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Compassionate systems approach



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IB mission statement

The International Baccalaureate aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect.

To this end the organization works with schools, governments and international organizations to develop challenging programmes of international education and rigorous assessment.

These programmes encourage students across the world to become active, compassionate and lifelong learners who understand that other people, with their differences, can also be right.



IB learner profile

The aim of all IB programmes is to develop internationally minded people who, recognizing their common humanity and shared guardianship of the planet, help to create a better and more peaceful world.

As IB learners we strive to be:

INQUIRERS

We nurture our curiosity, developing skills for inquiry and research. We know how to learn independently and with others. We learn with enthusiasm and sustain our love of learning throughout life.

KNOWLEDGEABLE

We develop and use conceptual understanding, exploring knowledge across a range of disciplines. We engage with issues and ideas that have local and global significance.

THINKERS

We use critical and creative thinking skills to analyse and take responsible action on complex problems. We exercise initiative in making reasoned, ethical decisions.

COMMUNICATORS

We express ourselves confidently and creatively in more than one language and in many ways. We collaborate effectively, listening carefully to the perspectives of other individuals and groups.

PRINCIPLED

We act with integrity and honesty, with a strong sense of fairness and justice, and with respect for the dignity and rights of people everywhere. We take responsibility for our actions and their consequences.

OPEN-MINDED

We critically appreciate our own cultures and personal histories, as well as the values and traditions of others. We seek and evaluate a range of points of view, and we are willing to grow from the experience.

CARING

We show empathy, compassion and respect. We have a commitment to service, and we act to make a positive difference in the lives of others and in the world around us.

RISK-TAKERS

We approach uncertainty with forethought and determination; we work independently and cooperatively to explore new ideas and innovative strategies. We are resourceful and resilient in the face of challenges and change.

BALANCED

We understand the importance of balancing different aspects of our lives—intellectual, physical, and emotional—to achieve well-being for ourselves and others. We recognize our interdependence with other people and with the world in which we live.

REFLECTIVE

We thoughtfully consider the world and our own ideas and experience. We work to understand our strengths and weaknesses in order to support our learning and personal development.

The IB learner profile represents 10 attributes valued by IB World Schools. We believe these attributes, and others like them, can help individuals and groups become responsible members of local, national and global communities.

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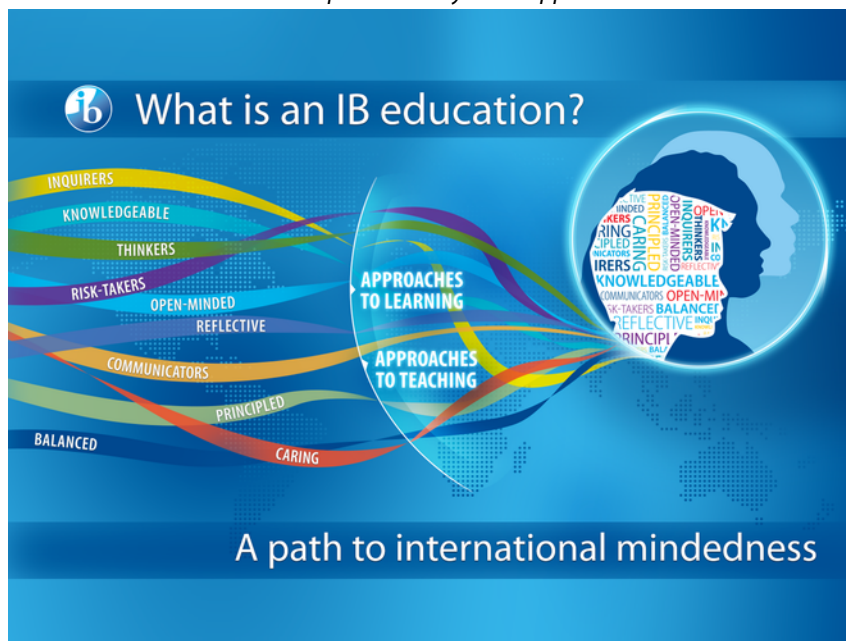
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About compassionate systems

“The compassionate systems thinking approach is essentially the mission of an IB education in action.”

Alexandra Holland, Academic development manager
The Aga Khan Academies

The compassionate systems approach



This resource demonstrates one way to bring together the four key elements of the WIAIBE graphic—the learner profile, international-mindedness, the approaches to learning and the approaches to teaching—into an active learning experience.

In an increasingly uncertain world, where challenges reach beyond borders, there has never been a greater need to cultivate compassion in our understanding and in our actions.

Compassionate systems represent one way to utilize the cognitive and affective aspects of the learner profile and the approaches to learning skills. Social and emotional learning (SEL), combined with an understanding of systems and complexity, can establish a cognitive and affective foundation for “international-mindedness.”

A variety of systems thinking tools, such as the ladder of inference, stock-flow diagrams and systems archetypes, can help reveal how different parts of an IB education relate to the whole and how elements that at first glance are seemingly unrelated actively influence each other.

Integrating SEL thinking can help with the development of an empathetic and emotional understanding of these issues, which is combined with the intellectual understanding provided by complex systems thinking.

In this context compassion is the combination of practical systems thinking with emotional understanding. It is the capacity to exhibit meaningful empathy and caring for people who are impacted by the unintended consequences of human behaviour within larger, interconnected systems.

