurately represent the physical reality?

2 Bohr's model built on the work of Rutherford, refining Rutherford's proposed 'nuclear' atom, and solving some of the problems with it, using the (then) new theory of quantum mechanics. Do all areas of knowledge construct new knowledge by this process of sharing and collaboration?

3 Bohr assisted in the development of the atomic bomb, but he went on to oppose the use of atomic weapons and became an advocate for peace. What responsibilities do scientists bear for the uses to which their work is put?

4 Explain which element of the knowledge framework (see pp. 20–21) you think best describes the story of Bohr's discovery? You might argue that more than one element applies.

5 Compare and contrast Bohr's use of models in the construction of knowledge with the use of models in another area of knowledge (AOK). Are models equally effective? Given how models might change over time, does this suggest that the use of models in different AOKs is less reliable?

6 In what ways do you think the processes involved in the construction of scientific knowledge manage the input from individuals in the field? Compare and contrast this with the role of personal knowledge in other AOKs.

Alyssia Kaczmarczyk studied chemistry at the University of York.

Next

TOK THEORY OF KNOWLEDGE

Using the knowl

A common pitfall in TOK assessments is that the analysis isn't 'TO order enough'. TOK analyses that are simply applications of AOKs order analyses (i.e. *doing* psychology, rather than interrogating the how can you shift from first- to second-order questioning? The know the *general* KQs relating to the elements of the knowledge framew as well. If you are asking these types of questions and if you can cle to some part of the knowledge frame

Scope/application

- What is the area of knowledge about?
- What practical problems can be solved through applying this knowledge?
- What makes this area of knowledge important?
- What are the current open questions in this area — important questions that are currently unanswered?
- Are there ethical considerations that limit the scope of enquiry? If so, what are they?

Concepts/language

- What role does language play in the accumulation of knowledge in this area?
- What are the roles of the key concepts and key terms that provide the building blocks for knowledge in this area?
- What metaphors are appropriate to this area of knowledge?
- What is the role of convention in this area?

Methodology

- What are the methods or procedures used in this area and what is it about these methods that generates knowledge?
- What are the assumptions underlying these methods?
- What counts as a fact in this area of knowledge?
- What role do models play in this area of knowledge?
- What ethical thinking constrains the methods used to gain knowledge?

Writing knowledge questions

Students often find it difficult to develop informative and helpful knowledge questions in both the presentation and the essay. In many cases the students are trying to capture meaningful insights but sometimes this takes them beyond the reach of genuine questions about knowledge.

Knowledge questions must be:

- open (i.e. shouldn't be answerable by yes or no)
- general (i.e. can be applied to a number of different real-life situations)
- about knowledge

A good first step would be to identify what element of the knowledge framework you are interested in exploring, then tailor your knowledge question directly to that. This reminder could be used to help keep you on track when discussing knowledge or building a knowledge question.

edge framework

enough' or that the knowledge questions (KQs) are not 'second ('What would a psychologist say about this?') or are merely first- methods of psychology) will never score highly on the criteria. So ledge framework is one way of achieving this. This poster gathers rk, but the TOK subject guide has a list of AOK-specific questions arly identify how the analysis of your presentation or essay relates ork, then you are on the right track

Historical development

- What is the significance of the key points in the historical development of this area of knowledge (AOK)?
- How has the history of this area led to its current form?

Links to personal knowledge

- Why is this AOK significant to the individual?
- What is the nature of the contribution of individuals to this area?
- What are the implications of this area of knowledge for one's own individual perspective?
- What assumptions underlie the individual's own approach to this knowledge?

The five elements

The five elements of the knowledge framework serve as a tool by which to *compare* the AOKs. You might, for instance, develop a presentation around any one of the questions, but explore the question in relation to two AOKs. In my view a comparison between two AOKs is *never* a mistake. The worst comparison essays are those which simply *juxtapose* the AOKs. ('History is like this… art is like this…'). It's far more effective to *start* with the framework and use one of the points to explore the two AOKs.

IBReviewExtras

Download this poster at www.hoddereducation.co.uk/ibreviewextras

John Sprague is the lead editor of IB Review, teaches IB philosophy and is TOK coordinator at the Tanglin Trust School, Singapore, and is an examiner and an IB workshop leader. His *TOK: Skills for Success* is published by Hodder Education and explains each of the five elements of the knowledge framework in greater detail.

How to write a great mathematics exploration

Kaylene Connell helps you choose a topic and lay the foundations for a first-class exploration

IBReviewExtras

Get a lesson plan to help with explorations at www.hoddereducation.co.uk/ibreviewextras

Starting your mathematics exploration can be a daunting task, but with a well-chosen topic, you will likely find the process painless, if not downright enjoyable. In fact, limiting yourself to only 12 pages might become the challenge (but it is important that you do stick to this limit — more is definitely not better in this case).

There is no single correct way to approach the exploration. I recommend reading a few samples to see the different ways people have approached the work. Your teacher should be able to provide you with some examples. You may also be able to ask students from past years if they are prepared to show you the work that they've done. Use examples to get an idea of the scope of what is possible, but don't spend too much time studying them. It is important that the exploration is something you personally produce (one of the criterion assesses your personal engagement in the work), so spending too much time looking at other people's work can make it difficult for your own thoughts to shine through.

Choosing a topic

So how do you start? One way to begin, after looking over some examples, is to ask yourself a few questions:

- **Interest**: what are you passionate about in life? A particular sport? Movies? Fashion? Architecture? Science? The list may be endless. If there's something you love doing, consider using it as a starting point for your exploration (Figure 1).
- **Favourite mathematics topic**: is there an area of mathematics that you've studied that you've particularly enjoyed, e.g. functions and trigonometric modelling (Figure 2)? You could try and find an exploration topic that will involve this area of mathematics.
- **Most challenging topic**: is there an area of mathematics that you've studied that you've found particularly challenging and that you'd like to spend more time on to help you better understand it? Spending time working on an exploration that involves this area of mathematics may help you strengthen your understanding (Figure 3).

Figure 1 Crazy pool tables — investigating a personal interest

- **Learn some new mathematics**: does the idea of learning some completely new mathematics excite you?

You can either begin with the topic idea and look for mathematics within that topic, or you can start with the area of mathematics and then work from there to find a topic that will help you to explore it. There's also the possibility of investigating an area of mathematics that's new to you. Talking with your mathematics teacher or searching the internet can provide all sorts of interesting ideas.

Challenging criteria

Whichever way you choose to go about the exploration, always keep in mind the five criteria used to measure your work. I won't go through

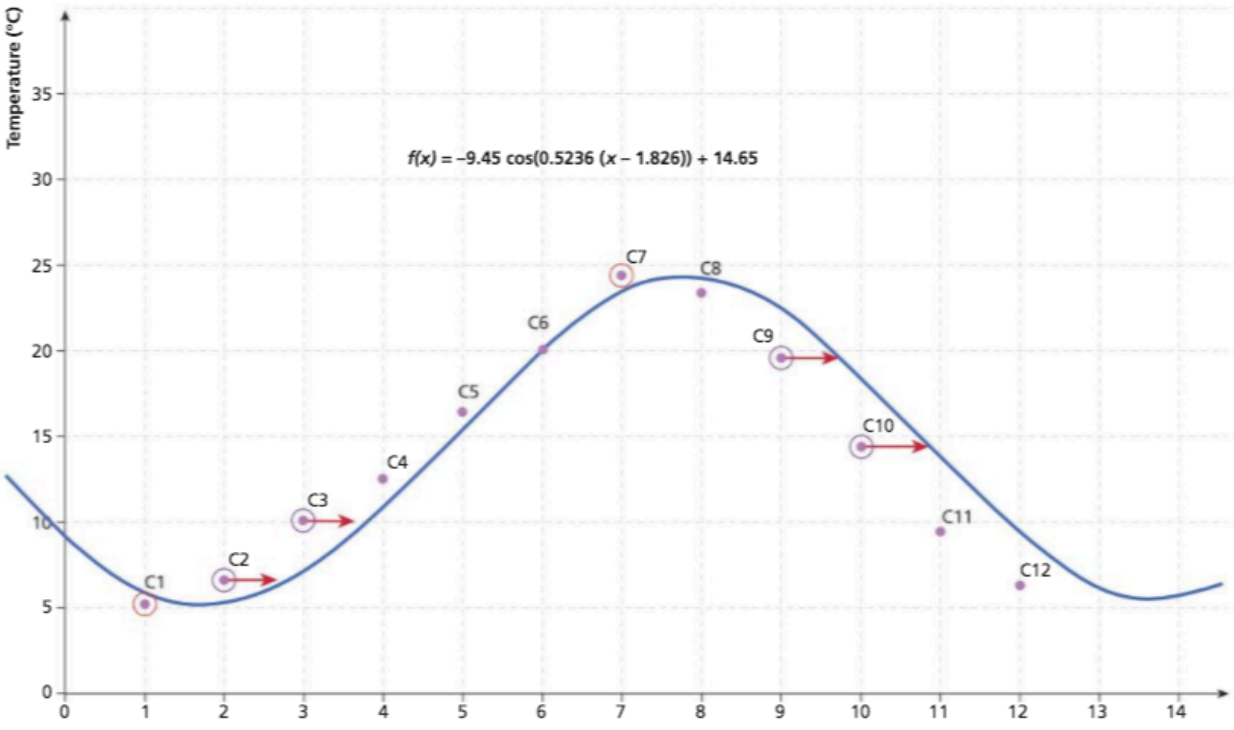


Figure 2 Madrid temperatures 1950–59 (theoretical model produced only through the data)

