

# 21ST-CENTURY SKILLS TOOLKIT



basic education Department: Basic Education REPUBLIC OF SOUTH AFRICA In partnership with





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## Teacher Tip

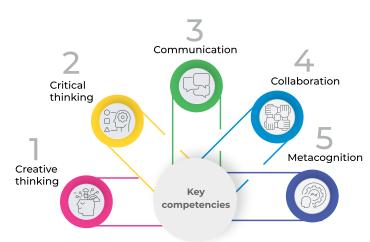
Remember that we have only selected a few 21st-century skills and their sub-21st-century skills!

The Center for Curriculum Redesign (CCR) and the Australian Council for Educational Research (ACER), among many other organisations worldwide, have researched and developed detailed competency assessment rubrics. These frameworks have informed the content of the Project 21st-century skill Rubrics and illustrate just how many skills make up a single 21st-century skill. As an introduction to 21st-century skills, we have purposefully selected a smaller number of sub-21st-century skills to focus on. We made our selections based on the ease of testing and application to the Project. We intend to use these materials as our starting point; to test them and learn from them so that we can develop a fuller picture of 21st-century skills over time.

## INTRODUCTION

Now that you have read A Teacher's Guide to 21st-century skills you should have a good understanding of what 21st-century skills are and why they are so important for our young people to develop.

This 21st-century skill Toolkit has materials that you can use to teach your learners about the specific 21st-century skills that we purposefully selected. This knowledge and understanding will help your learners do better in their Project-based Learning projects.



In this toolkit you will find:

- Definition cards to explain the basic definitions of the 21st-century skills.
- Action cards to help learners develop an understanding of the skill by actively applying it.
- Classroom supplies like printable posters
- Templates for printing cards

All the materials can be made with what you have in your classroom and so you won't need to buy anything expensive to make them. In this toolkit there are instructions for each activity that explain what you need to do before the lesson (preparation) as well as how to present the lesson (presentation). We know how busy you are, so we want to make teaching competencies as easy as possible for you.

## **X** Tool preparation:

At the end of this document you will find a **Templates** section, with printable pages of all the materials. Your learners can help you prepare the definition cards and other materials so that it doesn't take long. Maybe divide the class into groups and give each group a tool to prepare.

Some of the cards are used back to back. You can print the front and back and stick them together, or if you are able to print back to back, the templates are set up to print the correct back onto the front of the cards.

#### Distance Tool presentation:

You only really need to present the definitions of each skill, which will take about 5 minutes per skill. The learners can complete the rest of the activities on their own, without assistance once you have explained how to do them - or they have read the tool preparation instructions. After the cards and tools have been prepared you may want to leave them in envelopes on a "21st-century skill" shelf in your classroom so that the learners can find them easily and use them any time they want to.

At the end of this toolkit there are some **classroom materials** that you can display in your classroom to draw attention to the 21st-century skills. We have included some ideas on how you can use these classroom materials to make competencies fun.

There is also an **example of a register** that you can use for your observations or to make notes of how often the learners practise the different skills.

**CREATIVE THINKING TOOLS** 

### **Tool 1: Creative Thinking Definition Cards**



## Aim:

For learners to develop an understanding of what creative thinking means (by definition) and a few of the skills that make up creative thinking.

#### X Tool preparation:

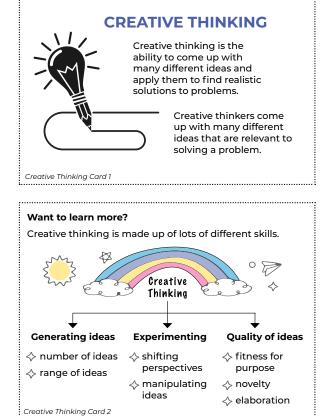
- Print and cut out Card numbers 1-8 from the Templates section of this Toolkit.
- · Laminate them if possible.



#### Tool presentation:

We suggest that this is done in groups of 8 learners, if possible. Otherwise you can present to the whole class at once.

- 1. Start a conversation with the class about 21st Century skills, explaining why they are important.
- 2. Explain that Creative Thinking is one of these skills. Ask the class what they think creative thinking means?
- 3. Lay card 1 out on the floor.
- 4. Explain that creative thinking is made up of lots of different skills. Show card 2 to the class and ask them to try and think about what each skill means or when they may use it.
- 5. Tell the class that we will be focusing on

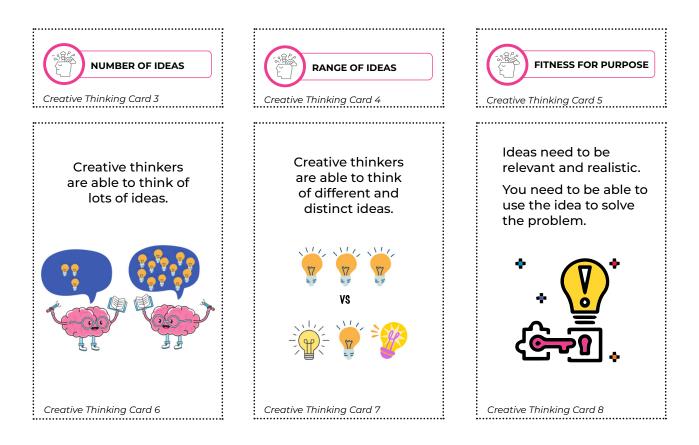


three skills (sub-21st-century skills) of creative thinking:

- Number of ideas (lay down card 3),
- Range of ideas (lay down card 4) and
- Fitness for purpose (lay down card 5).