This resource is divided into three parts.

The development of compassionate systems

This section provides details about the IB's partners and the process of developing the compassionate systems resource, as well as how this resource unites all the elements of an IB education.

Compassionate systems tools

This section provides brief introductions to the tools and strategies that the pilot schools used to explore a compassionate systems approach.

Compassionate systems in practice

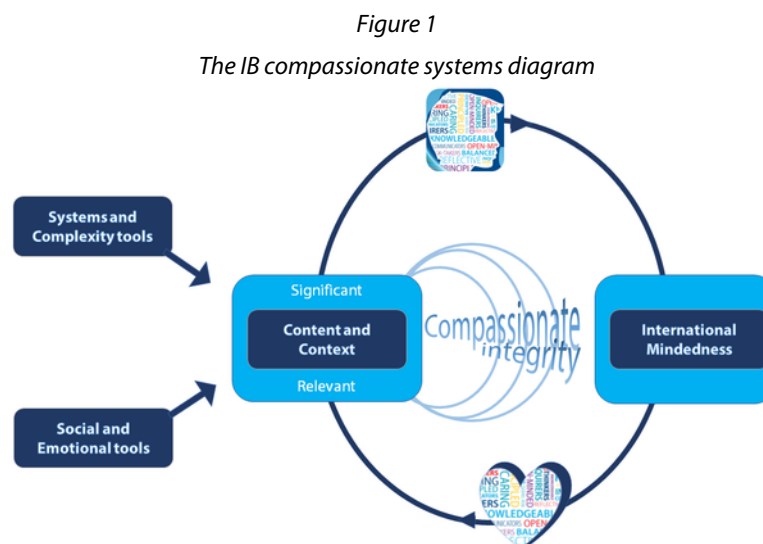
Examples of using the compassionate systems tools in the classroom on concrete exercises are given here. These are initial explorations that can be expanded upon or altered based on school context.

Pedagogical questions

The compassionate systems resource helps to address two key pedagogical questions.

- How do we help young people to develop the capacity to cope with the scale and complexity of today's issues?
- How do we help young people to develop solutions that are both effective and compassionate?

The compassionate systems diagram captures the idea that applying both systems thinking and social and emotional tools enables students to build a deeper understanding and connection to issues of significance and relevance, encouraging solutions that are both effective and compassionate. This approach draws on both cognitive and affective aspects of **all** the learner profile attributes (represented by the head and the heart within the diagram), with emphasis on the intersection between thinking (as it relates to systems and complexity tools) and caring (as it relates to social and emotional tools). The tools themselves are available in the “compassionate systems tools” section of this resource.

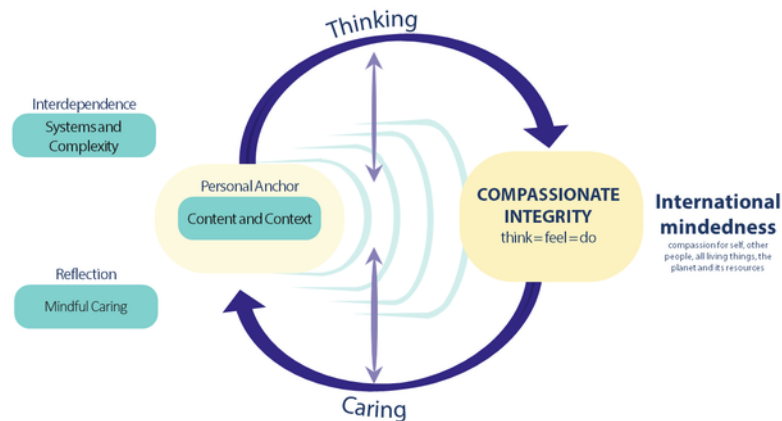


This work shows what can happen when leading experts and the IB community innovate together.

The concept for compassionate systems emerged from a meeting at an IB conference in 2015 where Peter Senge, Mette Boell and IB learning and teaching staff identified the two key questions above. This meeting was followed by a more extensive discussion at Massachusetts Institute of Technology (MIT), which included leading experts in the fields of systems thinking and compassion. This discussion resulted in the initial iteration of the compassionate systems diagram.

Figure 2

The first iteration of the compassionate systems diagram, developed at MIT and later refined for general use within the IB compassionate systems approach



The ideas generated in that meeting, including the compassionate systems diagram, were then presented to a small group of IB educators from schools around the world, including schools from Asia, Africa, the Middle East, Europe and the USA. Educators were trained in the use of a range of systems and social and emotional tools in ways that focus on the development of compassion, then developed initial prototypes for applying the approach.

An IB education centres on learners, develops effective approaches to teaching and learning, works within global contexts and explores significant content. Working together, these four characteristics define an IB education

What is an IB education? 2015

After putting those prototypes into practice, educators from the pilot schools all reported transformational teaching moments that united all the elements of an IB education into powerful learning experiences. Snapshots of some of the experiences of those schools can be found in the “compassionate systems in practice” section of this resource.

Contributors

Thanks to the following thinkers for their work with the IB in generating the ideas that underpin this compassionate systems resource.

- Professor Peter Senge and his team at MIT, working in systems thinking and leadership
- Professor Mark Greenberg and his team at Pennsylvania State University working in social and emotional learning
- Dr Mette Boell visiting research scientist and her team at The Abdul Latif Jameel World Education Lab (J-WEL), MIT
- Garrison Collaboration for Integrative Learning, working in social fields
- The Innovation Academy Charter School, Boston and their associates

Further thanks to the IB World Schools that piloted the compassionate systems approach.