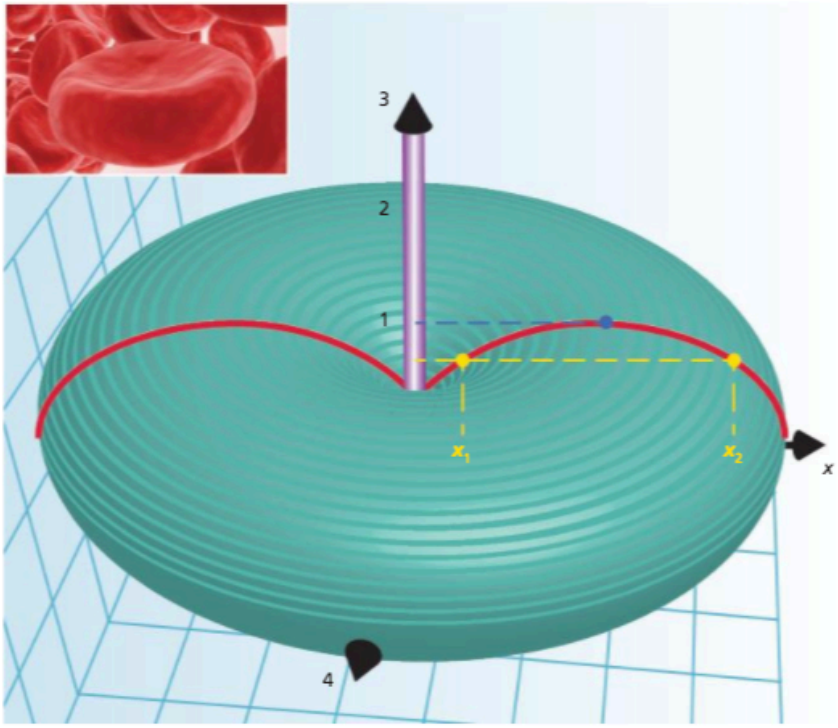


Figure 3 A red blood cell and its 3D mathematical model

them in detail (although you should definitely be familiar with them before you choose your topic) but I'll give you a few pointers about how they work with your choice of topic:

Criteria A and B

These deal with the way that you communicate. Regardless of your topic, it's important that you clearly communicate your thinking, that you use correct mathematical terminology and notation, and that you set out the work in a way that makes sense. The work should flow and the reader should never be left guessing the reasons for why you are using a particular piece of mathematics, nor what the mathematics tells you/means in the context of your exploration. Proofread for typos and make sure that you correctly cite any sources for data, images or work that are not your own.

Criterion C

This looks at personal engagement. It is not enough to tell the reader that you are interested in the topic. You need to show evidence through the way that you approach the work and the mathematics that you do. Choosing a topic you actually find interesting certainly helps. Creating your own examples is another way that you can show personal engagement.

Criterion D

This looks at how you reflect on the mathematics that you are doing. To do well in this section, it is important that the mathematics is substantial enough to give you work to reflect on. While you may choose to include a reflection section at the end of your work, it's often a good idea to reflect throughout. Each time you do some mathematics, tell the reader what it shows. It is also a good idea to explain why you are doing each piece of mathematics before you do it. So, for example, if you are creating a logarithmic model, explain why you chose that particular model.

Criterion E

This assesses your use of mathematics. As long as you have chosen mathematics commensurate with the course, you will score at least a 3 for SL in this criteria. HL is a little trickier, because the mathematics you do also needs to show a certain level of sophistication. It is critical that you don't just choose mathematics of an appropriate level, but that you also show understanding. To access higher grades, it is important that whatever you've done shows the reader that you understand the work. Once you've got an idea for a topic, you should discuss it with your teacher to make sure that it contains an appropriate level of mathematics.

Types of exploration

There are all sorts of explorations, and choosing a topic is just a beginning. The most common types of exploration are listed below, but don't feel that yours has to fit into one of these categories — the best exploration I have ever seen did not fit into any of them. What made it so good was that the student had clearly chosen something that truly interested him, and it was clear that he not only understood the mathematics, but had something meaningful to say about it.

Modelling

This type of exploration involves getting some data (either primary or secondary — don't forget to cite your source if you use secondary) and trying to find a mathematical model that fits it. You can use the model to make predictions or to explain trends in the data. Explorations that would fall into this category include:

- looking for correlation between the height of tennis players and their service speed
- creating a model for child mortality vs GDP of a country
- finding a mathematical model that matches the way in which the tip of a bird's wing moves as the bird flies

If you are going to undertake this type of exploration, it is important that you choose a topic that you are interested in and convey to the reader why you think the data is worth modelling. You will also need to ensure that you explain limitations of your model and circumstances under which its use would and would not be appropriate.

Learning new mathematics

In this type of exploration, you find an area of mathematics that you haven't studied and teach yourself about it. Usually you would work in examples that you have created yourself to show what you have learned. In this type of exploration, it is usually easy to show personal engagement but it can be difficult to show good knowledge and understanding unless you really understand the work. If you are writing this kind of exploration, make sure that you clearly explain which parts of the work are done by you and which parts are taken

from elsewhere. Topics could include fractals, partial differential equations, complex numbers (for SL), matrices, tensors or Taylor series.

This type would be a good choice if you have an idea of what you are hoping to study at university and will be using a type of mathematics that isn't covered in your high school course. Why not get a head start by doing some work on it now? For HL students it is particularly important that you make sure the topic you are considering is sophisticated enough, so talk to your teacher before you do too much work on it.

Statistics

In a statistical exploration, you start with some data (either primary or secondary) and use statistics to analyse it. You might be looking for a correlation between two pieces of data or you might be investigating a variable that is normally or binomially distributed.

It is also possible to learn some new work to combine with a statistical exploration. Statistical testing (such as the chi-squared test or the T-test) is not covered in mathematics SL/HL but is useful for many university courses, making it an interesting area for exploration. In mathematics HL, you also have the option of delving into work that you aren't covering in the course, especially if you are not taking the statistics option.

Investigating a well-known problem

Many students choose to investigate a well-known mathematical problem for their exploration. Examples include:

- the birthday paradox,
- Gabriel's horn
- the Monty Hall problem

If you decide to do one of these, it is important that you think of a way to make the exploration your own. Students who do the best job on these have generally found a way to extend the problem or to personalise it.

Probability

Explorations in this area can include investigations of lotteries, Russian roulette or casino games. Like with the work on well-known problems, the key here is making the work your own. You could do this by using a less well-known game (perhaps something specific to your culture) or changing the rules of standard games and investigating how that impacts the probabilities.

Unsuitable work

Before you start doing too much work on your exploration, be sure to have a clear idea of the mathematics you are going to study. Remember that you must include work that is at least commensurate with the course you are taking. If you are a HL student, you will need to make sure the topic is not only commensurate with the course, but that it allows you to show the level of sophistication required. If the mathematics in your exploration is too easy, it will limit your ability to score well in criterion E (and likely D as well, since it will be difficult to reflect well).

This doesn't mean you need to include super-hard mathematics. Attempting work that is too difficult means that you might struggle to show knowledge and understanding, which will also limit your ability to score well in criteria E and D. My advice is to talk with your teachers about your specific ideas. They will be able to give you guidance about whether or not what you're considering will work, or if you need to tweak your ideas before you begin.

The IB takes plagiarism very seriously and it is crucial that the work you submit is entirely your own, with appropriate citation and referencing. There are many great resources that can help you get started on a topic, but once you've got the initial idea it is best not to look at anyone else's work and just to focus on doing the best work you can do, explaining your thinking to the reader as you go along. This is the key to success in the exploration, regardless of which topic you select.

You now have an overview of some different possibilities for explorations. Remember that these are starting ideas, not limiting ones. Feel free to think outside the box and find something to investigate that really interests you.

Kaylene Connell is an IB coordinator and mathematics teacher at the Anglo-American School of Sofia, Bulgaria. She has taught IB Diploma mathematics for 11 years and is a team leader for the mathematics SL exploration.

The internet as an artistic tool

An IB teacher and student explain how you can use the internet to improve your assessment tasks

Times are changing for students and teachers in the IB art world. Approaches to teaching and learning are more diverse than ever before.

The teacher

When I started out as an IB art teacher 14 years ago, knowledge of media, techniques and art history came primarily from the teacher, books, laser discs, videos and museums. Today this information goes beyond the classroom and support comes from around the globe through the internet.

In China, where I worked for 11 years at the International School of Beijing, the majority of my students were already confident in the arts. They were well prepared to address the criteria and achieve top scores. Two years ago when I started working at a small international school in Croatia, the American International School of Zagreb, I had students taking higher level IB art who had limited knowledge of the arts. Most had not studied it in high school. I thought this would be a disadvantage, but I was wrong.

