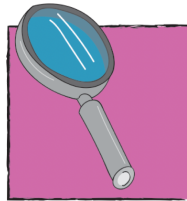




SCHEMA CHART

This resource aims to help learners explore and make visible how ideas develop, get categorised, connected, modified or deleted. In making the thinking process clearer, learners have the chance to develop agility, adaptability and resilience in thinking and processing new, difficult, interesting or confusing ideas, experiences and information.

CLARIFY...



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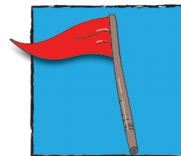
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CONNECTIONS...



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HIT DELETE



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I AM NOW WONDERING...



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SCHEMAS

I first encountered schema charts when reading Debbie Miller's books on teaching reading and meaningful inquiry. As a team, BeConWiz have since gone on to do our own research, testing and development of schema charts and the role they can play in learning.

Introduced by psychologist Frederic Bartlett as a basic concept in learning theory, he suggested that people learn to understand the world as they develop a network of mental structures. Piaget built on this idea and introduced the term 'schema'.

Basically a schema is a set of mental files (structures) that help people organise ideas, build connections using prior knowledge and guide other cognitive processes or ways of thinking.

As people engage with the world and try to make sense of what is happening around them, they organise and categorise ideas. As they encounter new information or experiences they acquire new knowledge that is then connected, re-sorted, organised or modified to develop new schemas or build/modify older schemas.

New schemas are formed when...

- People take new information and connect it to existing (prior knowledge) schemas. This is known as the assimilation of ideas
- People take in new information and it alters existing schemas as ideas are clarified, refined and misconceptions deleted which helps form new schemas.

Schemas

- Influence how and what we pay attention to as we explore the world around us
- Influence how mentally agile and adaptable we are as new information is refined, taken on board and developed
- Help people make sense of the world and interact with the world
- Are connected to conceptual thinking and application
- Influence how ideas, experiences, etc. are interpreted in the meaning-making process
- Can become fixed and rigid, effecting the possibility of new learning and ways of understanding the world
- Need to be revised, revisited and questioned in order to stop an over simplification of thought development and understandings (e.g. stereotypes)

This resource aims to help learners explore and make visible how ideas develop, get categorised, connected, modified or deleted. In making the thinking process clearer, learners have the chance to develop agility, adaptability and resilience in thinking and processing new, difficult, interesting or confusing ideas, experiences and information.

It also enables a learner to 'hit delete' on misconceptions or adapt and refine understandings as new information is connected.

This resource is the result of research and a combination of ideas, understandings and experiences with both adult and younger learners over a number of years.

References

Cherry, K., & Gans, S. (2019). What Role Do Schemas Play in the Learning Process?. Retrieved 25 November 2019, from <https://www.verywellmind.com/what-is-a-schema-2795873>

Katja Michalak. (2019). Schema 1 cognitive. Retrieved 25 November 2019, from <https://www.britannica.com/science/schema-cognitive>

Miller, D. (2008). *Teaching with intention* (1st ed., pp. 68-72). Stenhouse Publishers.

MAKING A SCHEMA CHART

There are 4 possible sizes of the different parts of the schema chart. Teachers and their learners can negotiate on the most effective size and layout for their schema chart. This will depend on if the resource is for whole class, small groups or individual use.

Alternatively instead of continually printing out this resource, print it out once in the size you need and laminate it so it can be reused over and over again.

Some layout ideas include:

- A4 folder
- Larger Poster
- White board prompts
- Power point backgrounds for student presentations

It is important to note that developing a set of ideas (or schemas) is not a linear or cyclical process, rather it is a process of moving back, forward and around different points. As learners get used to the parts of the process and what they have to do they can begin to organise, or create their own tools for making their thinking visible during the development of a schema.

WHAT WE THINK WE KNOW...



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Learners have the chance to document all the ideas and understanding they already have. Bringing forward prior knowledge is really important as it gives all learners an opportunity to contribute. Questions or wonderings may also be added or brought up at this point in the collaborative process. These ideas will be revisited and refined as the process goes on.

CONNECTIONS...



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As learners share prior knowledge some may begin to see connections with others ideas and these should be documented here. More connections will develop or be recognised as misconceptions as the inquiry process continues. So it is important to revisit, develop and refine connections. This will help learners see how schemas or thinking progresses and develops.

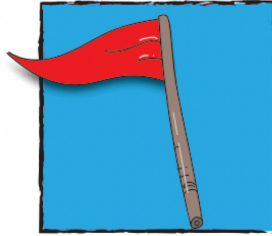
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This area of the schema chart is added to as the inquiry process into the topic develops. Learners add, refine, modify ideas and information as they gather new data, skills, feelings or attitudes. It is important in this phase that the two sections above are revisited so new connections can be made, older ideas can be confirmed or removed into the 'hit delete' box. Questions about the reliability or quality of certain information may be raised here. This information should be moved to the clarify box, so that the research can become more focused as needed.