- SEK schools in Qatar and Madrid
- Aga Khan Academy, Mombasa
- International School of Zug and Luzern, Switzerland
- Sha Tin College, Hong Kong

- iLEAD Schools: Santa Cratita Valley International Charter School
- GEMS Wellington Academy—Silicon Oasis, Dubai
- International School of Indiana, USA

Introduction to the tools

This section of the guide provides an introduction to each of the tools that can be used in the classroom by teachers utilising the compassionate systems approach. The tools cover a wide range of activities and can be used with all students of all ages. Programme-specific examples have been given but generally tools can be adapted for use at all stages of the pedagogical process and repeated if and when necessary.

Each compassionate systems thinking tool is designed to help students to understand a complex concept, problem or challenge and apply a compassionate lens to it. The teacher then further focuses on the compassionate elements of the problem through appropriate questioning and by developing a personal anchor within the content being studied. Through this methodology, the schools found that a compassionate thinking “habit” develops in students, leading to a more internationally minded approach to global issues.

The following table lists the tools that have been the most helpful for schools in fostering compassionate systems thinking. Each row contains a link to a description of the tool and how to use it, a downloadable blank version of the tool to use directly in the classroom, and links to associated school stories for real-life examples of the successful implementation of each tool.

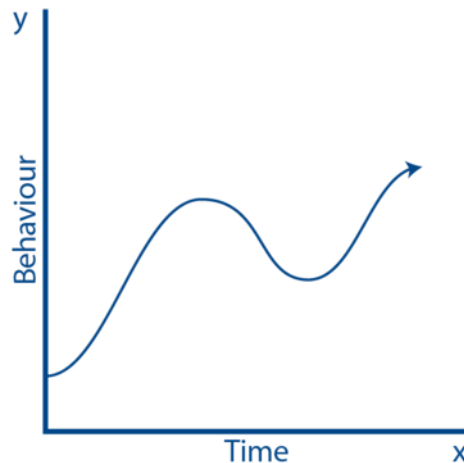
Tool description	Tool template	School stories
Behaviour over time graphs	PDF PNG	International School of Zug and Luzern, Switzerland International School of Indiana, USA
Connection circles	PDF PNG	International School of Zug and Luzern, Switzerland
Ladder of connectedness	PDF PNG	Dubai GEMS Wellington Academy —Silicon Oasis
Stock and flow diagram	PDF PNG	International School of Zug and Luzern, Switzerland Dubai GEMS Wellington Academy —Silicon Oasis
Systems iceberg	PDF PNG	International School of Indiana, USA
Ladder of inference	PDF PNG	Sha Tin College, Hong Kong Dubai GEMS Wellington Academy —Silicon Oasis International School of Indiana, USA
Experiential learning and simulations	Not applicable	International School of Indiana, USA
Check-ins	Not applicable	Sha Tin College, Hong Kong

Approach

The approach is to cultivate the capacity for seeing and sensing the larger system, with all its interdependence and interconnectedness, and all the unintended consequences of human behaviour that we reinforce daily.

The schools found that developing the skills to deal with their own emotional systems helps students to avoid becoming overwhelmed or “emotionally hijacked” by their immediate empathic responses to all the suffering and anxiety that surrounds us. Learners develop a genuine sense of curiosity and openness, the hallmark of a systems thinker, and the cultivated experience of connectedness which is the hallmark of a compassionate systems thinker.

Behaviour over time graphs



Description of the tool

A behaviour over time graph is a graphical representation of how behaviour, feelings or thinking have changed over time. This is not a quantitative measurement of behaviour but rather a personal reflection by the students.

This tool:

- allows students to identify how behaviour, thinking or emotions have changed in response to events
- encourages students to represent and analyse trends in data, thinking or emotions in an informal way
- develops non-verbal communication skills by allowing a graphical representation of a complex situation
- allows students to identify or suggest possible causes for behaviour and change
- charts emergent behaviour.

Developing compassionate thinking and international-mindedness

There are a number of ways this tool encourages the development of compassionate thinking and international-mindedness. The tool:

- enables students to be open-minded through understanding multiple perspectives and contexts that are relevant to a real-life problem
- develops empathy by giving students opportunities to view events from others' perspectives, leading to compassion

- encourages students to reflect on how their own behaviour, thoughts and feelings or those of others can be impacted by events around them
- promotes understanding of multiple perspectives, and feeling of empathy for others leads to a sense of connectedness. Students are then able to think and act compassionately
- allows students to look at trends over time using group behaviour as an influential factor in making informed decisions
- helps students to build leadership capacity by learning how to understand the behavioural pattern of a smaller and bigger community
- enables students to visually track the trends of their own behaviour, the behaviour of their team and at the same time use a comparative behaviour over time chart to juxtapose their behaviour over time to another community from another part of the world
- helps students compare and contrast using critical thinking skills by analysing behaviour.

Programme-specific implementation

For an example, see **Compassionate systems in practice**.

A simple example: Graphing characters' feelings in a narrative and non-quantitative way

By adding events in a story or situation to the x-axis, students can show how a character's feelings have changed over time in response to them.

PYP

Tracking character emotions during a story.