The internet has transformed our roles as IB art teachers and has levelled the field for where, when and how learning occurs. Teachers are not just a source of knowledge, but facilitators who allow students to participate, demonstrate and collaborate during their IB art journey in ways unimaginable 15 years ago. The use of the internet can lead to greater richness, relevance and relationships. We learn that new ideas, support and inspirations come through conversations taking place far beyond our classroom walls, giving students an authentic audience and confirming that the work we do as educators has diverse meaning.

TOK encourages you to think critically and curiously, and what better way to put this into practice than with the aid of the internet, giving vast opportunities to connect with others, respond and share what we do in IB art.

Lucija Pigl was my student from 2015 to 2017. By using the internet she managed to overcome her anxiety about the course and to become a confident, creative individual.

The student

After my first IB art class I felt overwhelmed with all the criteria that needed to be met. I had low self confidence because of my limited knowledge of art, artists, analysis and skills. How was I to succeed? I felt hopeless and in the beginning I didn't know where to begin.

The change in my attitude happened by the end of the first semester. My teacher, understanding my anxiety, encouraged me to focus on subjects that I really cared about and to integrate what I loved with all the new learning from my IB classes.

As the months went on, various communities and sites on the internet helped me find support. This allowed me to accomplish my goals, make sense of the criteria, meet new people and even win prizes for what I had done during class. At the end of the IB course my portfolio was maybe not perfect, but what was great was the progress I made and the confidence I gained.

Facebook

IB encourages students to connect with the local culture and to have first-hand experiences with art and artists. I love films and filmmaking and wanted to work in that media. I also wanted to know more about Croatian street art and artists but had no idea how to begin. With my teacher's recommendation, I contacted some of the most famous street artists in Croatia through Facebook. I thought that none of them would answer, but all of them responded. OKO, Lunac, Lunar and Chez sent back positive responses.

I communicated with OKO, perhaps the most well-known Croatian street artist, who was in London at the time. She was open and kind and offered to give advice at any time. I messaged with Lonac, who creates technically astounding realistic images and is famous for his work presenting a real 'beating heart'. I later had a coffee with him where we talked about visual arts and his inspirations. Lunar, who is recognised for his lively, colourful cat motifs, was open to meeting me as well.

Logo of street artist OKO in Zagreb, Croatia

Theory of knowledge

1 Throughout history, art has had the power to change society, especially when new media are used to express an idea. The arrival of photography and film brought knowledge to the masses and also led to governments censoring the content created by these media. How does the new media help or hinder acquisition and sharing of knowledge?

2 How and to what effect does social media distort our perception of reality?

3 In what sense is a work of art 'true'?

I was able to listen to their stories and ask any questions that came to mind. I couldn't believe how simple it was to get in touch with them. After these first conversations my perspective on street art developed and I decided, with the help of another student, to create a documentary movie about it. It made sense to use this knowledge about street art in my comparative study, where I chose to compare and contrast the work of Lonac, Joseph Cornell and Hannah Höch. This authentic, valuable experience would definitely not be possible without the connections I made through Facebook. The internet gave me the courage to take risks, meet the artists and respond in ways I would never have considered previously.

YouTube

For someone who needs to develop their skills and learn about different techniques, art history or media, YouTube is a great starting point. It is hard to imagine that it has only been around for 12 years. It is free, and lectures are available in English and many other languages as well. The ISB Art History Channel videos improved my understanding of artists and art movements. If I had any questions about filming, I viewed YouTube videos to prepare myself.

I uploaded my Street Art, Croatia documentary to YouTube (**www.tinyurl.com/street-art-croatia**), allowing me to share it globally as well as with my school community. The film has been viewed more than 9000 times and won the award for an international documentary at a 2016 California young filmmakers' festival. This valuable feedback and encouragement confirmed that what I had accomplished had a real impact.

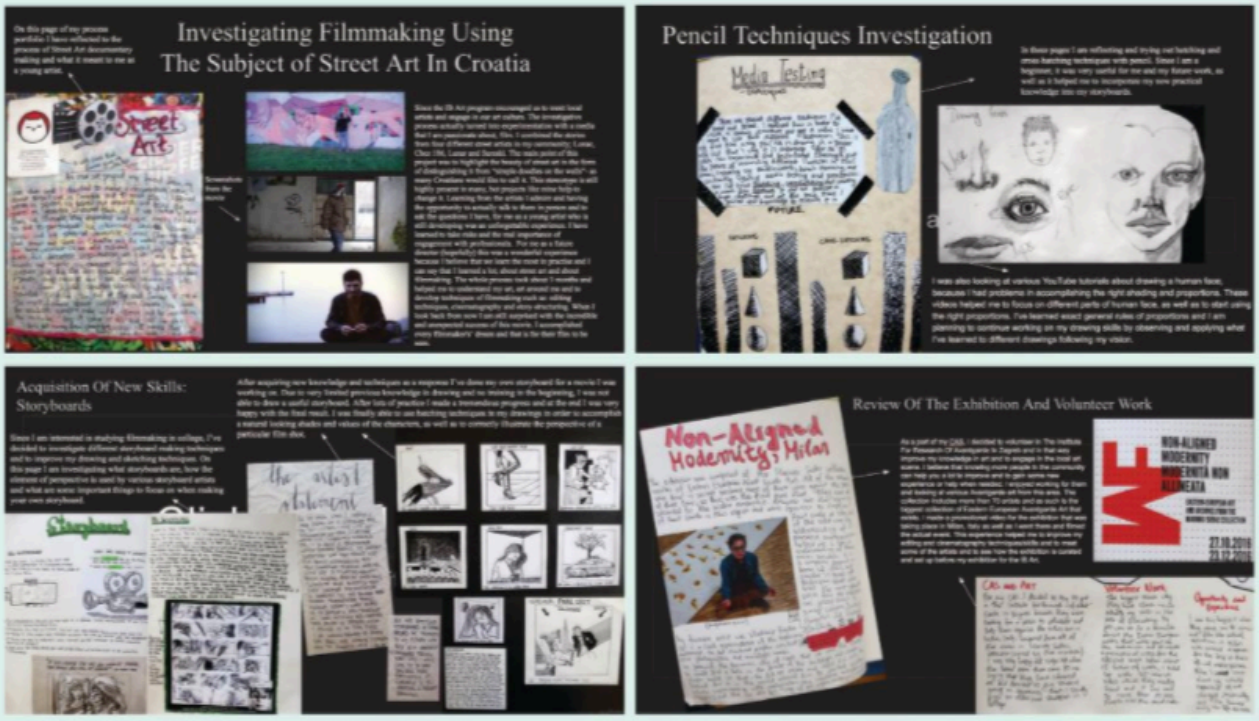
Gaining breadth and depth

I found **www.khanacademy.org** and **www.theartstory.org** invaluable in developing perspectives on artists, themes and contexts.

Sometimes, finding a good artist that you would like to investigate can be tough. When I ran out of inspiration **www.artsy.net** would always help me discover new artists. It is easy to use and if you choose a category of art that you like it will instantly give you many artists working in that field. You can look at their artwork and read about them. You can also read online magazines about new art and artists and their artwork. MOMA (Museum of Modern Art) does a wonderful job of organising art by artists and themes.

Pinterest is an excellent visual bookmarking resource for finding artists and ideas for artwork, and organising anything that inspired me. My teacher's boards were very helpful: **www.pinterest.com/kenfar**

Next



Instagram

I use Instagram as an online platform to share my work and the work of others who I admire. You can upload both videos and images with ease. I follow those who share similar interests in the arts and film. This helps me to expand my philosophy, practice and perspective. I've gained inspiration and motivation as I communicate with other people, comment on their work and gain knowledge of what is out there.

Community-based websites

The IB programme encourages you to find relevant opportunities, develop your creativity and to be active. The great thing about CAS is that you can choose to do whatever you want and there are some perfect opportunities to develop your interests.

Again I found that the internet was the place to go to help me fulfill my CAS requirement. Initially, the most difficult thing for me was to hear that I could do anything I wanted. As a member of an online volunteer centre in Zagreb, I searched for opportunities where I would be able to gain knowledge in the visual arts. IB has helped me to develop wise choice making. I was actually able to recycle knowledge I've gained and to integrate and make connections in my classes.

After searching for the best fit, I discovered that the Zagreb Institute for the Research of the Avant-Garde was looking for a volunteer who would create a promotional video for the exhibition of avant-garde artworks in Milan, Italy. I applied and was chosen, and was invited to the institute to start work on my video. During my introductory conversation with the director of the institute, I learned a lot about avant-garde art and artists.

After completing the promotional video, I was invited to attend the exhibition in Milan and to film it as an external associate. I met some of the artists, and listened to all lectures that were held in the exhibition. I was involved first hand with artists and art history, and was able to analyse the work of international artists. This was perfect experience for my upcoming exhibition component, as I was also present when the curator was setting up the exhibition before the opening and I absorbed the choices he made and asked about them, knowing this would be useful for my own exhibition a few months later. It was a valuable experience as a young filmmaker in terms of developing my skills and gaining more practical knowledge.