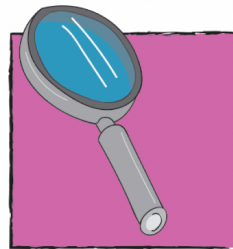
HIT DELETE



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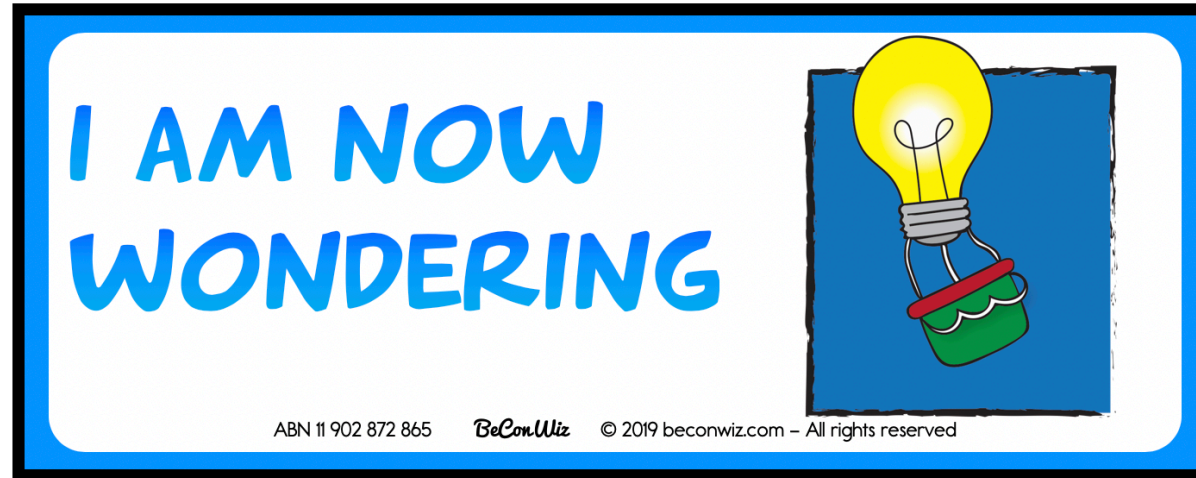
In order to maintain mental agility it is important for learners to see that 'hitting delete' on ideas that don't stand up to scrutiny helps make room for newer, more refined ideas. You can explain that while the misconceptions have been deleted from this file, the proverbial bin is not emptied, as the ideas that don't fit here may be useful somewhere else.

CLARIFY



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Sometimes ideas, information and perspectives may arise that cause tension or need further checking out. This is an important part of the process in helping people make sense and interact with the world. Sometimes learners will begin to see that not all information is black and white, rather there can many takes on the same idea or experience depending on various factors.



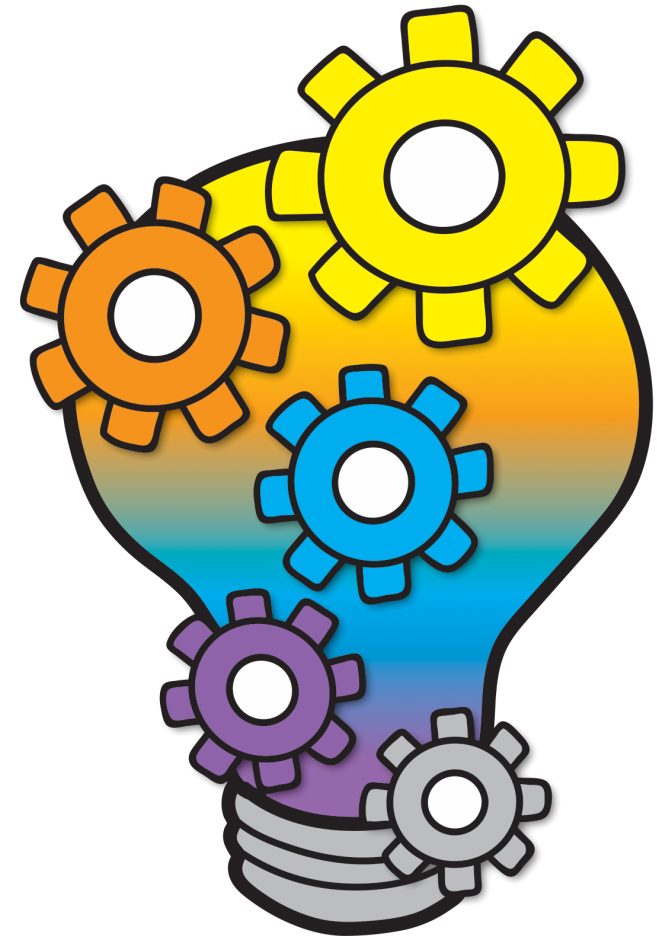
During the whole process learners will bring forward wonderings, questions or thoughts that they want to research further.