- 6. Place the three definitions (cards 6-8) **upside down** in random order below the heading cards.
- 7. Ask one learner to turn one of the upside-down cards over, and read it.
- 8. Ask the group which heading they think it belongs to. Place the card under the correct heading. Repeat this for the other two upside-down cards.
- 9. See the answer below to check if the cards have been matched correctly.



- Learners play the "Name, Place, Animal, Thing (NPAT)" game.
- Learners use the "Fitness for purpose" cards.
- Learners practise on their own with matching the skill name to the definition.
- Learners work on the Creative Thinking page in their 21st-century skill journals.

## 🔂 Aim:

To encourage learners to come up with as many different ideas as possible in a short time.

#### X Tool preparation:

- Write the alphabet on the board or use the alphabet (card 9) from the Templates section of this Toolkit.
- · Laminate the alphabet card if possible.
- Find a timer/stopwatch that can time 30 seconds.
- Optional: Printouts of card 10 for each learner if you want them to play on their own in small groups (card 10).

#### Tool presentation:

- 1. Ask the learners to draw 4 lines down their page (creating 5 columns).
- Tell them to write "Name" at the top of the first column, "Place" at the top of the second column, "Animal" at the top of the third column, "Thing" at the top of the fourth column and "Points" at the top of the fifth column.
- 3. Close your eyes an randomly choose one letter of the alphabet, for example "B".
- 4. Explain the rules of the game to the learners:

Come up with as many different words as possible that start with the letter "B" for each category. For example, different names starting with "B"; different places starting with "B", etc.

For every word learners write that is unique to them, they get 10 points. For every word they write that someone else in the class (or in their team) has also written, they get 5 points. (If only Sam writes the name "Betty" she will get 10 points. If Sam and Sizwe both write "Betty", they will each get only 5 points each).

Learners have 30 seconds to come up with as many different words as possible.

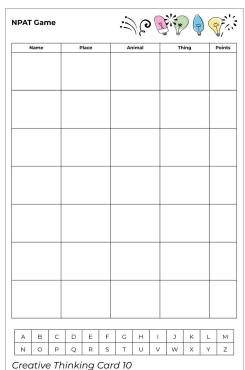
- 5. Tell the learners to start. Time 30 seconds and then tell them to put down their pens/pencils.
- 6. Tally up the marks.
- 7. Cross out "B" on the board/alphabet card and repeat for a different letter. Repeat for as many letters as you like.

#### Options for after the lesson:

• Learners can easily play this game on their own in small groups.



- Piece of paper.
- Pen/pencil.





## 🕀 Aim:

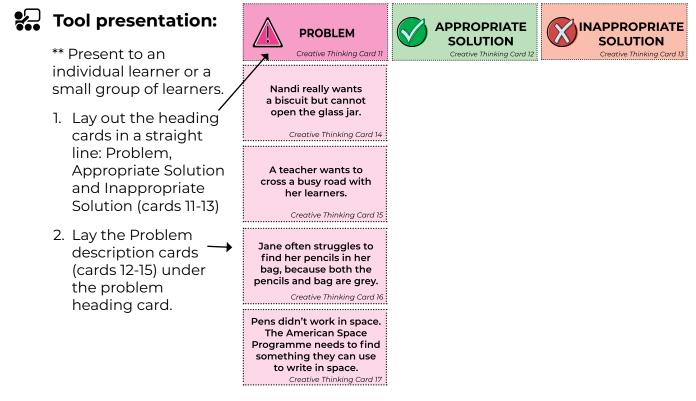
To encourage learners to identify which ideas are suitable as solutions to problems.

eative Think.

Tool 3

#### X Tool preparation:

- Print and cut out cards 11 26 from the Templates section of this Toolkit.
- Print out the answer sheet from the Templates section if you need to (card 26).
- Laminate them if possible.



- 3. Shuffle the solution cards (cards 16 -23), mixing the appropriate and inappropriate solutions together. Place them upside down in a pile on the side.
- 4. Ask the learner to pick up a card and read it.
- 5. Ask them which problem they think it is a possible solution to.
- 6. Ask the learner whether they think it would be a good solution (appropriate) or a bad solution (inappropriate), and then to place it under the "Appropriate Solution" or "Inappropriate Solution" heading, in line with the problem it is solving.
- 7. Ask the learner to repeat the process for the rest of the cards.
- 8. Learners can complete this alone or in a small group and check their solutions against the answer sheet (card 26). See next page for answers.

- 1. Learners can easily complete this activity on their own in small groups.
- 2. Learners can create their own problems and solutions, giving the problems to another group to try and solve.

PROBLEM	APPROPRIATE SOLUTION Creative Thinking Card 12	SOLUTION
Nandi really wants a biscuit but cannot open the glass jar.	Ask her mom to help her open the jar.	Throw the jar on the floor so that the glass breaks and she can get a biscuit.
Creative Thinking Card 14	Creative Thinking Card 18	A12       SOLUTION         Creative Thinking Card 13         Throw the jar on the floor so that the glass breaks and she can get a biscuit.         Creative Thinking Card 19         Build a bridge over the road so that they can cross safely.         Creative Thinking Card 21         Jane must carry her pencils in her hand so she does not lose them.         Zo         Creative Thinking Card 23         Spend lots of money designing a new type of pen that would work.
A teacher wants to cross a busy road with her learners.	Get someone to stand in the road and signal for the cars to stop.	road so that they can
Creative Thinking Card 15	Creative Thinking Card 20	Creative Thinking Carc
Jane often struggles to find her pencils in her bag, because both the pencils and bag are grey.	Stick a red sticker on her pencils that allows her to notice them more easily.	pencils in her hand so sh
Creative Thinking Card 16	Creative Thinking Card 22	Creative Thinking Card
Pens didn't work in space. The American Space Programme needs to find something they can use	Use a pencil.	designing a new type of
to write in space. Creative Thinking Card 17	Creative Thinking Card 24	Creative Thinking Card

**CRITICAL THINKING TOOLS** 

### **Tool 4: Critical Thinking Definitions**



### 🔂 Aim:

For learners to develop an understanding of what critical thinking means (by definition) and a few of the skills that make up critical thinking.