I would say that the best way to evolve as an artist, filmmaker or designer as part of an IB art class is to be sure during those 2 years to engage in the community — connect and respond. There are many people out there willing to help who will be interested in your work and who can inspire you and encourage you to think outside of the box.

The internet has made so much possible, expanding my world and ambitions in ways unimaginable. Learning and creating became much more relevant. I found that I had plenty to reflect on in my process journal, and I expanded my knowledge of media and techniques. I learned to take risks, be brave, make connections, listen to peoples' stories and to develop my own voice as a young artist.

Kendra Farrell has taught art since 1989. Lucija Pigl is a recent graduate of the American International School of Zagreb.

Kenneth Tang

After completing his IB Diploma at Sha Tin College in Hong Kong, Kenneth Tang went on to study accounting and economics at the Rotman School of Management at the University of Toronto, Canada. He worked as an accountant and an operations analyst before becoming an IB business management and economics teacher. Paul Hoang spoke to Kenneth about his time as an IB Diploma student

PH What attracted you to the IB Diploma?

KT I first knew about the IB Diploma when I was still studying in junior high school in Vancouver through an information session at school. Three phrases from that presentation attracted me — 'global', 'academic rigour' and 'well rounded'. The breadth of the DP, allowing students to take subjects from all six groups, was suitable for me as I was debating what I wanted to pursue at university. Also, having lived in Canada for most of my life, I hadn't really experienced any public examinations. So the DP would test my ability against international standards. It became an easy decision for me since this was an excellent opportunity to challenge myself academically while obtaining a qualification that would open doors to the world.

Originally, I was enrolled at an IB school in Vancouver, but my father had to relocate to Hong Kong due to work, so I completed my IB Diploma there. In hindsight, it was quite bizarre for me to take on so many challenges — moving to Hong Kong, adapting to a new school, building new friendships and doing the DP. I think I embodied the 'risk taking' attribute of the IB learner profile.

PH What were your top three memories for you as an IB student?

KT My top three memories are:

- the intellectual conversations and discussions in TOK with my peers over 'how do we know what we know?' and coming to an epiphany after every lesson as we made connections between the various IB subjects
- finding the courage to interview strangers with another DP economics student outside Hong Kong Disneyland to collect primary data for my business management IA and for her EE.
- writing my English literature exam on the day of a red rainstorm warning and thunderstorm warning, while everyone tried to stay calm to annotate our unseen poetry

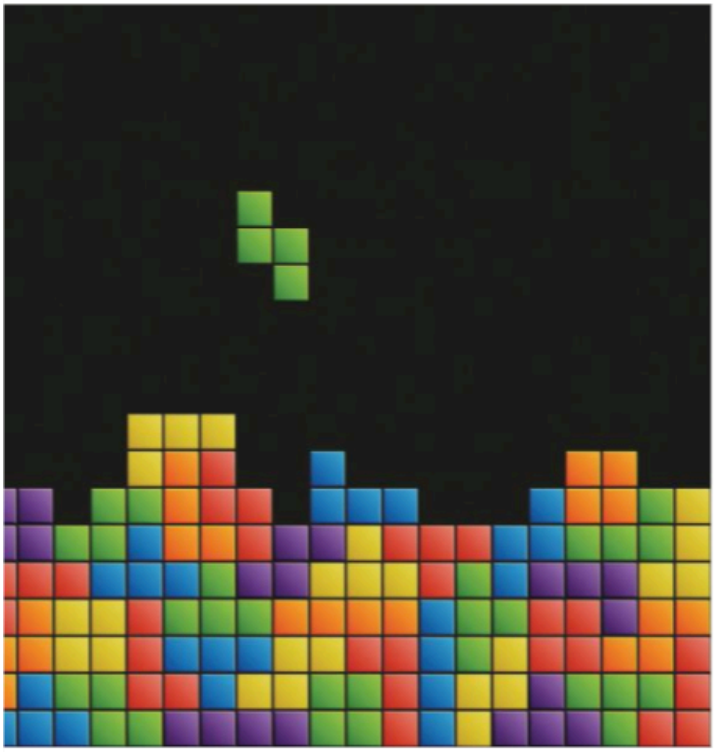
Next

PH One of the things most students struggle with in the IB Diploma is managing countless deadlines and assessments. How did this play a role in your transition to undergraduate studies? What advice would you give to DP students about staying on top of deadlines?

KT When I decided to do the DP, I was mentally prepared that it was not going to be easy and expected that the workload was going to be heavy. To me, juggling my six subjects with TOK, EE and CAS was like playing *Tetris*, keeping a calm and patient mind while you strategically put the blocks into the right place. This pushed me to become organised with my notes and deadlines, and create strategies to ensure I was able to manage my time effectively. I am a visual learner, so I wrote up all my deadlines and commitments for the following 3 months and pasted this on a wall in my bedroom so that it was visible to me, allowing me to plan and prioritise my to-do list for the week.

I continued with this habit in university and it really helped me to keep my head above water. The deadlines in IB disciplined me well when I was swamped with the same situation in my first year at university, with weekly quizzes, presentations, projects, and mid-term and final exams all happening within my first 4 months in university. Compared to some of my non-IB peers, I was less likely to procrastinate and leave work to the last minute, jeopardising the grade and quality of my work.

Ultimately, my advice for DP students would be to always plan ahead and maintain a disciplined and committed schedule, but make sure that you also give yourself some downtime to rest and relax. With the growing use of smartphones and digital calendars, students have an additional way to stay organised. You really don't want to burn out before your exams.



PH A differentiator of the IB Diploma from other programmes is its 'international mindedness'. Did this help you after university?

KT Definitely. At the beginning of my fourth year in university, during the campus recruitment month, I was lucky to have secured my first full-time job and I believe the international mindedness that I developed in the IB helped me in making a positive impression on the recruiters and company representatives.

My first job was as an audit staff accountant, where I worked in teams and was stationed at a client's office to audit and ensure that their financial statements were presented accurately and fairly. The work involved reaching out to different personnel and organisations for financial information to complete the audit. Unfortunately, not all clients were cooperative, so it was important to build a rapport with them. The breadth of the DP and the international mindedness built into the courses allowed me to explore and become more aware of things that were outside my comfort zone.

In my second job working as a management associate at Citibank, I spent a 6-month placement in three departments: finance, sales and distribution, and operations and technology. The bank was a large financial institution and my work depended heavily on cooperation with teams in Hong Kong, the USA, China, the Philippines, Singapore and India. The assignments and research that I did for the human resources unit in DP business management helped me be culturally sensitive to the differences in workplace etiquette. It may certainly take time for DP students to see the true value of an IB education — it's often years after you've finished the programme.

PH You mentioned changing your career after a few years working in the commercial industry. Tell us a little more about why you made the switch.

KT 'Find a lifelong career' or 'stick to one job for life' was what I was told by my parents when I was growing up. I don't think this is the case anymore for my generation and even more so for the students I am teaching now. In the past, graduating from a business school would lead you to a career within the corporate world. But nowadays, with technology, social media and mobile devices, people are able to pursue non-traditional careers.

After having a taste of the corporate world, I really didn't think it was the right fit for me. I cannot see myself contributing to society by sitting in a cubicle, preparing Excel spreadsheets all day and generating daily reports. When you dread going to work every day and feel completely unmotivated, this is a sign that it's time move on. I asked myself what I really enjoyed doing. During my 2 years in the DP, as part of my CAS project, I spent every Saturday volunteering to teach English to primary school students in the most underprivileged district in Hong Kong. Despite the stresses from the DP, the satisfaction and smile the students gave me each week certainly helped to keep me going. Maslow's hierarchy of needs was right — people do need to 'self-actualise' in order to be truly motivated.

Following my quarter-life crisis, I made the switch into education and the teaching profession. The IB had taught me to be open-minded and reflective, and in hindsight it wasn't a crisis at all, because I found my passion and what I truly wanted to do. I trusted my instincts and took a different path from my peers. To this date, I have never regretted making that switch. I find joy in what I am doing because I am able to contribute and help young people.

Next

PH How does it feel to switch roles from IB alumnus to IB teacher?

KT It's quite surreal sitting on the other side of the table as a teacher, teaching students who are going through the same programme I went through a decade ago. I think the major change is that I have the responsibility to be a role model for my students. Also, since I did the IB Diploma, I am able to think from the perspective of my students more as a teacher. This really helps because you can gauge and empathise with the students' workload and stress levels, which they appreciate.

As an IB teacher, it is easier for me to instil an inquiry-based learning approach for my students because the pedagogy and framework of the DP remains the same as when I took the course. For example, I always try to make connections between examples from business management and economics with the other IB subjects that students are taking, emphasising that the skills they develop are versatile and applicable across the subject groups.

PH Which aspects of teaching do you enjoy the most?

KT At the heart of the IB's mission and philosophy is to nurture 'lifelong learners'. As a teacher in the classroom, you are presumed to be the 'expert' in your subject but I would argue that because information is now so accessible through the internet, the extent to which teachers are 'experts' is somewhat debatable. Rather than an 'expert', I see myself as a 'lifelong learner', because I am learning from my students as much as they are learning from me. From the students, I can keep myself abreast with the latest trends, technologies and mobile applications, all of which help with my teaching and learning strategies.