Within the limits of a classroom and the teaching/learning time available, there may not always be an opportunity to attend to these important threads of ideas. If your school has compulsory homework policies, you could invite students to use these wonderings as a an individual research project in homework time. They can then present what they discover, giving other learners an opportunity to depth the schema they are developing.

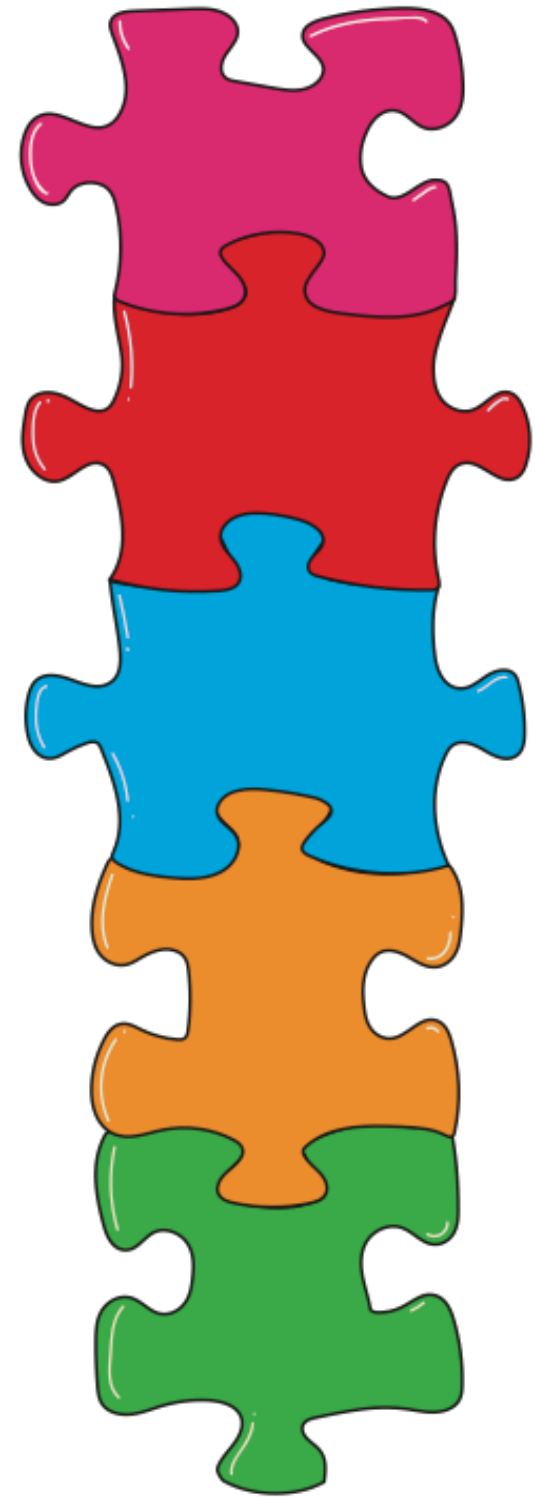
If, however, you are in a school that supports agency and student driven inquiry within a broader framework or transdisciplinary inquiry, these wonderings can be great prompts to refine research. Teachers and students can refine these research projects further by linking them to a guiding concept, question or line of inquiry.



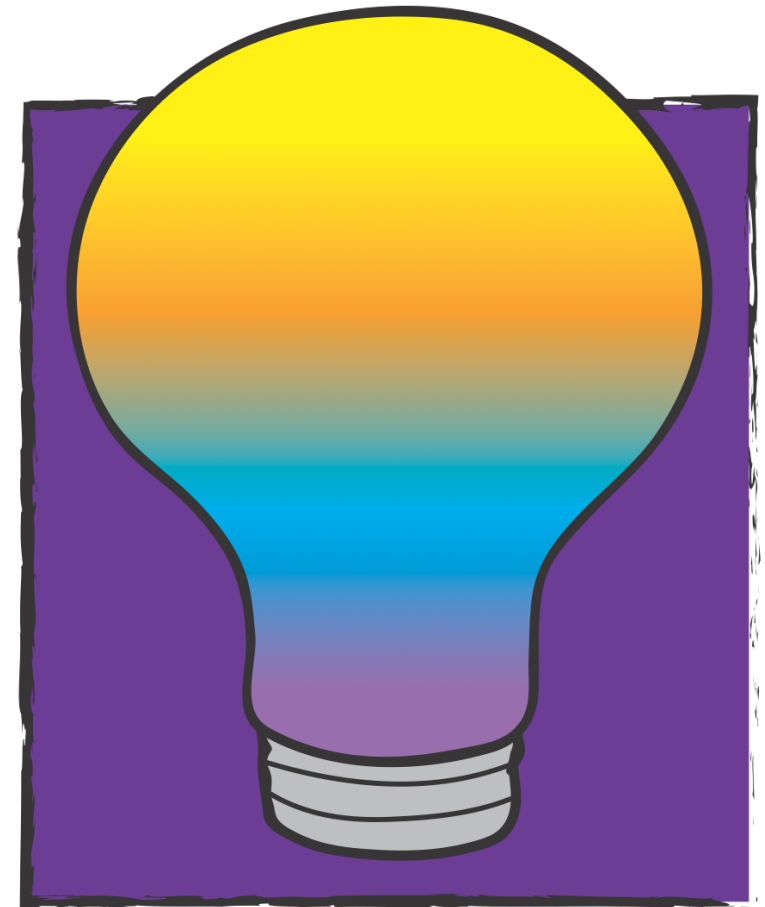
WHAT WE THINK WE KNOW...