#### **X** Tool preparation:

- Print and cut out card numbers 27-35 from the Templates section of this Toolkit.
- Laminate them if possible.

#### Tool presentation:

\*\* We suggest that this is done in groups of 8 learners, if possible. Otherwise you can present to the whole class at once.

1. Ask the learners if they remember what 21st Century skills are and why they are important.



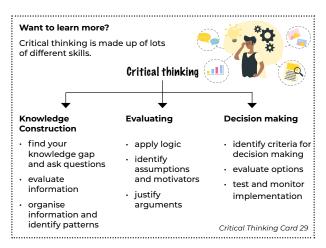
- 2. Explain that like Creative Thinking, Critical Thinking is another one of these skills. Ask the class what they think critical thinking means? Lay card 27 out on the floor.
- 3. Lay card 28 on the floor and explain that critical thinkers often follow a process:

When a critical thinker finds out about a problem, they want to try and find a solution for it. So they start investigating information on the topic. Not all the information they find will be helpful and so they select only the helpful information. Assessing information to find helpful information is called "discrimination". They then use the helpful information to design a solution to the problem. Once they have the solution, they apply it and monitor/check up to see if it is working.

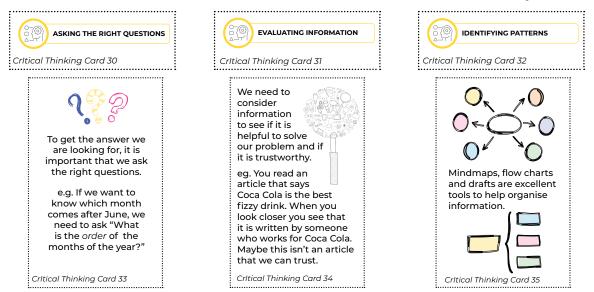


Alternatively, you could cut out the individual steps on card 27 and ask learners to put them in the correct sequence.

4. Your learners will soon see that critical thinking is made up of lots of different skills. Show card 29 to the class and ask them to try and think about what each skill means or when they would use it.



- 5. Tell the class that you will be focusing on three skills (sub-21st-century skills) of critical thinking:
  - Asking the "right" questions (lay down card 30),
  - Evaluating information (lay down card 31) and
  - · Identifying patterns (lay down card 32).
- 6. Place the three definitions (cards 33-35) **upside down** in random order below the heading cards.
- 7. Ask one learner to turn one of the upside-down cards over, and read it.
- 8. Ask the group which heading they think it belongs to. Place the card under the correct heading. Repeat this for the other two upside-down cards.
- 9. See the answer below to check if the cards have been matched correctly.



- 1. Learners work on the "Asking the 'right' questions" activity.
- 2. Learners work on the "Discriminating information" activity.
- 3. Learners work on the "Organising information" activity.
- 4. Learners practise on their own with matching the skill name to the definition.
- 5. Learners work on the Critical Thinking page in their 21st-century skill journals.

## 🔂 Aim:

To encourage learners to identify how they should ask questions.

#### X Tool preparation:

- Print and cut out cards 36 47 from the Templates section of this Toolkit.
- Print out the answer sheet from the Templates section if you need to (card 48).

cal Thing

· Laminate them if possible.



#### Tool presentation:

- \*\* Present to an individual learner or a small group of learners.
- 1. Lay out the heading cards in a straight line: Query, The "right" question, The "wrong" question (cards 36 - 38)
- 2. Lay the Query description cards (cards 39 41) under the Query heading card.
- 3. Shuffle the Right and Wrong question cards (cards 42 47). Place them upside down in a pile on the side.
- 4. Ask the learner to pick up a card and read it.
- 5. Ask them which query it is a possible question for and whether it would be the "right" or "wrong" question to ask, and then to place it under the "Right question" or "Wrong question" heading.
- 7. Ask the learner to repeat the process for the rest of the cards.
- 8. Learners can complete this alone or in a small group and check their solutions against the answer sheet (card 48). See next page for answers.

- 1. Learners can easily complete this activity on their own in small groups.
- 2. This would be a good opportunity to present a lesson on "How to ask questions?". Simply google these words and lots of tools and tips come up. You could share these tips with the learners.

Asking	the	right	question	answer	sheet
--------	-----	-------	----------	--------	-------

QUERY We want to know Critical Thinking Card 36	THE RIGHT QUESTION Critical Thinking Card 37	THE WRONG QUESTION Critical Thinking Card 3			
what time the pizza will be delivered.	What time will the pizza be delivered?	Can you deliver the pizza tonight?			
Critical Thinking Card 39	Critical Thinking Card 42	Critical Thinking Card			
which day comes after Tuesday.	What is the order of the days of the week?	What are the days of the week?			
Critical Thinking Card 40	Critical Thinking Card 43	Critical Thinking Card 4			
when our bicycle will be fixed.	When will my bicycle be ready for collection?	How long will it take you to fix my bicycle?			
Critical Thinking Card 41	Critical Thinking Card 44	Critical Thinking Card 4			



### 🕑 Aim:

To encourage learners to identify which information will help them solve problems by considering bias and relevance.