I also enjoy the interactions, discussions and rapport I am able to build with my students. This is what drives my energy and motivation every day. I enjoy sharing my past experiences as an IB alumnus with my students. I find that they are generally more engaged and motivated to listen when you have interesting and relevant stories to share.

Finally, teaching does have its perks compared to other professions, such as the long summer holidays for us to rejuvenate in preparation for another busy academic year.

PH How is the IB Diploma different to when you were a student?

KT When I walked into my first class for my teaching practice, all my students had their laptops on or were using their smartphones. The classroom setting was very different from how I used to learn as a student when we attended our lessons with pen and paper. It's amazing to see how innovation and technology are now part of our lives.

In the past, when I had group projects or discussions, students would verbally communicate with each other. Now my students engage in 'virtual' discussions through Google Docs, so sometimes the classroom does become a bit quiet. The library also became the default place for extensive research to prepare for my IAs or EE. But students now hardly go to the library because they can access most information through their devices. Lastly, as a student, even through university, a pen or a pencil was the basic stationery I brought to classes. When I gave my MYP students their first test, many came unprepared without a pen or a pencil, which was something I took for granted. I do appreciate that technology can make life more convenient, but it certainly has its demerits too.

PH Looking back, what piece of advice would you give to current or potential IB students?

KT My 2 years in the DP were certainly one of the busiest times in my life. At times, you might be so busy that you start doubting yourself. Don't be discouraged when you are struggling with your courses. Talk to your teachers, form study groups with your friends (that helped me a lot with the TOK prescribed essay) and set yourself reasonable goals to achieve. Everyone is there to support and help you. You may not see the benefits of the IB Diploma when you are doing it, but the long-term rewards are priceless.

PH What advice would you give to IB students who want to teach?

KT The rigour of the IB Diploma certainly prepares anyone for the challenges ahead, in tertiary education or in life. For IB students who want to teach, certainly use the CAS component of the DP as an opportunity to do some volunteer teaching or summer camps to see if this is the right career for you. By doing this, you get to work with children and young adults to see if you enjoy it. Be passionate about the subject or content you wish to teach and understand that learning doesn't end after university. Aim to be FAB (flexible, adaptable and brave). It does take courage and responsibility to nurture the next generation, but your efforts will definitely have a positive impact on the lives and futures of students.

Paul Hoang is vice principal and IB Diploma Programme coordinator at Sha Tin College, Hong Kong. He is an associate editor of IB Review.

CAS CREATIVITY, ACTIVITY, SERVICE

Rainforest reconstruction project

Singapore Botanic Gardens

Jasmine Heber Percy explains how she set up a project in her school that cares for endangered plant seedlings

I joined forces with the Singapore Botanic Gardens before my IB programme had even begun, and this is where CAS started for me. I learned how to properly care for endangered seedlings of plants native to the region.

There is a huge number of different species of flora in southeast Asia, but the majority are classed as endangered due to the devastating rate of deforestation. This encouraged my desire to set up and develop a space at my school (Tanglin Trust School, TTS) where these seedlings could be transferred from the Botanic Gardens to our own plant nursery as part of a rainforest reconstruction project.

Seeds of an idea

It all began with a Global Issues Network (GIN) conference I attended in 2015, which involved a handful of students who were interested in issues of global significance. These conferences involve representatives from different international schools coming together to plan actions that could be implemented in our own schools. Coming away from this experience, I was keen to investigate the rainforest reconstruction projects that a few of the schools were already carrying out. Little did I know at the time that this was to be the start of my CAS project.

We often read about countless problems and impacts, and how we humans are destroying the planet. Unfortunately, we rarely seem to be presented with solutions or ways in which we can change our actions for the better. Yet we are often reminded that we are 'the generation that can make a difference'.

The rainforest reconstruction project allows schools in Singapore to work in conjunction with the country's Botanic Gardens (a UNESCO World Heritage site) in order to actively help the rainforests in this part of the world. During my time volunteering in the plant nursery it became apparent that involvement from organisations outside of the Botanic Gardens was crucial. The lack of space is a major issue for this small country, so people taking on a few seedlings, even caring for them in their homes, makes a huge difference.

Starting from zero

The first step was to get in touch with the GIN host school's environmental systems and societies teachers to learn more about how they went about setting the project up within their school. I was given the details of the botanists they were working with, and things moved rapidly from there. Within a couple days I had met with the botanists and suggested TTS could get involved. This idea was initially just a passion and personal initiative of one of the committed botanists, so the conservational education and training started there and then.

I volunteered in the plant nursery with a couple of friends, learning about the plants and how to care for them properly. People have to 'earn' the seedlings, they aren't just handed out to anyone. Commitment and dedication is key and this is earned through devoting time at the nursery. I realised that when it comes to conservation work you can't simply plant a tree and leave it in the hope of it growing naturally. The seedlings are vulnerable and require daily attention. Although this may sound like an

alarming amount of work, the actual reality of the situation is simple: if the plants look healthy, you carry on with what you are doing.

The battle for space

When it came to setting up our own plant nursery on the TTS campus, authorisation proved to be harder to obtain than I had anticipated.

The biggest problem I faced was communication. It was paramount that all parties at the different tiers of authority (operations, teachers, heads of the schools and the CEO) were aware and in support of the project for it to get off the ground. The exchange and correspondence between myself and people both inside and outside of school proved to be quite a challenge. I have come to realise that prior to my CAS project experience, I was blissfully unaware of the sheer scale of planning that needs to go into setting up new initiatives in a school. Although I do believe that what was learnt at the Botanic Gardens was so important that all the admin headaches were worth it.

Space was the second problem that made the rainforest reconstruction project so tricky to launch. The other international schools that I visited in order to see how they had set up their gardens had the luxury of more land to play with. However, the beauty of the early stages is, when it comes to little seedlings, any space will do, you just have to make it work with what you have. Space issues can't be 'solved', so you simply have to get creative and work with what you've got. Collaboration helps to spread the workload when getting projects off the ground and running smoothly, but on the flip side, having to inform everyone can be overly complicated and generates extra unnecessary work that can hinder overall progress.

In the end though, it was extremely satisfying to see 3 years of planning, meetings and presentations of ideas to figures in authority finally come through and become a reality.

Too big?

The next problem that presented itself was what to do with the saplings once the seedlings matured and became small trees. As mentioned before, space is one of the keys to the survival of these plants.

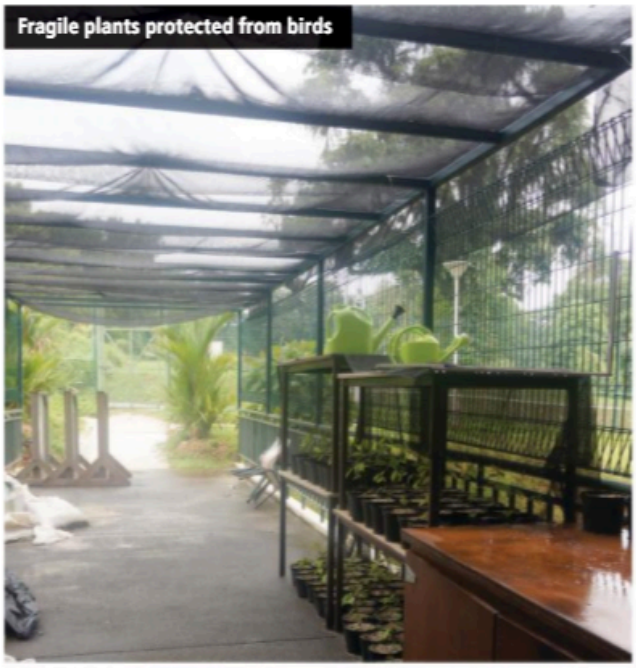
The TTS grounds contain many plants, but most are ornamental. All that is needed is to replace these plants with the trees that really matter. Furthermore, upon introducing these native species back into the area, they in turn attract other forms of beneficial wildlife, diversifying the ecosystem to a greater extent.

However, a concern that arises then is the structural impact these plants have on the school's buildings. Take the *Dipterocarps* for example — their seeds grow into the massive and iconic rainforest trees that people associate with Asia. Following on from negotiations with NParks (Sinapore's national parks board), TTS has permission to replant these trees in the public spaces close to our school once they have grown large enough. The surrounding One-North area is undergoing a transformation into a high-tech hub with a focus on a 'greener' space, so is a perfect area to carry out this work.

Keeping it going

Although there is now a committed team of students working on Tanglin's rainforest reconstruction project, another condition of being supplied with the initial seeds was that the school had to guarantee the

Future generations of forest



Fragile plants protected from birds

Baby trees sprouting

Next

care of them during the holiday periods. Thanks to operations staff, we were able to confirm that the plants would be cared for throughout the year.