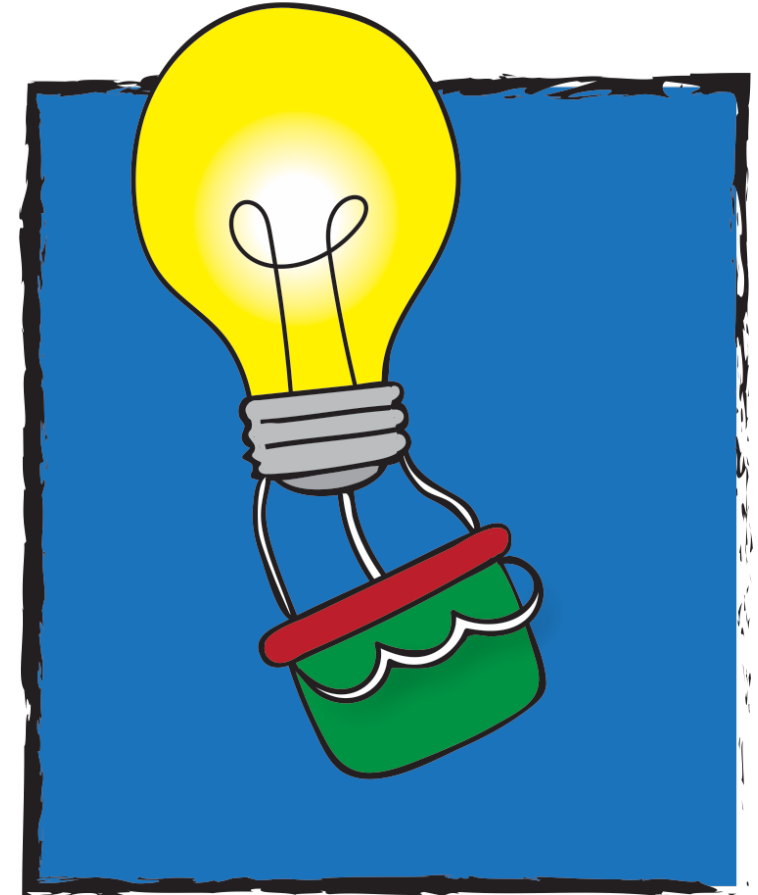
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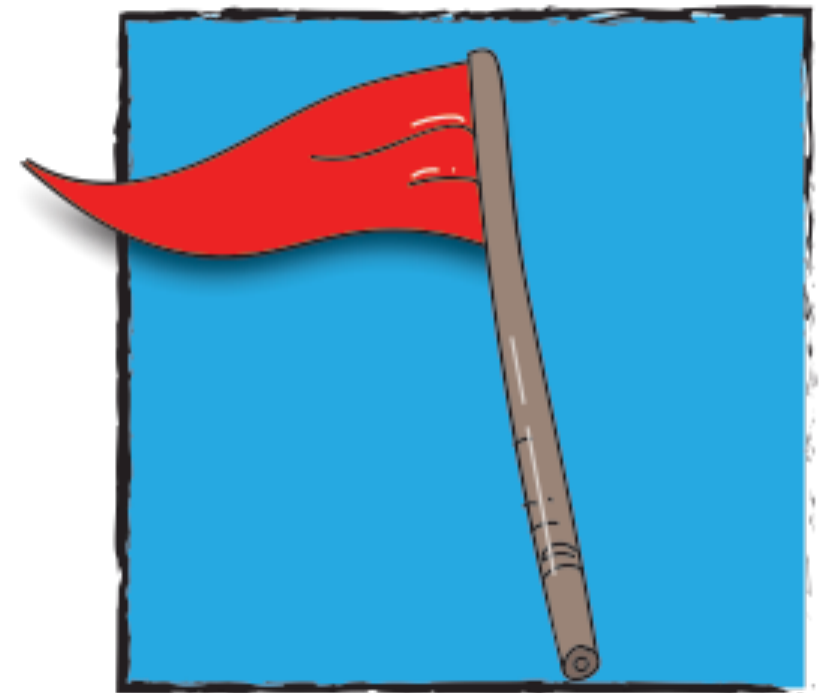
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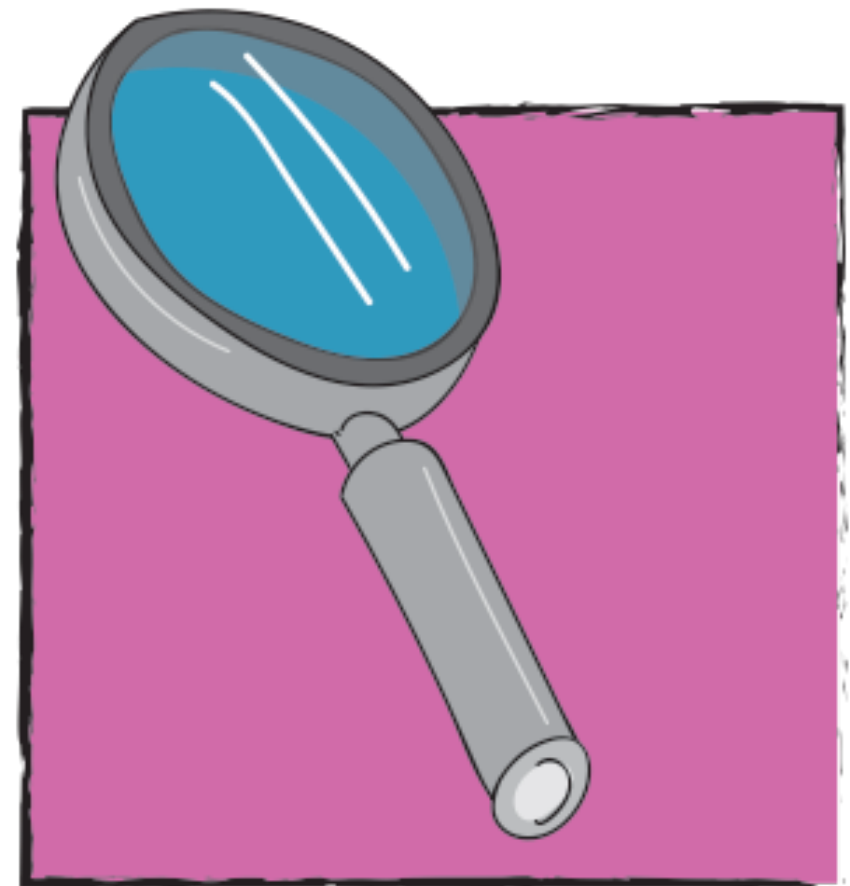
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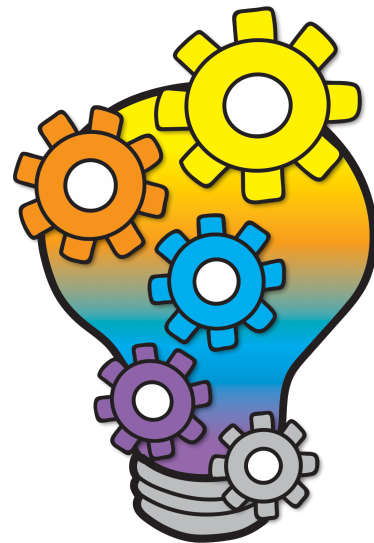