#### Y Tool preparation:

- Print and cut out cards 48-55 from the Templates section of this Toolkit.
- Stick the Evaluation cards (cards 52 55) onto the back of the matching Information cards (cards 48-51).
- Laminate them if possible.



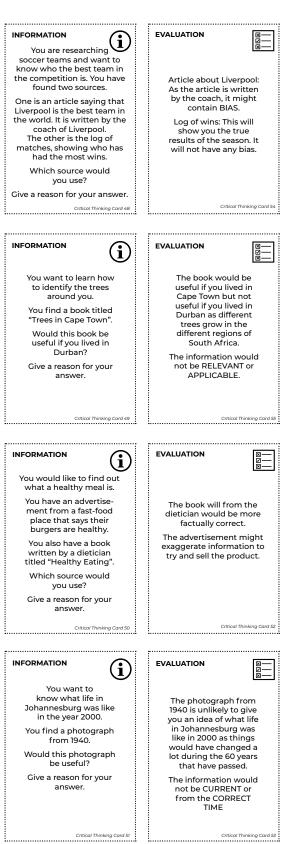
#### Tool presentation:

\*\* Present to an individual learner or a small group of learners.

- 1. Explain that some information that we find may not be trustworthy or useful for our purpose. Ask the learner what might make information untrustworthy. Ask the learner what might make information irrelevant (not relevant).
- 2. Lay the cards in a line on the ground with the Information side facing up.
- 3. Ask the learner to pick up a card and read it.
- 4. Encourage them to answer the questions. Once they have done this, they can turn the card over to read the Evaluation side.
- 5. The learner can repeat the process with the other cards.

#### **Options for after the lesson:**

- 1. Learners can easily complete this activity on their own in small groups.
- 2. Offer the learner different sources (maybe from History textbooks) and ask them to think whether the information is trustworthy and what it might tell us.



itical Think. ó Tool 6

## 🕀 Aim:

To encourage learners to notice which tools organise information the best.

#### X Tool preparation:

- Print and cut out cards 56 61 from the Templates section of this Toolkit.
- Stick the Solution cards (cards 59 -61) onto the back of the Organise It cards (cards 56 - 58).
- Laminate them if possible.

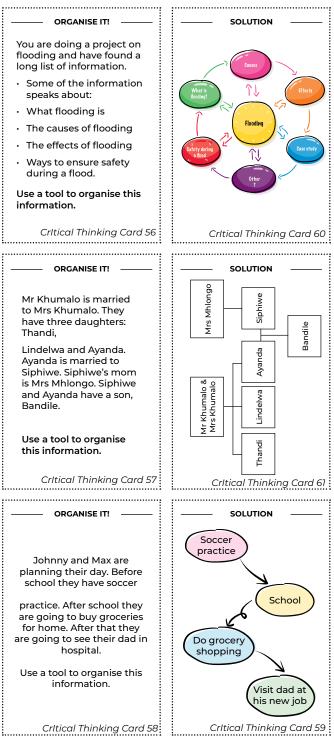
What learners need:

- Paper.
- Pen/pencil.

Tool presentation:

\*\* Present to an individual learner or a small group of learners.

- Explain that there are lots of different tools that we can use to help us organise information, such as a mind map or flow chart. Ask the learner if they can think of any other tools.
- 2. Lay the cards out in a line on the ground with the Organise it cards facing up.
- 3. Ask the learner to pick up a card, read it and then organise the information on the card by sketching a solution on their own piece of paper.
- 4. Explain that there is not one correct way to organise data and that a POSSIBLE solution is written on the back of the card.



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\*\* If it will be too tempting for the learner to look at the back of the card, you can keep the solutions separate and only give them to the learners when they have finished.

5. The learner can repeat the process with the other cards.

#### Options for after the lesson:

• Learners can easily complete this activity on their own in small groups.

COMMUNICATION

### Tool 8: Communication Definition cards



### Aim:

For learners to develop an understanding of what communication means (by definition) and a few of the skills that make up creative thinking.

#### X Tool preparation:

- · Print and cut out card numbers 62 68 from the Templates section of this Toolkit.
- · Laminate them if possible.

#### Tool presentation:

\*\* We suggest that this is done in groups of 8 learners, if possible. Otherwise you can present to the whole class at once.

- 1. Ask the learners if they remember what 21st Century skills are and why they are important.
- COMMUNICATION HOW IT IS SAID WHAT IS SAID Communication is the process of sharing information, attitudes and values. Both what we say and how we say it are important. Communication Card 62
- 2. Explain that Communication is one of these skills. Ask the class what they think communication means? Lay card 62 out on the floor.

Emphasise that communication has two elements: what we say and how we say it. Explain that communication is made up of lots of different skills and ask the learners what they think these might be.

- 4. Tell the class that we will be focusing on three skills (sub-21st-century skills) of communication:
- Non-verbal communication (lay down card 63)
- Articulation (lay down card 64) and
- Empathising (lay down card 65).
- 5. Place the three definitions (cards 66 68) upside down in random order below the heading cards.
- 6. Ask one learner to turn one of the upside-down cards over, and read it.
- 7. Ask the group which heading they think the definition belongs to. Place the card under the correct heading. Repeat this for the other two upside-down cards.
- 8. See the answer on the next page to check if the cards have been matched correctly.