At points during the IB course I felt completely out of my depth and overwhelmed by the prospect of juggling all the different requirements of the Diploma. If I were to do this again, I would look at trying to get a few more people involved in my CAS project from the beginning. We were a small team of three originally, and people left and joined the team at different points. This was especially challenging for me, as when you end up being the only person with a full overview of the original project's direction and goals, you find yourself explaining everything to each new individual. Others who joined along the way would only know bits and pieces, as it was never possible for everyone to meet at the same time. If the future teams could remove the barriers I encountered regarding communication, the productivity and efficiency would improve dramatically. This would mean that progress could be made at a faster rate, ultimately saving, growing and reintroducing more plants.

Now that Tanglin's plant nursery is in full swing, I fully appreciate how well organised the Botanic Gardens' nursery is. In terms of productivity and efficiency, TTS has not yet mastered the space, but it is still early days. For example, the Botanic Gardens have designated areas for preparing the materials when mixing the soil for potting seedlings. Small allotments are systematically lined up and positioned to make the job much easier to carry out.

The TTS nursery has much potential. For example, it has an access road, which means that the gardening equipment and materials could be delivered directly to the nursery. However, it is currently fenced off, so instead deliveries are forced through the main gate and the sacks of sand and soil need to be moved by hand.

The plant nursery is located in the reception class (4–5 year olds). One of the original ideas was to get them involved, and as they progressed through the school, the seedlings would grow with them, following them up to sixth form where a planting area for established saplings would be located in the senior zone of the school.

Doing your part

This project was a true test of perseverance. The TTS botanical nursery currently houses 119 saplings of 200 seedlings potted, with only one fatality to date. I have found that the more people are interested in the idea, the more support you receive. This ultimately means that the vision is not only realistic, but far more likely to succeed.

The rainforest reconstruction project also highlights the importance of how you both sell yourself and market the ideas. Impressions are key, as what people value about your work has a significant effect on levels of support and interest. Receiving e-mails from staff and senior students, asking how they might be able to get involved or combine ideas of their own, reminded me that there are always people out there with similar ideas, you just have to find them. When thinking about environmental initiatives like this, people are often afraid of being viewed as 'eco-warriors' and 'conservationists' by their peers. But you don't have to be a hardcore tree hugger, you can be relatively 'normal' and still do your part for the planet.

This experience has been incredibly rewarding and it provided me with skills that are only acquired through the kind of work we experience through CAS, which cannot simply be learnt in a classroom. When it comes to school and academics, life lessons on how to be a better human are not part of the taught curriculum. The rainforest reconstruction project allowed us a rich experience beyond the confines of school, and in my case, I've found what I have learnt from my CAS project to be of far more value than I first thought. If I were to give one piece of advice to someone who is considering setting up such a project it would be this: if you want it to succeed it needs to be easy to maintain and easy for people to participate in.

Jasmine Heber Percy completed her IB Diploma Programme at Tanglin Trust School, Singapore, in July 2017. She is now studying fine art at Falmouth University, UK.

Next

EXTENDED ESSAY EE

Academic honesty in the EE

'Collusion' is the supporting of academic dishonesty by another student

What counts as academic malpractice in IB assessments? Paul Hoang explains

Academic honesty is a code of conduct based on approaching your studies in a manner that is honest, truthful, responsible, fair and respectful. It is a set of guiding principles regarding intellectual property rights, and is a core trait of any academic institution and an expectation of all IB schools.

In contrast, academic dishonesty is any action that results in a student gaining an unfair advantage for a piece of assessed work, such as the extended essay (EE). Examples of academic dishonesty include:

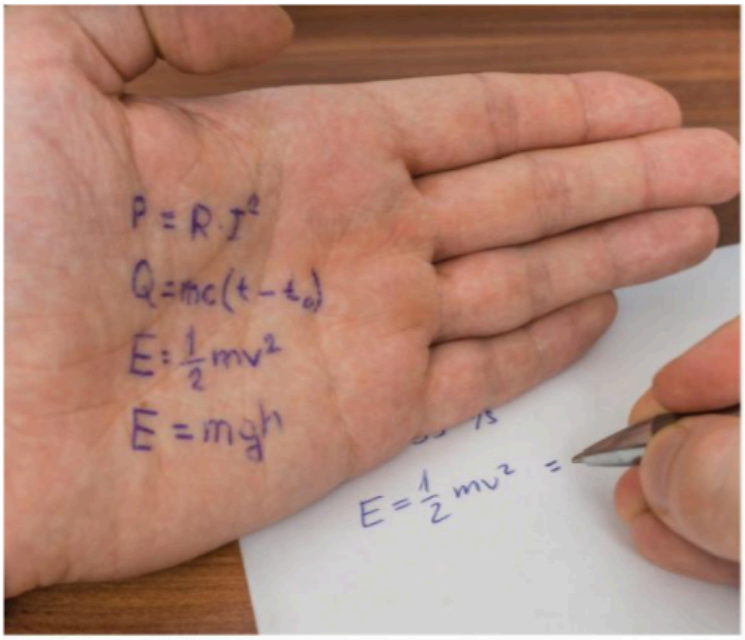
- **Plagiarism**: when students present the words, ideas or opinions of another person as their own. Plagiarism is an infringement of copyrights belonging to others.
- **Collusion**: supporting the academic dishonesty of another student, e.g. a student allows a friend to copy work submitted for formal assessment.
- **Fabrication of research**: falsifying research data, such as interviews or questionnaires. This includes fabricating the use of textbooks or academic journals that have been referred to in the bibliography, and citing sources that don't actually exist. Dishonest construction and presentation of research and data in the EE is academic malpractice. Supervisors will find it difficult to authenticate such essays.

Box 1 Your responsibilities

In completing your EE (or any assessment work), it is vital that you:

- cite and reference your work appropriately
- conduct and present research findings truthfully
- attend all three reflection sessions with your supervisor
- follow all internal deadlines set by your school
- submit a complete draft of the essay, as written feedback cannot be provided if you miss a deadline without prior authorisation from your IB coordinator
- declare the exact word count

- **Double dipping**: when a student duplicates and submits the same work (in part or in entirety) for different components of IB assessment, e.g. extended essays containing work from an internal assessment.
- **Gaining an unfair advantage**: any act that enables a student to gain an unfair advantage is considered academic dishonesty. Examples include using a commercial service provider or any third party to write



the EE on a student's behalf; submitting the work of another person as your own; using another person's ideas, words, images or examples without citation; missing the internal deadline for submitting the first (and only) draft of the EE; under-declaring the word count of the EE.

All schools are profiled for academic honesty and all cases of suspected malpractice are logged by the IBO.

What are the IB rules?

Since May 2016, all extended essays are checked by the IBO for possible collusion and plagiarism, using sophisticated text-matching software. Online tools such as Turnitin can help students and teachers identify potential problems before the final draft is handed in.

Any potential breach of the rules and regulations will be investigated by the IBO. In the case of suspected academic malpractice, the IBO may request a full written report from the school. The IBO will then take up the case, with the Final Award Committee in Cardiff, UK deciding whether to disqualify the candidate, resulting in them not getting a grade for the subject.

Word limits

Academic honesty applies to the word limits for all assessment work, including the 4000-word limit for extended essays. Examiners are instructed not to read beyond the word limit, so a candidate who submits an essay in excess of 4000 words potentially loses marks for all five assessment criteria. For example, if the conclusion appears after the 4000th word, the candidate would lose marks in criterion C (critical thinking) and criterion D (presentation). Any knowledge and understanding (criterion B) shown after the 4000th word would not be read by the examiner. As all extended essays are electronically uploaded, it is easy for examiners to identify where the 4000-word limit has been reached.

Table 1 shows what is included in the word count for the EE. The inappropriate use of footnotes or endnotes should be avoided. Examiners will not entertain any attempts to use footnotes or endnotes to circumvent the word count. Doing so is considered to be academic malpractice.

Deadlines and academic honesty

Your school or college should have a formal deadlines policy. This should be shared with teachers, students and parents. A candidate cannot gain an unfair advantage by missing official school (internal) deadlines. If the assessment work is submitted after the internal deadline, the EE supervisor might not be able to authenticate the work to be entirely the student's own. In cases of suspected academic dishonesty, the essay can be submitted to the IBO as an atypical piece of assessment.

If you need to request an extension for the internal deadline, this must be administered by your school's IB Diploma coordinator, along with all necessary supporting documents. Be aware that the IB rules state that short-term illness is not a valid reason for submitting an incomplete piece of work for assessment (other than for missing an actual IB examination). This is because the extended essay, for example, should have been written over a certain length of time, with sufficient time for the candidate to complete the work. The IB handbook of procedures clearly states that the following situations are deemed to be reasonably within the control of a candidate and are unacceptable reasons for submitting incomplete or late assessment work:

- misreading and/or misunderstanding the deadline for final submission
- oversleeping
- a family holiday (vacation)
- moving house
- participation in a social engagement, such as a graduation ceremony
- participation in a competition, concert, field trip or sporting event
- attendance at an interview

The first submission of the EE should be a complete draft. This is important for academic honesty reasons, as a complete submission enables your supervisor to provide written feedback in a holistic way. It also makes it easier to authenticate the final version of the essay. Drafting and redrafting of the EE is deemed to give candidates an unfair advantage. Supervisors must ensure the fair and transparent treatment of all deadlines so that there is consistency in their approach to academic honesty and internal school deadlines.