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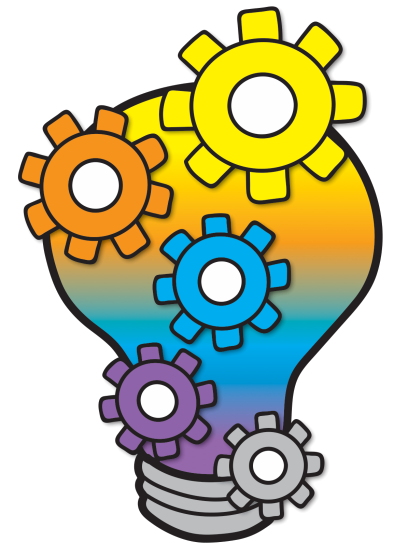
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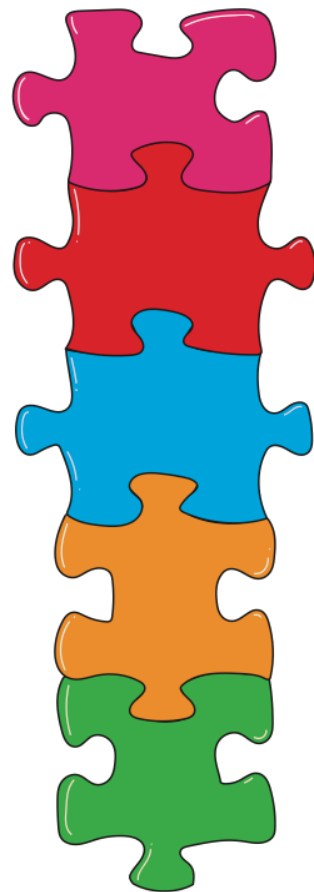
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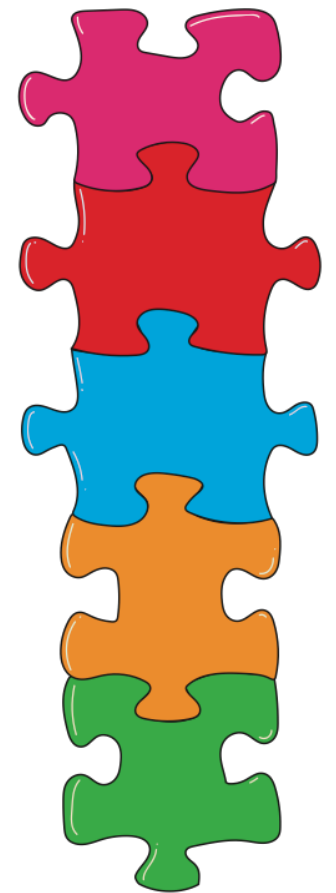
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CONNECTIONS...