명	NON-VERBAL COMMUNICATION
	Communication Card 63

모	ARTICULATION
	Communication Card 64

몃	EMPATHISING
$\smile$	Communication Card 65



- 1. Learners play the "Non-verbal communication" game.
- 2. Learners use the "Articulation" cards.
- 3. You hold a group discussion using the "Employing empathy" cards.
- 4. Learners practise on their own with matching the skill name to the definition.
- 5. Learners work on the Communication page in their competency journals.



Learners practice their understanding of different non-verbal communication cues.

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Tool 9

What message is this person's body language giving us?

How do you think this

person is feeling?

What message is this person's body language giving us?

How do you think this person is feeling?

'hat message is this person's body language giving us?

How do you think this person is feeling?

Use your face

how you are feeling

Commu

#### X Tool preparation:

• Print and cut out card numbers 69 - 86 from the Templates section of this Toolkit.

What message is this person's body language giving us?

How do you think this person is feeling?

What message is this person's

body language giving us?

How do you think this person is feeling?

What message is this person's

body language giving us?

u think this

person is feeling?

Use your face

how you are feeling

Laminate them if possible.



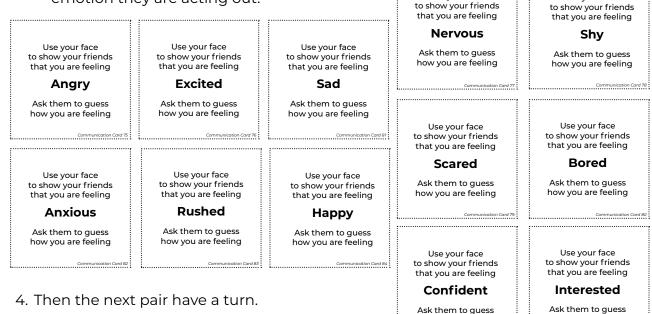
#### Tool presentation:

\*\* This is best done in smaller groups of about 6 learners, if possible. Otherwise you can present to the whole class at once.

- 1. Ask the learners to sit in a circle.
- 2. Shuffle the cards and place them in a pile in the middle of the circle. Explain that learners will be working in pairs. They can select who their partner is.
- 3. One learner picks up a card and reads it aloud.
  - Body language picture cards: The pairs look at the picture and answer the question on the card together.

#### Body language acting cards:

One learner enacts the body language written on the card, while the other learner in the pair tries to guess what emotion they are acting out.



### Options for after the lesson:

Learners work on the Communication page in their 21st-century skill journals.



To encourage learners to identify the correct language for each situation.

#### X Tool preparation:

- Print and cut out card numbers 87 98 from the Templates section of this Toolkit.
- Laminate them if possible.



#### Tool presentation:

- \*\* Present to an individual learner or a small group of learners.
- 1. Lay out the heading cards (cards 87 88) next to each other.
- 2. Shuffle the cards with phrases (cards 89 98).
- 3. Ask the learner to pick up a phrase card and read it.
- 4. Ask them if they think the phrase is used when a) chatting to a friend, or b) speaking to a teacher.
- 5. Ask them to place it under the correct heading.
- 6. Ask the learner to repeat the process for the rest of the cards.
- 7. See the answer below to check if the cards have been matched correctly.

#### **Options for after the lesson:**

Learners can easily complete this activity on their own in small groups.



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Tool 10



## Aim:

To encourage learners to employ empathy.

#### X Tool preparation:

- Print and cut out card numbers 99 -101 from the Templates section of this Toolkit.
- Laminate them if possible.



#### Tool presentation:

- 1. During a group discussion read one of the Employing Empathy cards to the group.
- 2. Ask each of the discussion questions, giving the learners a chance to answer if they would like to do so.

#### **Options for after the lesson:**

EMPLOYING EMPATHY

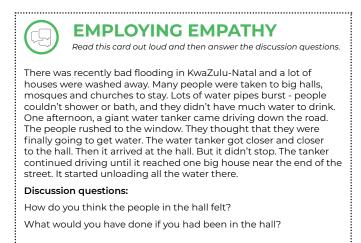
All the girls class are talking about Jane's upcoming birthday party.

From the minute they arrive at school they start planning the decorations. They talk about the cakes and sweets they will get to

Sally sits quietly in the corner. She hasn't been invited.

Read this card out loud and then answer the discussion questions.

Learners can easily complete this activity on their own in small groups.



Communication Card 99



EMPLOYING EMPATHY

Read this card out loud and then answer the discussion questions.

There was a man who worked very hard. He had three jobs and was slowly saving money to send his daughter to university. His friends started talking about him, saying that he was stealing jobs from other people. "Why can't he be happy with just one job?", they asked. One day, they were feeling so jealous that they lied to his employer about him and he lost his job. His employer told his other employers, and within three days the man had lost all three his jobs.

#### **Discussion questions:**

How do you think his friends had been feeling?

How do you think the man felt?

Were his friends' actions fair?

What do you think the man should do now?

How does this story make you feel?

Communication Card 100

Communication Card 101

eat and about who will be there

How do you think Sally is feeling?

.....

Discussion questions:

How would you feel? What would you do?



### **Tool 12: Collaboration Definition cards**



### Aim:

For learners to develop an understanding of what collaboration means (by definition) and a few of the skills that make up critical thinking.

- Print and cut out card numbers 102 110 from the Templates section of this Toolkit.
- Laminate them if possible.