Citation and referencing

While collaboration is an important approach to learning for many people, there is a major difference between *collusion* and *collaboration*. During the collaborative process, you share ideas with other learners

Table 1 What's included in the word count?

Included	Not included
Introduction	Contents page
Main body of the essay	Maps, charts, diagrams, annotated illustrations
Conclusion	Data tables
Quotations	Equations, formulae and calculations
Footnotes not used for referencing	Citations and references
Endnotes not used for referencing	Bibliography
	Appendices
	Reflections on planning and progress form

Next

— this is not malpractice. However, collusion is academic malpractice as it is not about preparing or presenting your own work. You should focus on preparing, writing and presenting your individual and personal essay. The ideas of other people should always be referenced.

The EE is an academic piece of work, so you are expected to cite all sources used to write the essay. Although there are no marks explicitly awarded for citation and referencing in the EE, all students are expected to do so for academic honesty reasons. Citation and referencing are vital in providing the examiner with the necessary information to locate your sources, such as a particular publication you used or a person you interviewed as part of your academic research. You must provide a citation when:

- referring to a particular source
- stating the words, opinions, ideas or research of another person
- using a photo, diagram or image created by someone else

However, it is not necessary to provide a citation when you are stating:

- your own opinions or ideas about a particular issue, problem, subject or event
- common knowledge, such as that Paris is the capital city of France

Be warned, however, that even if you use proper citation and referencing, it may still be considered academic malpractice if the essay lacks originality and over-relies on the work of another person. Incorrect referencing is viewed as academic dishonesty.

Conclusion

Academic honesty is aligned with being principled, which is part of the IB learner profile. So make sure you do the morally correct thing when it comes to all aspects of your extended essay, be it the research, the word count, citations and referencing or meeting deadlines. Not only will this avoid unnecessary sanctions, but it will stand you in good stead as a lifelong learner, way beyond your IB years of schooling.

Remember that academic honesty applies to all assessment work, not just the extended essay. Make sure you comply with the same standards and practices for your internal assessments, individual oral commentaries, written assignments, TOK essays and final IB examinations.

Questions and activities

Academic honesty is intertwined with aspects of the IB learner profile. Discuss how the following traits of the IB learner profile are relevant to academic honesty:

- knowledgeable
- thinkers
- inquirers
- communicators
- reflective
- principled

References and resources

'Citation and referencing' (IB Review, Vol. 2, No. 4, pp. 13–15)

'Academic honesty in the IB educational context' (**www.goo.gl/45wFDI**)

'Effective citing and referencing' (**www.goo.gl/YqvYc5**)

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GROUP 1: ENGLISH

Did Trump talk his way to victory?

Adam Oliver uses President Trump's announcement speech to apply the skills needed in analysing the language of political speech

Exam context

Analysing a political speech could form part of a your work within either part 1 or part 2 of the language and literature syllabus. Under part 1: language in cultural context, you might consider, for example, the use of persuasive language in political speeches. Under part 2: language and mass communication, you could look at the potential for political or ideological influence of the media, and might consider diversity of audiences, use of style and register, and bias.

Donald Trump considers global warming to be a total hoax, has suggested that Mexicans coming to America should be shut out by a giant wall, and he was endorsed by right-wing leaders including a former Grand Wizard of the Ku Klux Klan. Such a track record should have finished off any candidate for a political position, yet Trump cleverly harnessed every media moment, using bad press far more frequently than good, to ensure that the entire narrative of the presidential campaign revolved around him. It may have seemed a risky strategy, but as the evidence shows, it was a successful one: he is now the 45th president of the USA.

How did he pull off such a remarkable achievement? What rhetorical tricks of the trade did he use to simultaneously rile the media, dispatch his opponents and woo the voters to such surprising effect? The best answers are provided in the man's own words. A candidate's announcement speech is the first major milestone in an election run, and is particularly revealing because it is the moment which establishes the platform and likely tone of their campaign — Trump's certainly followed that pattern. The entire speech runs to 15 pages, so here are some highlights of content and style that reveal President Trump's seven key techniques for election success.

Humour

The immediate context of the speech was a hall full of die-hard Trump supporters: a friendly crowd, packing the home ground of Trump Tower in New York. Much more important was the wider context of the national stage: this speech represented the electorate's first opportunity to see what the former host of television reality show *The Apprentice* could offer. Trump warmed up with **comprobatio**, the technique of complementing your audience to win their confidence:

> That is some group of people. Thousands… . This is beyond anybody's expectations. There's been no crowd like this.

Immediately he segues from hyperbolic flattery to a humorous attack on his rivals, first through alleging stupidity (which Trump quickly established as a regular technique) — 'some of the candidates… they didn't know the air conditioner didn't work. They sweated like dogs' — then through contrast to his supposedly larger audience: 'They didn't know the room was too big…they didn't have anybody there.' A breezy, informal tone somehow makes it easier for him to brush off his own remarks, and from here it is only a short comic step for Trump to ponder: 'How are they going to beat ISIS? I don't think it's gonna happen.'

Trump's speeches are riddled with fallacies in the precise sense of the word: an incorrect argument in logic. While it is only a joke here, Trump's aside is representative of comments he will later make more seriously. In this case, he deploys a **post hoc** or **correlative fallacy**: because other political leaders can't sort out the air conditioning or pull in a decent crowd, they surely cannot be relied upon to lead the war on terror.

Stoke and stroke

In a common ploy, having warmed up his audience Trump immediately switches mood:

> Our country is in serious trouble. We don't have victories anymore. We used to have victories, but we don't have them. When was the last time anybody saw us beating, let's say, China in a trade deal? They kill us.

Trump excels at stoking the fears of voters, then emotionally stroking audiences to soothe and win them. I mentioned Trump's use of argumentative fallacies above, and here is a second: an appeal to emotion. In this case, that emotion is fear:

> When do we beat Mexico at the border? They're laughing at us, at our stupidity.

Who can we turn to, to save us in our hour of need? Obviously, the answer is staring us in the face: 'I beat China all the time. All the time.' He harnesses the emotions of fear, and the anger that follows,

Trump excels at stoking the fears of voters

with reference to himself as the 'saviour'. He creates unworkable yet symbolic solutions such as the famous wall:

> Build that wall, build that wall. Who's gonna pay? Mexico.

The Mexican treasury secretary was quick to reply:

> I say it emphatically and categorically: Mexico, under no circumstance, is going to pay for the wall that Mr Trump is proposing.

One wonders whether Trump has given any consideration to how he has damaged trade between the USA and Mexico, worth $500 billion annually. Is this stupidity? Not at all. Trump courted controversy because he knew it gained him media airtime at no cost. This was risky, but Trump is arguably the most successful proponent of such a strategy in history. According to the *New York Times*, up to mid March 2016 Trump's 'earned media' amounted to almost $2 billion. This is similar to the total for all the other candidates combined. Much of the coverage was hostile, but those negative elements ensured that almost anything Trump said was considered newsworthy.

Simple lexis

Trump's lexical choices are remarkably simple. He opts for mono- rather than polysyllabic vocabulary wherever possible, which inevitably means he utilises Anglo-Saxon lexis in preference to Latin- or Greek-derived words:

> I am a nice person. I give a lot of money away to charities and other things. I think I'm actually a very nice person.

US newspaper the *Boston Globe* analysed Trump's announcement speech alongside that of all the other candidates, using an algorithm called the Flesch–Kincaid readability test. This measures elements such as number of characters and syllables per word, as well as sentence length and structure.

The test was performed on a transcript rather than a written text, which casts doubt as to where punctuation occurs. Nevertheless, Trump's speech came out bottom of the candidates, with a readability score suitable for 9 and 10 year olds. However, this is no bad thing. As Obama's former scriptwriter Jon Favreau commented:

> A leader's job isn't to educate the public — it's to inspire and persuade them.

By keeping his speech simple and using frequent repetition, Trump ensures that everyone can easily understand his key messages.

Self-referential comments

Trump likes to talk about himself. His pronouncements often come from Trump Tower, Trump Plaza, or aboard the Trump plane. Often these comments are about how wise or intelligent he is compared to everyone else, even when set against whole nations:

> I beat China all the time. All the time.

The predominant lexical items in his announcement speech are proper nouns and pronouns. Their frequent repetition creates simple oppositional relationships: 'I', 'me', 'Trump' against 'he', 'they', 'Mexico', 'China'. It is interesting, and completely in character, that it is his own surname that often forms oppositional pairs with 'Mexico' or 'China', rather than 'America' as we might expect — the campaign is all about Trump.

Even more common are phrases that flaunt his name and his assets. So prevalent are self-referencing (or more accurately, self-aggrandising) remarks about his wealth that we might propose a neologism in Mr Trump's honour: the **swelfie**, a self-referential remark emphasising one's own financial wealth:

> I'm proud of my net worth. I've done an amazing job; I'm really proud of my success. I really am.

Forbes, the US magazine that produces an annual 'rich list' of America's billionaires, suggests Trump's worth is actually $4.5 billion, half what he suggests, but he himself is clear:

> I have a total net worth…it'll be well over $10 billion… . Now I'm not doing that…I'm not doing that to brag, because you know what? I don't have to brag. I don't have to, believe it or not.