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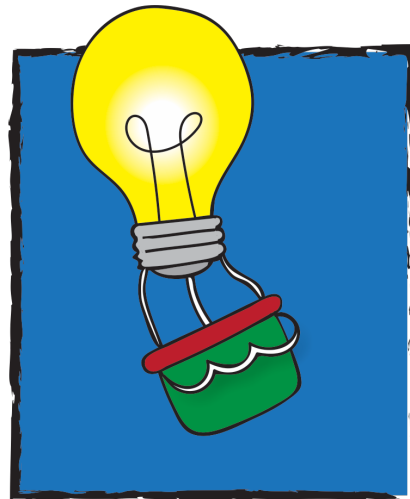
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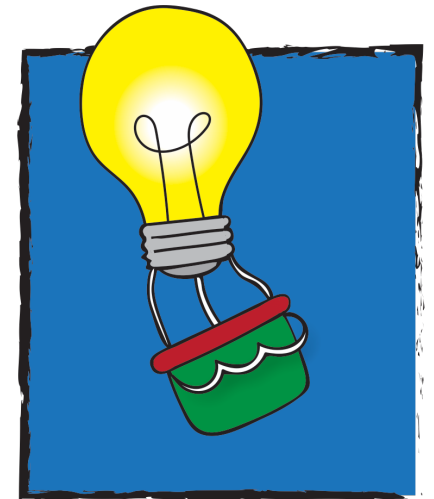
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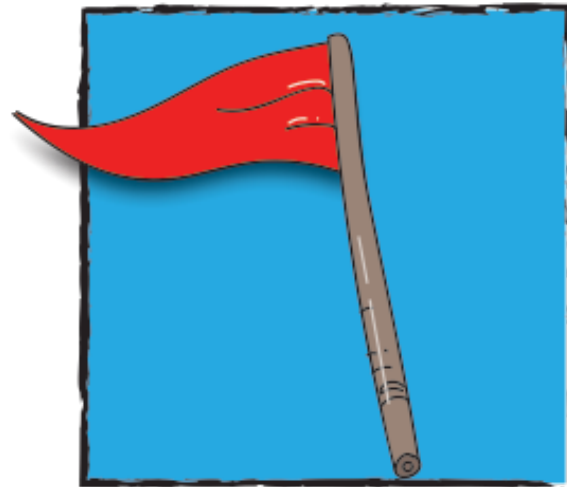
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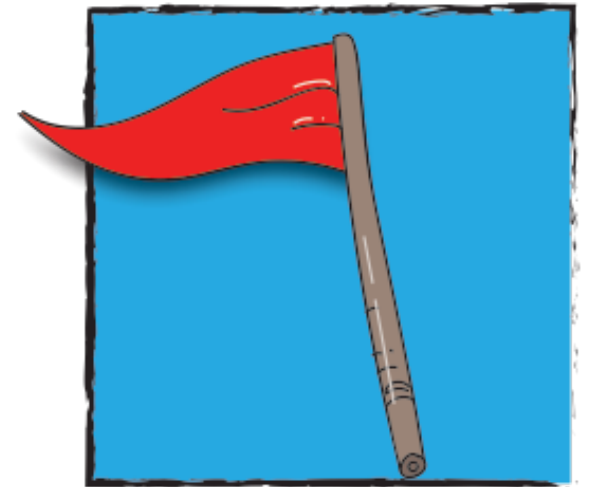
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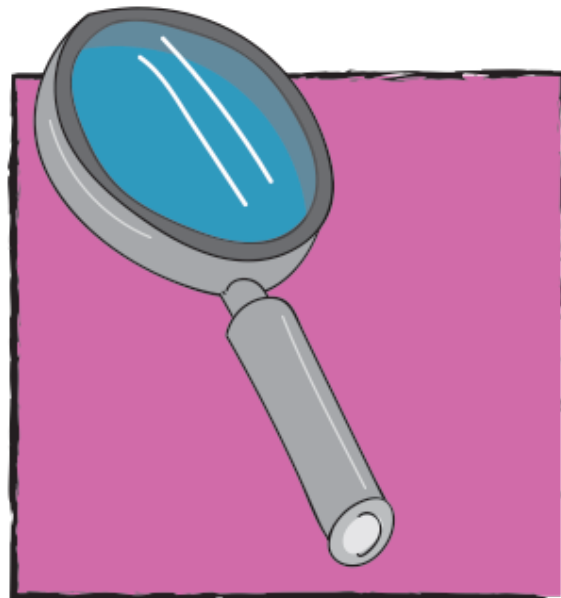
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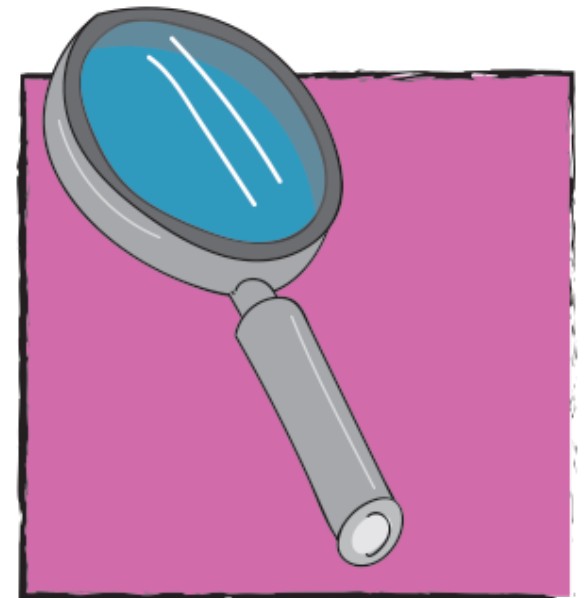
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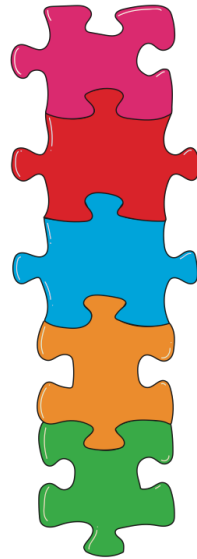
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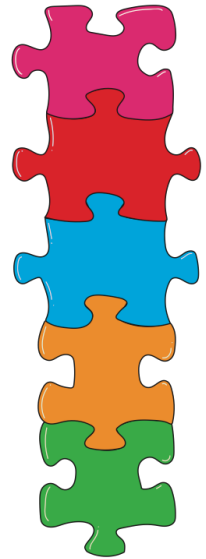
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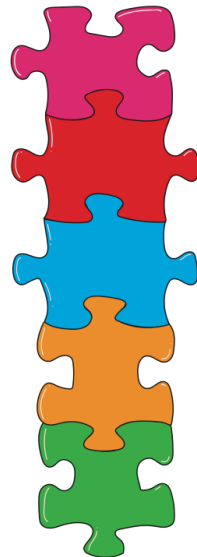
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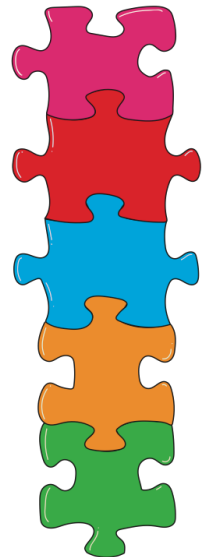
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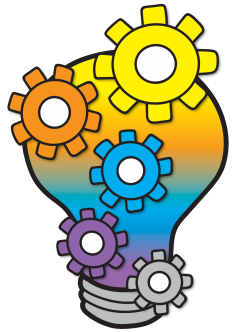
Fast Four: Creating Thinkers