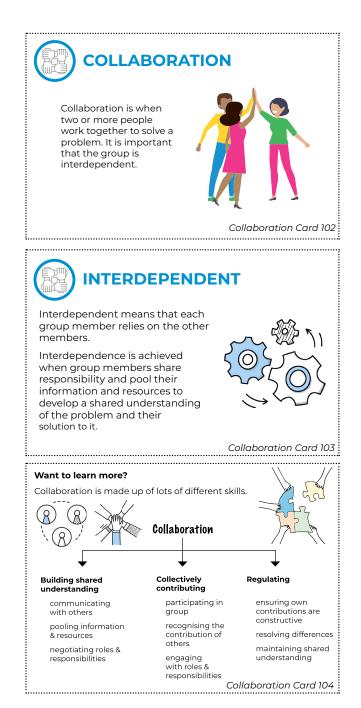
#### - Tool presentation:

\*\* We suggest that this is done in groups of 8 learners, if possible. Otherwise you can present to the whole class at once.

- 1. Ask the learners if they remember what 21st Century skills are and why they are important.
- 2. Explain that Collaboration is another one of these skills. Ask the class what they think collaboration means? Lay card 102 out on the floor.
- 3. Lay card 103 on the floor and explain the following:

To collaborate properly, people need to rely on each other by sharing responsibility and pooling their knowledge and life experience to make the group as strong and successful as possible. This is called Interdependence.

4. Explain that collaboration is made up of lots of different skills. Lav down card 104. Ask the learners what they think these skills are.



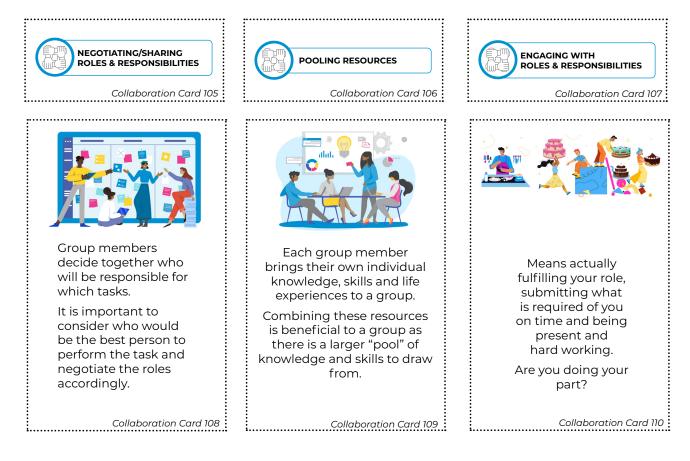
- Sharing roles and responsibilities (lay down card 105),
  - Pooling information (lay down card 106) and

5. Tell the class that we will be focusing on three skills

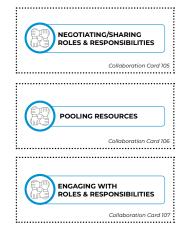
• Engaging with roles and responsibilities (lay down card 107).

(sub-21st-century skills) of collaboration:

- 6. Place the three definitions (cards 108 110) **upside down** in random order below the heading cards.
- 7. Ask one learner to turn one of the upside-down cards over, and read it.
- 8. Ask the group which heading they think the definition belongs to. Place the card under the correct heading. Repeat this for the other two upside-down cards.
- 9. See the answer below to check if the cards have been matched correctly.



- 1. Learners work on the "An interdependent group" activity.
- 2. Learners work on the Collaboration page in their 21st-century skill journals.



## 🔂 Aim:

For learners to practise negotiating roles and hopefully recognise how a group can pool information.

collaboratio

Tool 1



#### X Tool preparation:

For learners to develop an understanding of what collaboration means (by definition) and a few of the skills that make up critical thinking.

- Print and cut out card numbers 111 113 from the Templates section of this Toolkit.
- · Laminate them if possible.



#### Tool presentation:

- \*\* This is best done in smaller groups of about 4 learners, if possible.
- Give the learners the Let's Negotiate Roles cards (cards 111-113) and ask them to discuss the questions at the bottom of the card.

LET'S NEGOTIATE ROLES!	
Sizwe, Lily, Corné and Nandi are in a group together. They are going hiking next week. Corné lived in the Drakensberg until he was 10 years old and knows the area very well. Sizwe's uncle has a farm in the Drakensberg that they can stay at.	
The group needs to decide who will be responsible for:	
Planning and leading the route.	
Organising the accommodation and transport.	
Making the snacks.	🕅 LET'S NEGOTIATE ROLES!
Managing the finances.	
Discussion Questions	Sizwe, Lily, Corné and Nandi are in a group together. They are going to
Who do you think should be responsible for which role?	be hosting a table at the town market next Saturday. They will be selling pasta. Lily's mom is from Italy and she has a special recipe. Nandi's dad is an
What personal knowledge and experience is helping the group?	accountant and she has been learning about balance sheets from him. He is always happy to help his daughter.
Collaboration Card 111	The group needs to decide who will be responsible for:
	Making the pasta.
	Finances.
	Making the decorations.
	Advertising their stand.
Sizwe, Lily, Corné and Nandi are in a group together. They are going to be directing the school play.	Who do you think should be responsible for which role?
Nandi is an excellent dancer, Corné is very organised, and Sizwe takes drama as a subject.	What personal knowledge and experience is helping the group?
The group needs to decide who will be responsible for:	If Lily was from India instead, and had a family curry recipe, should the group
Writing the script and directing.	still make and sell pasta? Collaboration Card 112
Designing the props.	:
Organising rehearsal times and booking the stage.	
Choreographing the dances.	
111111	
Discussion Questions	
Who do you think should be responsible for which role?	
What personal knowledge and experience is helping the group?	
Collaboration Card 113	

- 1. In these small groups, ask the learners to think about and discuss what knowledge or experience they might be able to contribute to a group project.
- 2. Learners work on the Collaboration page in their 21st-century skill journals.