Human migration: together with a simulation this tool can be used to compare the numbers of migrants entering a country and how this is impacted by changes in law and policies.

DP

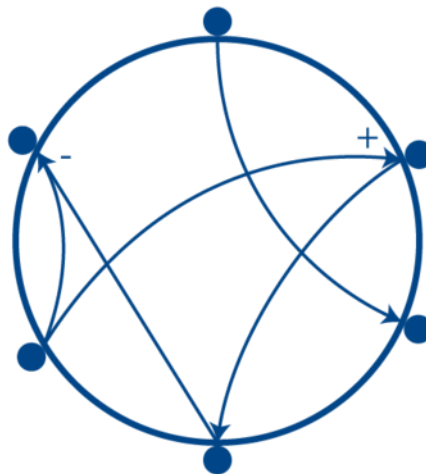
Students can track their feelings/behaviours throughout the extended essay.

CP

Looking locally in Dubai at the problem of litter in the desert; this tool may be used to help develop ideas for service learning.

Students can track their feelings and behaviours throughout the reflective project.

Connection circles



- Influencing factors
- +/- indicates positive or negative influence

Description of the tool

This tool shows connections between different factors or elements of a complex system. The arrows within the circle identify cause-and-effect relationships. This tool can be developed to include feedback loops and other more complex relationships.

This tool:

- allows students to identify and link together a number of factors that are relevant to a question or problem, expanding their awareness of connections within systems
- enables students to understand how making one change can have a widespread and unexpected impact
- supports students to identify causal loops
- allows students to change the factors in their predicted models and gain a deeper understanding of the complex question being asked
- develops non-verbal communication skills by allowing a graphical representation of a complex relationship
- often leads to unexpected links being formed that can identify key factors which influence the entire system.

Developing compassionate thinking and international-mindedness

There are a number of ways this tool encourages the development of compassionate thinking and international-mindedness. The tool:

- enables students to be open-minded through understanding multiple perspectives and contexts that are relevant to a real-life problem
- encourages students to think more critically about the connections and impacts of the many elements
- enables students, through understanding the connections between different elements in a system, to understand why people may make decisions different to their own
- encourages more compassionate thinking about the choices made by understanding the intended and unintended impact of the student's own and others' actions
- helps students to enrich the connections between opinions, experiences and actions
- learn how to become compassionate listeners and team members by using the connection circles diagram
- helps students to map their opinion in the context of what others think, how they act and what they do
- helps students explore their opinions by considering the connections between perspectives, problems and solutions
- helps students to develop and maintain a level of growth mindset, adaptability and agility.

Programme-specific implementation

For an example, see **Compassionate systems in practice**.

A simple example: Exploring interdependence within a biome

Students identify a biome and the different living things within it. Using the circle graphic, they connect the different living things and identify how they affect each other. This can be extended by adding in human actions and environmental factors. Students can experiment with the circle by adding and taking out factors and predicting the impact of this.

Compassionate thinking note: it is important to develop an empathetic link with the organisms within in the biome to develop the compassionate thinking of students.

PYP

Habitats: Caring for animals and protecting their habitats ensures the well-being of human ecosystems.

Human migration: What are the push and pull factors related to human migration and how do these impact the number of migrants coming into and leaving a country?

Explaining why a decision has been made in a classroom situation.

MYP

Water shortages: Looking at how the bed nets used to fight malaria are contributing to a lack of clean and safe water in Tanzania.

DP

Factors that affect equilibrium position and concentration for a system in dynamic equilibrium.

Geography (option F: food and health): Looking at how food availability differs in High Income Countries /Low Income Countries (HIC/LICs).

CP

Looking locally in Dubai at the problem of litter in the desert; this tool may be used to help develop ideas for service learning.

Experiential learning and simulations

Description of the tool

Experiential learning and simulations are examples of learning by first-hand experience or learning by doing. Instructional scenarios are used in which the learner is immersed in an imitation or representation of a real-world system, entity, phenomenon or process. Experience presents a reality within which students interact and develop new skills, new attitudes or new ways of thinking.

This tool:

- engages the students' emotions through the personal nature of experiential learning, as well as enhancing their knowledge and skills
- accelerates learning and improves retention as student engagement increases through the use of these processes
- allows students to develop new skills, new attitudes or new ways of thinking.

Developing compassionate thinking and international-mindedness

There are a number of ways this tool encourages the development of compassionate thinking and international-mindedness. The tool:

- cultivates consideration of the cognitive (systemic) and affective (empathetic) aspects of an issue together
- helps students understand the responsibility of the “successor generation”
- enables students to see experiences in a global context rather than through isolated context constraints
- helps students understand that there is a “world out there” and they are part of that world as meaningful and impactful constituents
- helps students understand and prepare for the inevitable through carefully crafted scenarios and experiences
- takes the learning to a deeper, personal and meaningful level
- helps minimize and eliminate geographical and demographical challenges by helping students establish and maintain close relationships through the experiences
- helps teachers offer experiences that help students learn how to live together “by living together”
- offers students an opportunity for greater immersion and formation of long-lasting relationships and enduring understandings
- gives students an opportunity to build and sustain local, national and global networks for understanding and acting.
- helps students create individual and team perspectives or solutions and learn how to defend these perspectives and solutions through compassion, empathy and critical thinking.

Programme-specific implementation

For an example, see **Compassionate systems in practice**.