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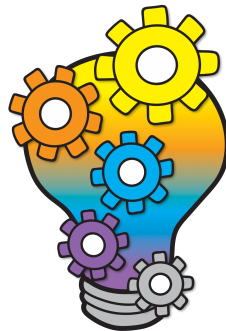
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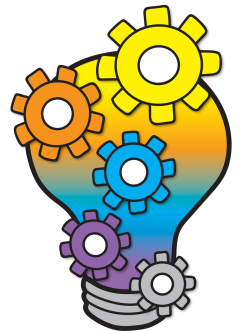
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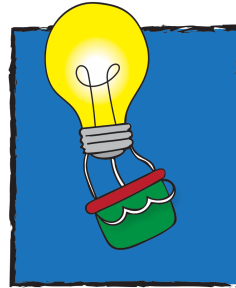
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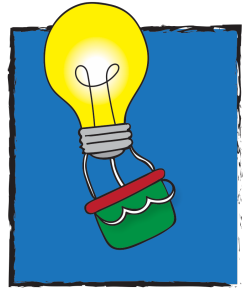
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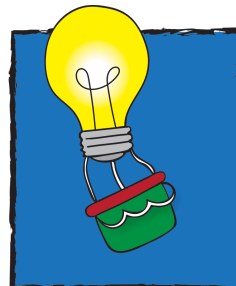
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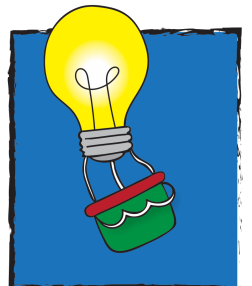
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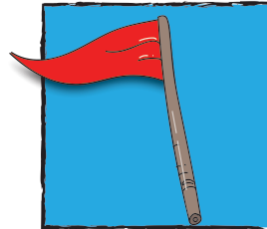
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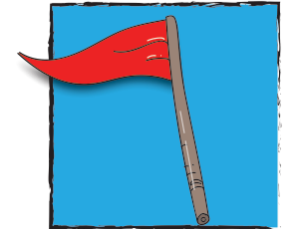
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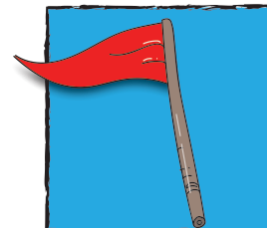
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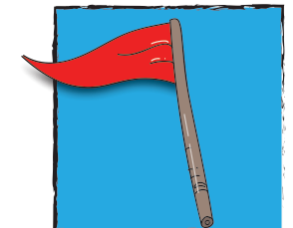
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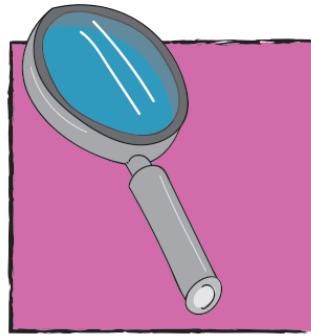
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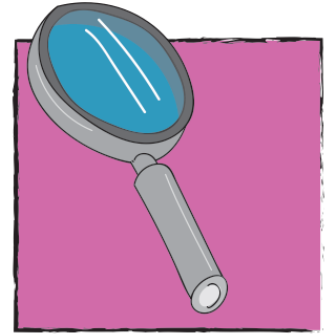