METACOGNITION

### **Tool 14: Metacognition Definition cards**



## Aim:

For learners to develop an understanding of what metacognition means (by definition) and a few of the skills that make up metacognition.

#### X Tool preparation:

- Print and cut out card numbers 114 115 from the Templates section of this Toolkit.
- · Laminate them if possible.

What learners need:

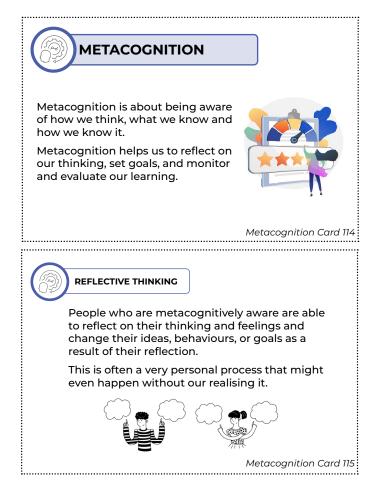
- 21st-century skill journal.
- Pen/pencil.



#### Tool presentation:

\*\* We suggest that this is done in groups of 8 learners, if possible. Otherwise you can present to the whole class at once.

- 1. Gather the group together.
- 2. Explain that Metacognition is another one of the 21st Century skills. Tell them that metacognition is a fancy word that explains "how we think". Lay down card 114, reading the definition.
- 3. Tell the class that we will be focusing on one skill (subcompetency) of metacognition: Reflective thinking. Lay down card 115, reading the definition.



4. Ask the learners to work on the Metacognition page in their 21st-century skill journals.

- 1. Read the "Reflective thinking" prompts to the learners.
- 2. Learners work on the Metacognition page in their 21st-century skill journals.



To encourage learners to reflect on their thinking.

#### X Tool preparation:

• Print and cut out card numbers 116 - 120 from the Templates section of this Toolkit.

acognitio

- Laminate them if possible.
- · Calming music if possible.

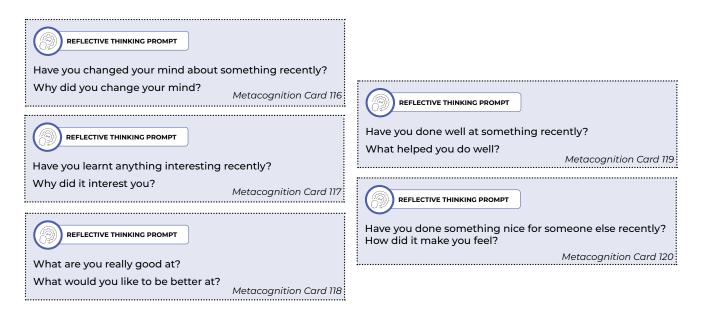
What learners need:

- · 21st-century skill journal or piece of paper.
- Pen/pencil.



#### Tool presentation:

- 1. Ask the learners to sit somewhere comfortable with a piece of paper/21st-century skill journal and a pen/pencil.
- 2. If you are able to, you could put on some calming music.
- 3. Read one of the Reflective Thinking Prompts (cards 116 120) to the learners.
- 4. Ask them to think about their answer and write it on the paper or in their competency journal using words or drawings.



- 1. Learners can fetch these prompts from the "21st-century skill" shelf and complete them on their own.
- 2. Learners work on the Metacognition page in their 21st-century skill journal.

## **CLASSROOM SUPPLIES**

## **21ST-CENTURY SKILL WHEEL**

#### **X** Tool preparation:

How to assemble the 21st-century skill wheel:

- Cut out the 21st-century skill wheel and arrow on the next page.
- · Laminate them if possible.
- Make a small hole in the round dot of the arrow and wheel.
- Place a split pin through the hole so that the arrow can spin around inside the circle. If you cannot get a split pin, you can slip a little twig through the hole or use a normal pin.

#### How to use the 21st-century skill wheel:

Spin the 21st-century skill wheel with your class to decide which 21st-century skill to teach or which page in their 21st-century skill journal they should work on.

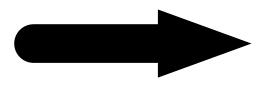
Make sure that you have explained what the 21st Century skills are to the learners before you teach your first lesson. You can do this by starting a conversation with the class about 21st Century skills and explaining why they are important (use the poster on 21st Century skills for this).