PYP

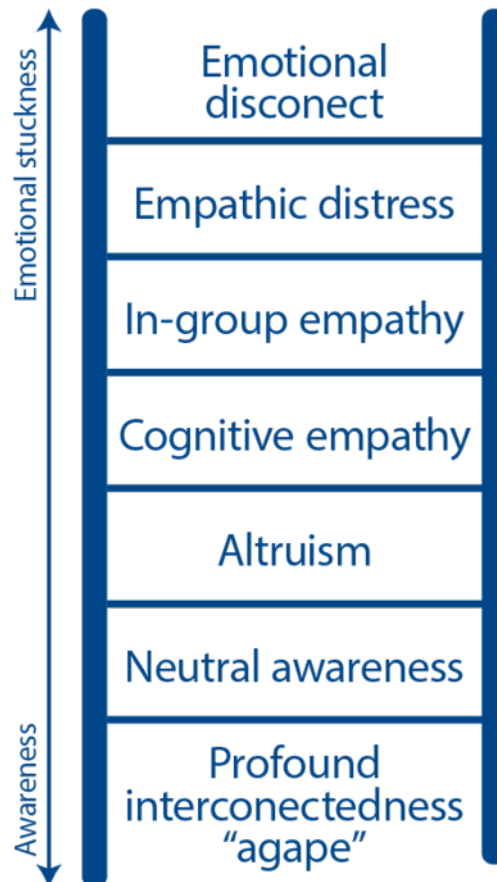
Walk for water

Hunger banquet

Migration dice simulation

Adaptation and survival: Mammoth dice simulation

Ladder of connectedness



Description of the tool

A ladder is used to show that there are many levels of connection. Connectedness is personal understanding, knowing of self and other. This diagram graphically links together the levels of connectedness. Moving down the ladder shows an increase in connectedness.

This tool:

- allows students to identify their own level of connectedness within a context
- encourages the students to examine if they are striving to meet the learner attribute of caring
- unpacks compassion as something that can be developed over time
- develops non-verbal communication skills by allowing a graphical representation of a complex relationship
- expands students' awareness of connections within systems.

The levels of empathy

Emotional disconnect

The individual has disconnected from all other individuals associated with the scenario and is less and less able to demonstrate or show concern. They “objectify” people, no longer relating to others as human beings but as objects and become numb to the issue or scenario.

Example: In a highly stressful incident such as an ongoing war, individuals can become totally disconnected from others and desensitized.

Empathic distress

At this stage an individual becomes overwhelmed by one's own empathy and actively starts to disconnect from the issue and those previously sensed individuals or groups; genuine experiences of care, concern and other positive emotions are replaced by wanting to alleviate one's own distress. Behaviors of concern may still be exhibited but the underlying motivation is to make the others' emotions go away so as alleviate one's own distress.

Example: The first time individuals see images of a disaster, they will be shocked and will most likely display altruistic empathy and positivity towards the affected individuals. The more they view the images the more likely they are to begin to reduce their levels of empathy.

In-group empathy

All individuals are (in the majority of cases) are also members of a range of groups: gender, age range, year level, fans of a sports team and so on. Conversely individuals are also non-members of other groups. This can have a very negative effect on empathy and can start to actively reduce it towards individuals. This starts to erode goodwill.

Example: A supporter of a particular sports team (reds) may feel uneasy if surrounded or outnumbered by a group of competing team supporters (blues). Due to this unease the individual may develop opinions that are negative towards the blues but are not really based in fact. This reduces empathy and the level of positive response.

Cognitive empathy

Cognitive: The process of mental interpretation and the forming of an opinion through perceiving, recognizing, conceiving, judging, reasoning and imagining.

Cognitive empathy: Perspective taking, a developed awareness, often without language simply knowing how the other person feels and what they might be thinking. This kind of empathy can help in a negotiation or in motivating people.

Example: A sports coach uses cognitive empathy with a team through observation and maybe language to measure commitment and develop awareness of individuals and then determines how to motivate them based on this awareness.

Altruistic empathy

Altruistic: Engaging and assisting others with no expectation of any personal benefit.

Empathy: the ability to sense, understand and interpret the feelings of another. The individuals are aware of each other and sense the issues surrounding them positively with a perspective of mutual assistance.

Example: A member of the public who volunteers to help others by offering time or skills free of charge.

Neutral awareness

Being aware of others but not being judgmental in either a positive or negative way. Being in an unbiased state.

Example: A medical first responder approaches all casualties without bias: they are solely there to provide medical attention, they just see a human in need of medical care.

Agape

Greek, unconditional love towards others based on deep understanding that we are all part of a larger whole. Can be expressed as positive and open caring for others with no agenda or focus other than care.

Example: The love for a parent or child.

Developing compassionate thinking and international-mindedness

There are a number of ways this tool encourages the development of compassionate thinking and international-mindedness. The tool:

- starts to give students the opportunity to draw upon elements of the attributes open-mindedness and principled which underpin aspects of compassionate integrity
- enables students to be open-minded through understanding multiple perspectives and contexts that are relevant to a real-life problem. Once open-mindedness has been enabled and students are able to show cognitive empathy, compassionate thinking flourishes, allowing students to move further down the ladder of connectedness
- encourages students to think more critically about their own connections with their global communities
- questions whether humans are compassionate enough to solve or resolve the issue of disease diffusion.
- provides opportunities to develop empathy and think deeply and compassionately about the question being discussed or the problem being studied
- enables students, having looked at a global example, to apply the same concept as a lens to view a local or national issue. Alternatively, this could work the other way around.