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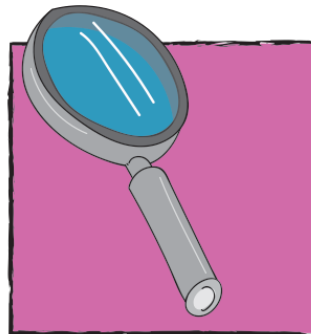
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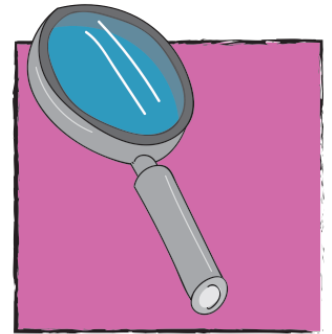
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BeConWiz's commitment to equitable and ethical practices

BeConWiz, will be referred to as BCW in this document.

BCW will now use 'they - themselves' as a singular, gender-neutral pronoun in all material and resources generated. Just as the use of 'he - man' disappeared women's voice and identity, use of the binary 'she - he' and related pronouns has disappeared and rendered voiceless marginalised groups that do not identify with the 'he -she' pronouns. Until some wider grammatical agreement has been reached about what pronouns will be used to embrace the diversity of gender experience, in text we will use 'they - themselves' in our materials. Given that words/language create reality, using language that is acknowledging and inclusive of all people who identify across a wide gender spectrum is an issue of power, politics, respect and visibility. "





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