Occultatio is when someone says they are not going to tell us all about *x* or *y* — and in not telling us every detail, Trump uses it to perfection in his disclosure of personal wealth.

Big hands

Look at footage of Barack Obama's speeches and you will see that his favoured gesture is what academic Michael Lempert calls the **precision grip**. Obama touches the tip of his forefinger to his thumb, almost as if holding a pencil, when making important points. Experts in the study of gesture within the broader field of paralinguistics have noted that this hand movement, which is pointed, measured and controlled, subtly implies Obama's precise control of the subject.

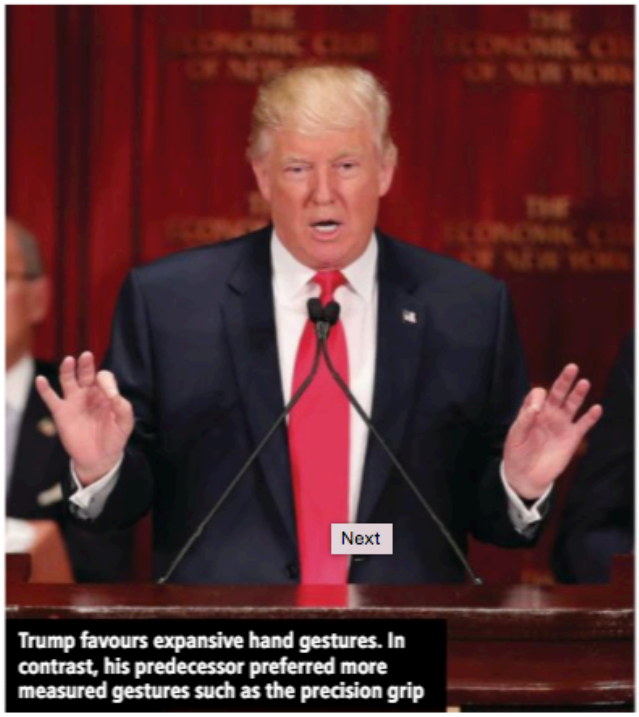
In contrast, Trump is about 'bigness'. Like UK politician Boris Johnson, he has famously big hair — but it is Trump's hands that speak most volubly of size. He commonly makes wide gestures with both hands simultaneously. His 'big hands' expansive gestures perhaps suggest potential, growth and size. In other words, Trump's dominant paralinguistic gesture reinforces the larger-than-life, growth-oriented persona he aims to present.

Make it personal

Another favourite Trump device is to make individual attacks on opponents. These are called **ad hominen** remarks (ad hominem means 'against the man'). During the Republican nominations, Trump labelled his rival Jeb Bush as 'low energy', characterising his rival so effectively that it finished off an already faltering campaign.

As the previous office holder and a member of the opposing Democratic party, Barack Obama was a prime victim of Trump's attacks: 'We have a disaster called the big lie: Obamacare.' Politicians generally are also rubbished:

> politicians are all talk, no action. Nothing's gonna get done. They will not bring us…to the promised land.



Trump favours expansive hand gestures. In contrast, his predecessor preferred more measured gestures such as the precision grip

Powerful slogans were key to Trump's campaign

Two journalists, Jasmine Lee and Kevin Quealy, read every one of Trump's 4,000 tweets from his declaration of candidacy (15 June 2015) up to 4 March 2016. According to the authors, over 300 people, places and things were insulted, while one in eight tweets was an attack on a person (*New York Times*, **www.tinyurl.com/gnodbyv**).

A great slogan

President John F. Kennedy's famous 1961 inaugural soundbite, 'Ask not what your country can do for you, ask what you can do for your country', is surely echoed in Trump's campaign slogan: 'Make America great again.' Trump's alternative alters the second clause's interrogative 'ask what' into the more assertive imperative 'Make', turns the slightly non-specific 'your country' into the proper noun 'America', and replaces the questioning, or generalised 'what you can do for your country' into the compact, direct exhortation: 'Make…great again.'

Trump's slogan is not new. Republican President Ronald Reagan used it in 1980 in the marginally longer form of 'Let's make America great again'. Trump's advisers strengthened his slogan by dropping the superfluous 'Let's'. That subtraction also allows the slogan to start with the command verb 'Make', which is an immediate attention-grabber: when someone gives us an instruction, we tend to pay more attention, whether we like it or not.

This powerful imperative is placed next to the proper noun 'America', itself followed by the emotive adjective 'Great'. Together they suggest the call of duty citizens should feel towards their homeland. In his book *Winning Minds*, political speechwriter Simon Lancaster identifies 'great' as belonging to a group of words so powerful that he calls them **word bombs**. It crops up in some of our most memorable titles for novels (*Great Expectations*, *The Great Gatsby*), is currently the word of choice for summarising success (compare 'superb' or 'fantastic'), and epitomises personal or national excellence ('Great Britain', 'Alexander the Great'). That final, adverbial 'again' intensifies the sense of duty, through its nostalgic implication of a past golden age that has been lost, but which through a vote for Trump might be regained.

IAs and EEs

Analysing the language of political speech can make for interesting internal assessment assignments. Should you be interested in following this idea through, then Trump's inaugural speech, widely available on the internet, would provide excellent material. An extended essay project might investigate Trump's significant speeches, or compare his announcement or inaugural speeches to those of earlier presidents such as Obama or Bush.

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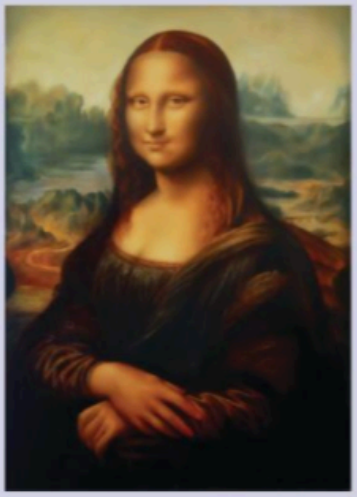
TOK THEORY OF KNOWLEDGE

Not all art is subjective

John Sprague explains the difference between taste and judgement, and looks at the importance of competency

One of my failings as a teacher is in making assumptions about what students think. I also do my darnedest to change their minds. Teachers shouldn't do this, but I'm guilty of both, especially when it comes to TOK analyses of art as an area of knowledge (AOK).

My main assumption when I start teaching art as an AOK is that students naturally think that 'art is subjective', and my main goal is to get them to think that 'art is not necessarily subjective'. It's a small shift, but a significant one.



Taste vs judgement

A helpful point to make early on is the distinction between *taste* and *judgement* in the arts. It is not controversial to say that 'artistic *taste* is subjective' — I like what I like and there is no other fact of the matter. For instance: no matter what you say about da Vinci's technique in the *Mona Lisa*, its historical context, its relation to other works of da Vinci's or other artists or its impact on later works of art, the most I can manage when I see it is…*meh*. Nobody can make me *like* it more, even though I might be able to appreciate it more. I find the crowds paying homage to it in the Louvre far more fun to watch, and the bullet-proof plexiglass covering it far more interesting. In other words, taste is subjective.

Artistic *judgement*, however, is different. The ability to recognise and discuss features of art and those features themselves is not entirely subjective. Whether I like the *Mona Lisa* is subjective, but whether da Vinci's technique is skilled, the extent to which he influenced later artists, and the historical context in which the portrait sits are all part of a set of knowledge claims that are not subjective in the same way that my taste is.

Competency

If you have competency in certain areas then your judgements should be considered more justified. The claims that people who know about the topic make (use of technique, historical context, impact) are the sorts of claims about which there may genuinely be better and worse answers — in other words, they attempt to capture objective facts about the art.

Take Marquis Scott's 2011 YouTube dubstep video (**www.tinyurl.com/42yow7l**, now at over 130 million views). Whether you find that sort of dancing *aesthetically pleasing* (i.e. pleasing to watch), you can certainly agree on certain objective facts about precision, creativity, use of music, talent, skill, practice and commitment demonstrated. These claims are not entirely subjective and we can make them without any appeal to subjective taste.

We can give similar weight to the judgement of art critics when evaluating art. Their competency (gained through education and experience) gives their judgements about the *quality* of the art credibility (not whether you should *like it*) and should be taken as better judgements than mine. In other AOKs this is the same. If I have specialist knowledge of climate science then you should listen to me (even if you don't agree), but if I get my knowledge from Facebook headlines, you shouldn't. There are facts out there, and those competent in the field are the ones best suited to finding them, even in the world of art: Scott is a *good* dancer and you'd be mistaken to think otherwise. Da Vinci was a *good* artist and you'd be mistaken to think otherwise. Whether you like either of them is entirely up to you.

Questions and activities

1 Make a list of all the features of a piece of art that you and another person can agree on but which do not depend on whether you *like* it. Think about skill, technique, emotional impact, historical impact or conceptual meaning. Can these be thought of as more or less objective?

2 Research a work of art (dance, drama, sculpture, poem etc.) and consider the following: what effect does developing your 'artistic competency' have on whether you like the work?

Online archive

For more discussion of artistic competency, see Andy Waldron's article 'What is art?' (IB Review, Vol. 2, No. 4. pp. 31–33).

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