Programme-specific implementation

For an example, see **Compassionate systems in practice**.

A simple example: Disease (diffusion and barriers)

Giving students the opportunity to evaluate their concern for others.

Allowing students the opportunity to question whether they are being compassionate on any level towards the global issue of disease.

Allowing students to truly evaluate their own international-mindedness.

PYP

Habitat unit (Grade 2): Students can assess how connected they feel to ecosystem destruction.

MYP

Water shortages: Looking at how the mosquito nets used to fight malaria in Tanzania have contributed to a lack of lack of clean and safe water in Tanzania.

Disease diffusion and barriers: Understanding the problem of disease and how disease in one part of the world relates to us globally.

DP

Geography (option F: food and health): Looking at how food availability differs in HIC/LICs.

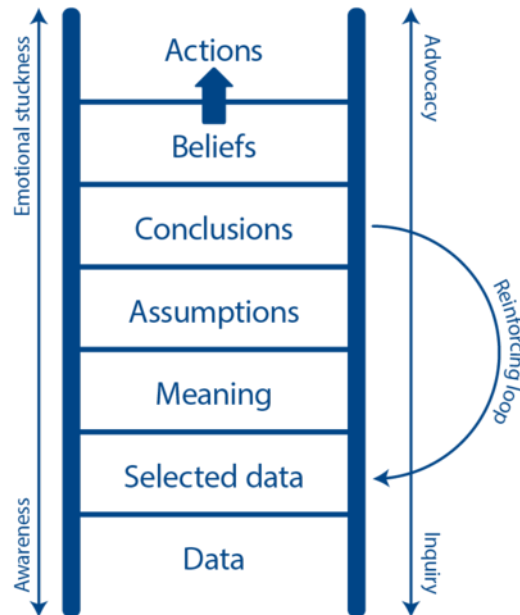
Geography (option F: food and health): Disease (diffusion and barriers), understanding the problem of disease and how disease in one part of the world relates to us globally.

CP

Looking locally in Dubai at the problem of litter in the desert; this tool may be used to help develop ideas for service learning. Do students relate to the problem, does it concern them?

Ideas for the reflective project: Looking at the ethical issue of child labour. Where do they stand on a compassionate level in relation to this issue?

Ladder of inference



Description of the tool

The ladder of inference describes the thinking process that people go through, usually without realizing it, to progress from a fact through to a decision or action. The thinking stages can be seen as steps on a ladder. The tool takes students step by step through how decisions are formed which then lead to actions. Students will reflect on what actual facts they are basing their assumptions on. A popular question will be "Where are you on the ladder?"

This tool:

- highlights how decision-making processes occur and inferences that may be present
- focuses students on being aware of how they form opinions, and questions if what they are responding to is truly valid
- encourages critical and reflective thinking
- leads to challenging conversations where students examine assumptions, what they are based on and what impact they can have.

Developing compassionate thinking and international-mindedness

There are a number of ways this tool encourages the development of compassionate thinking and international-mindedness. The tool:

- increases awareness of how decisions are formed and what impact this can have on others in local and global contexts. This encourages balanced and reflective views alongside awareness of principled actions
- develops an increased understanding in students of the need for appropriate data, in context, for them to be able to develop an informed opinion
- encourages dialectic discussion and thinking
- prompts students to understand and practise the feelings of “being in someone else's shoes” before making decisions or forming judgment
- offers students a chance to participate in a well-rounded process for exploring and understanding perspectives, stances, circumstances and behaviours
- guides students in applying a rich context for gathering and analysing facts and knowledge
- challenges students on widely held opinions in an international context and, in conjunction with other tools (systems iceberg, for example), can highlight bias and encourage them to be genuinely knowledgeable.

Programme-specific implementation

For an example, see **Compassionate systems in practice**.

A simple example: Making assumptions

Working in groups of three, students are asked to silently answer questions about the other group members, making assumptions on minimal prior knowledge.

Assumptions to the questions are written down, then each student states what their answer was and why they thought this was the case.

All students respond with their actual answers.

What percentage of assumptions were correct? Why was this the case? Why are assumptions potentially dangerous? What data are students basing decisions on?

PYP

Food/hunger: Why are people suffering from food shortages? Are members of the local community struggling to obtain enough food?

Water: Gallery picture walk around the world to explore assumptions about which community has access to clean water.

Human migration: What initial awareness and assumptions do students have in relation to migrants? Once appropriate data is considered how do student assumptions evolve?

Beliefs: How do your own experiences affect the judgments you make on others?

Reading: Why did this character act in the way that they did? Where are they on the ladder of inference?

Conflict resolution: Students use the ladder of inference to examine their own and others' actions.

MYP

Individuals and societies: Students make assumptions on the high numbers of deaths still evident as a result of malaria in Tanzania.

DP

English literature: Character analysis. Examining character feelings and actions.

CP

Introduction to the reflective project: Students are exposed to the ethical issues surrounding the implementation of bed nets. Students are asked to make assumptions on the aid given and the outcome experienced in Tanzania.

Stock and flow



Description of the tool

A stock is something that can accumulate or can be used up. A flow is something which makes the quantity of a stock increase or reduce. This diagram links together the stock and the flows and allows students to predict and understand the effects of changes to the stock. Stock can be tangible (a physical item, such as water) or intangible (such as time or empathy).

The tool:

- allows students to identify and link together a number of factors that are relevant to a question or problem
- encourages “big picture thinking”
- allows students to change the flows in their predicted models and gain a deeper understanding of the complex question being asked
- develops non-verbal communication skills by allowing a graphical representation of a complex relationship
- expands students’ awareness of connections within systems.

Developing compassionate thinking and international-mindedness

There are a number of ways this tool encourages the development of compassionate thinking and international-mindedness. The tool:

- encourages students to think more critically about the connections and impacts of the many flows into and out of a system
- allows students to be open-minded and to think about and take into consideration other opinions, feelings, perspectives, predicaments and conditions before understanding a situation and making a conclusion
- prepares students to value others and make informed decisions
- provides opportunities to develop empathy and think deeply and compassionately about the question being discussed or the problem being studied
- enables students, having looked at a simple local example of stock and flow, to apply the same concept as a lens to view multiple international issues.

Programme-specific implementation

For an example, see **Compassionate systems in practice**.

A simple example: The water system

Water as a natural resource can be depleted, preserved or increased.

What creates inflow? Rain or transported water.

Water can be positively accumulated by storage (reservoir) or negatively by flooding.

What causes outflow? Usage (personal, industry), leakage, evaporation.

Why is a balanced system preferred? Flooding/drought.

Compassionate thinking question: Do all people have the opportunity of a balanced water system?

PYP

Food/hunger: Used to examine hunger and food insecurity (stock). What things can add to hunger (inflow)?

What things can help reduce hunger (outflow)?

Human migration: What are the push and pull factors related to human migration and how do these impact the number of migrants coming into and leaving a country?

MYP

Water shortages: Looking at how the bed nets used to fight malaria are now contributing to a lack of clean and safe water in Tanzania.

DP

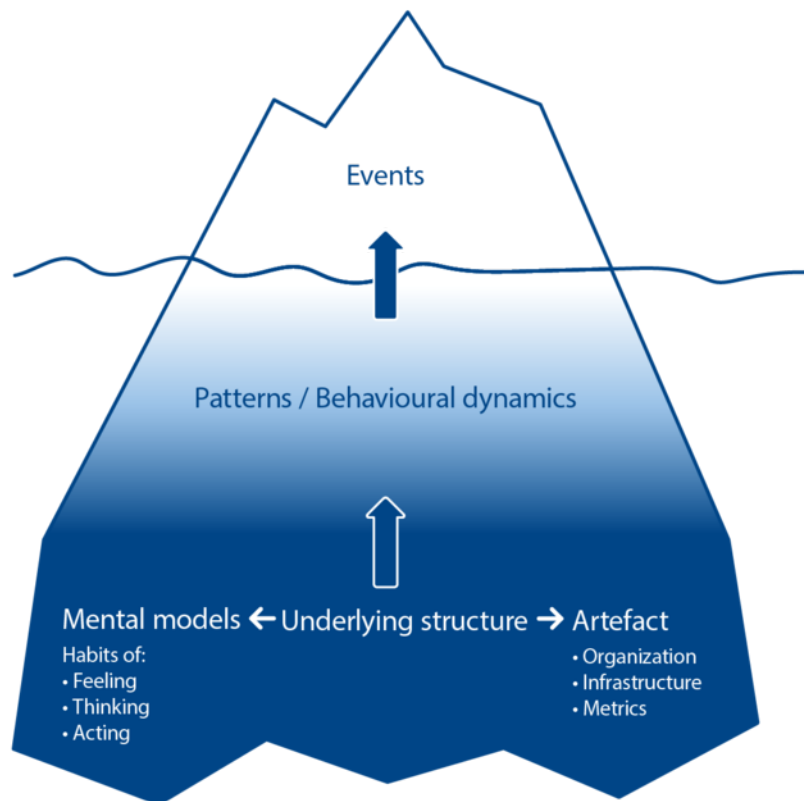
Factors that affect equilibrium position and concentration for a system in dynamic equilibrium.

Geography (option F: food and health): Looking at how food availability differs in HIC/LICs.

CP

Service learning: Looking locally at the problem of litter in the desert; this tool may be used to help develop ideas for service learning.

Systems iceberg



Description of the tool

“Tip of the iceberg” is a popular term that indicates only a very small proportion of the whole issue is displayed, typically only 10%, therefore 90% may be unseen. Students can use the tool to investigate issues that are complex and go significantly beyond or below what is initially visible. Students see how beliefs formed over time at the unseen level lead to the creation of social structures, in turn creating patterns of behaviour. Students will grasp that for change to happen at the seen event level, systemic change is required at the lowest belief or “mental model” stage.

The tool:

- develops students’ ability to go beyond what is visible to gain a deeper awareness of the issue
- highlights and makes visible causation factors
- shows that the overarching beliefs and actions of people within a system leads to events
- helps develop an understanding of where intervention is required to create change at the event level.

Developing compassionate thinking and international-mindedness

There are a number of ways this tool encourages the development of compassionate thinking and international-mindedness. The tool:

- develops an understanding in students that the event has been created by a significant range of other factors, in many cases determined by behaviours and beliefs with, in some cases, significant history. By discussing and thinking about personal beliefs, students become more open to placing themselves at different levels of compassion. (See “Ladder of connectedness”.)
- exposes students to how social and cultural beliefs in an international context can affect the event level.
- develops an understanding in students of how intervention from a compassionate standpoint, without an understanding of the interconnected system or underlying factors, can result in minimal change, very short-term impact or even a negative outcome.
- helps students develop a dialogue between the “iceberg representation” and their team, and develop personal opinions and decisions gaining a greater understanding and depth of the experience.
- allows students to have in-depth experiences of other cultures, belief systems and values as well as an opportunity to understand these systems better by revealing the roots.
- helps students to re-envision their personal perspectives and understanding of self, home and community.

Programme-specific implementation

For an example, see **Compassionate systems in practice**.

A simple example: Water contamination in Tanzania

Key locations in Tanzania suffering from chemically contaminated water and depleted fish stocks; this is the “event level”.

What are the underlying causes? To combat malaria a health organization donated fine mesh anti-mosquito nets that were designed to ward off mosquito attacks. To give additional protection, the nets were also impregnated with an insecticide.

In many cases the nets were used as fishing nets. The insecticide washed off, contaminating water courses.

Compassionate thinking note: When intervening or donating into an environment, why is it important to understand the wider repercussions of a donation?

MYP

Students look at examples of stories affecting developing nations that appear in the media headlines. Using the iceberg tool students understood that it was only the “visible 10%” that had been reported in the media. For example, the drought in Sudan, famine caused by drought, poor water distribution, political mistrust and a range of diverse factors lower down the iceberg. From a compassionate standpoint, how should students watching the news reports react after knowing the full iceberg picture? Consider the ladder of connectedness as well: where are you on the ladder? Why?

Check-ins

Description of the tool

This is a tool which promotes reflection, or “check-ins” with yourself or others. Check-ins usually involve participants considering a question or responding to a prompt about what they are thinking or how they are feeling at a given time.

Check-ins have two rules:

1. Only one person speaks at a time without interruption, giving everyone a turn to speak.
2. All participants actively listen for the duration of the check-in.

There are different types of check-ins including:

- check-in with yourself, where participants may journal or reflect quietly in their head
- small group check-in, where you share in a group of two to four people
- reverse check-in, where participants sit back-to-back and shoulder to shoulder
- Whole group check-in where everyone in the group shares thoughts, often after a check-in with themselves. Participants sit in a circle and then share either by speaking one after another around the circle or in no particular order. This can also be called an opening/closing circle if done at the start or end of a day or session.

Check-ins offer students the opportunity to reflect on their own learning, how they are feeling and become more aware of the feelings of others.

Developing compassionate thinking and international mindedness

There are a number of ways this tool encourages the development of compassionate thinking and international-mindedness. The tool:

- develops self-awareness when participants start sensing into their own feelings. When used with tools like the ladder of inference, ladder of connectedness and the systems iceberg, check-ins can support students to express and identify their own feelings and mental models
- encourages listening to others and helps participants to develop understanding that different people have alternative perspectives. It also helps students to identify similarities and differences between their own feelings and mental models and those of others
- helps students stay connected to others due to the close and personal nature of a check-in and the rule that each person gets a chance to speak uninterrupted. This develops compassion as it can stop the emotional disconnect that can happen if they disagree or find what is being said challenges their own ideas.
- encourages participants to start to understand how their own actions and words impact on the social field and those around them through increased awareness of their own feelings and mental models and those of others.

Programme-specific implementation

For an example, see **Compassionate systems in practice**.

A simple example:

Students come into class in the morning. After some breathing exercises, journaling or a short meditation/mindfulness activity, students consider the questions:

- How are you feeling this morning?
- What has moved you (emotionally)?
- What are your aspirations for the day ahead?

Students then get into groups to share the answers. Teacher asks if any themes are coming through, whether there are similarities or connections between students' own feelings and aspirations and those of others.

Check-ins can be used across all programmes.

They can be used at the start or end of a day or session, or at any time where students or teachers need to reflect, share feelings and thoughts.

Taking the compassionate systems approach further

Schools are busy places and with so many new and ongoing initiatives happening it can often be challenging to introduce another idea or pedagogical approach. This section illustrates some of the ways the pilot schools implemented the compassionate systems tools and approach. It covers the background and context of the individual schools, what tools they used and reflections on successes and failures. Schools also share their recommendations on how to undertake a successful journey in compassionate systems.

The following table lists the schools that have shared their experience in setting up the compassionate systems approach and what their vignette relates to. Each row shows the school which took part and the experience their project focused on.

School name	Project	Programme application	Template of tool utilized
Sha Tin College, Hong Kong	Inspiring global thinking skills	MYP/DP/CP	Ladder of inference
International School of Zug and Luzern	Understanding migration	PYP/MYP/DP/CP	Behaviour over time graphs Connection circles Stock and flow
GEMS Wellington Academy – Silicon Oasis	Service learning versus life skills	DP/CP	Ladder of connectedness Ladder of inference
International School of Indiana	Focusing on UN Sustainable Development Goals	PYP/MYP/DP	Systems iceberg Ladder of inference Behaviour over time graphs
GEMS Wellington Academy – Silicon Oasis	Unforeseen consequences of tackling malaria	MYP/ DP/CP	Stock and flow Systems iceberg Ladder of connectedness

The compassionate systems approach is being discussed in IB Communities. Log on via the programme resource centre to take part in the conversation.