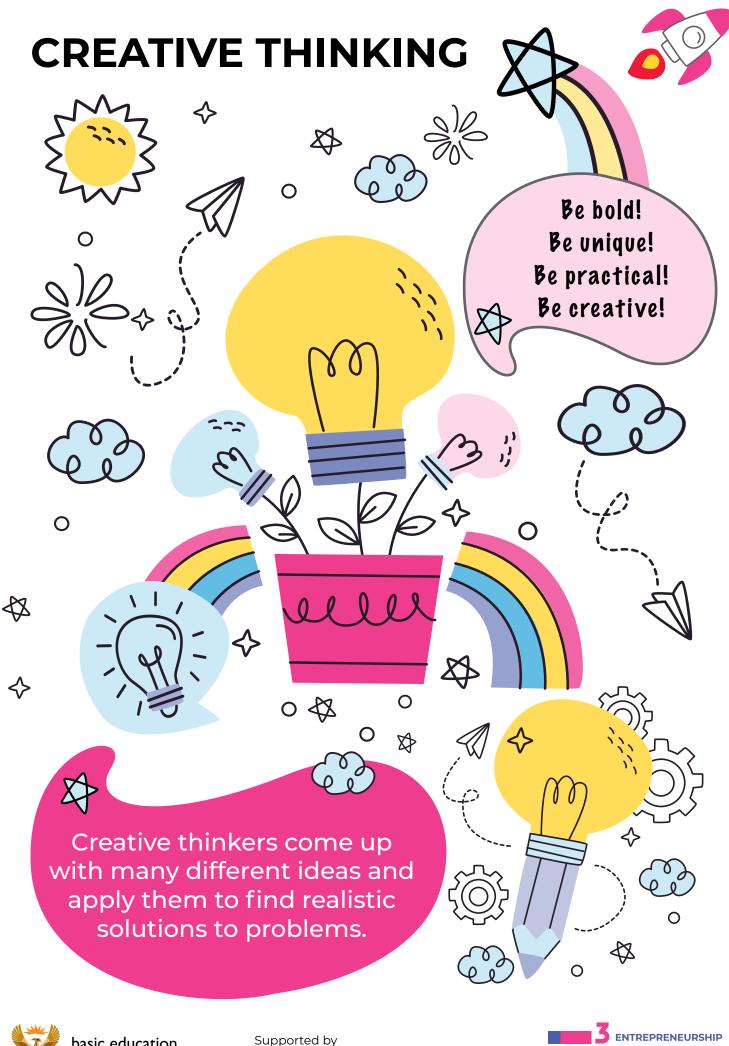


21st-century skill Toolkit Classroom Supplies

## **21ST-CENTURY SKILL WHEEL**







basic education Department: Basic Education REPUBLIC OF SOUTH AFRICA

The **LEGO** Foundation

EMPLOYABILITY EDUCATION

# **CRITICAL THINKING**

Critical thinkers discriminate to find useful information to design appropriate solutions.

Once they have a solution, they apply it and monitor to see if the solution is working.

Ask questions!

Be logical: Think "Does this information help me?"



Department: Basic Education REPUBLIC OF SOUTH AFRICA

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## COMMUNICATION

Listen to both WHAT is said and HOW it is said

Good communicators listen to both WHAT is said and HOW it is said. They are able to understand non-verbal cues such as body language.

They make sure they use the correct language for the correct situation, and they try to understand how others are feeling.



basic education Department: Basic Education REPUBLIC OF SOUTH AFRICA Supported by The LEGO Foundation **3** ENTREPRENEURSHIP EMPLOYABILITY EDUCATION

## COLLABORATION

🗹 Share your knowledge

🍼 Share your experience

🖌 Do your part

Collaboration is when people work together to solve a problem. Interdependence is achieved when group members pool their information and resources to develop a shared understanding of the problem and share tasks to implement the solution.



basic education Department: Basic Education REPUBLIC OF SOUTH AFRICA Supported by The LEGO Foundation 3 ENTREPRENEURSHIP EMPLOYABILITY EDUCATION





basic education Department: Basic Education REPUBLIC OF SOUTH AFRICA Supported by The LEGO Foundation EMPLOYABILITY EDUCATION

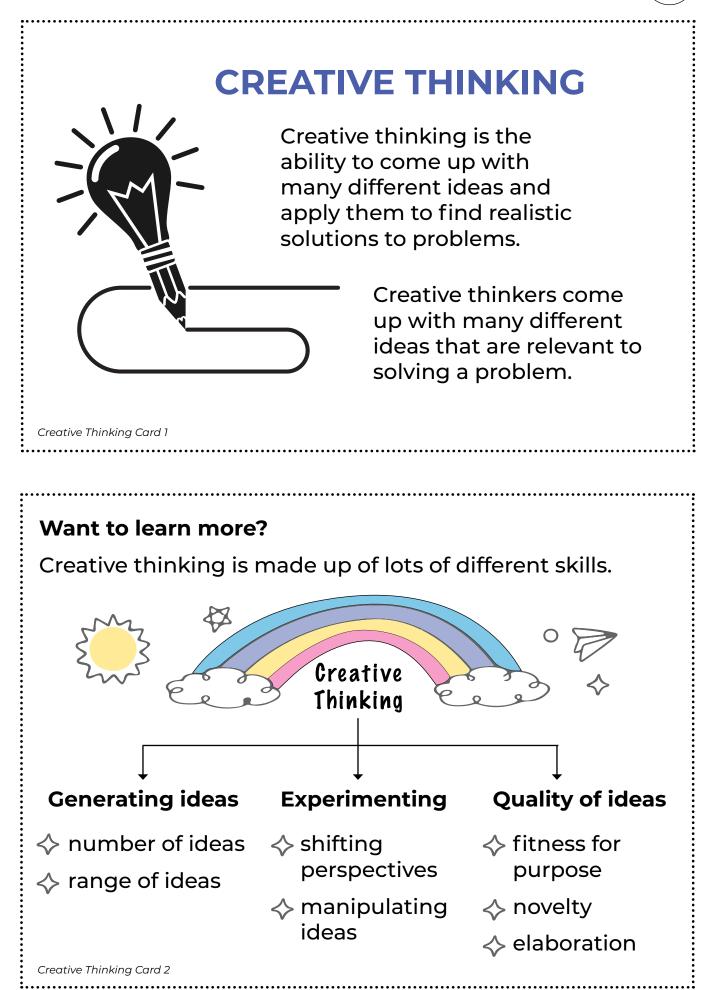
## SAMPLE REGISTER

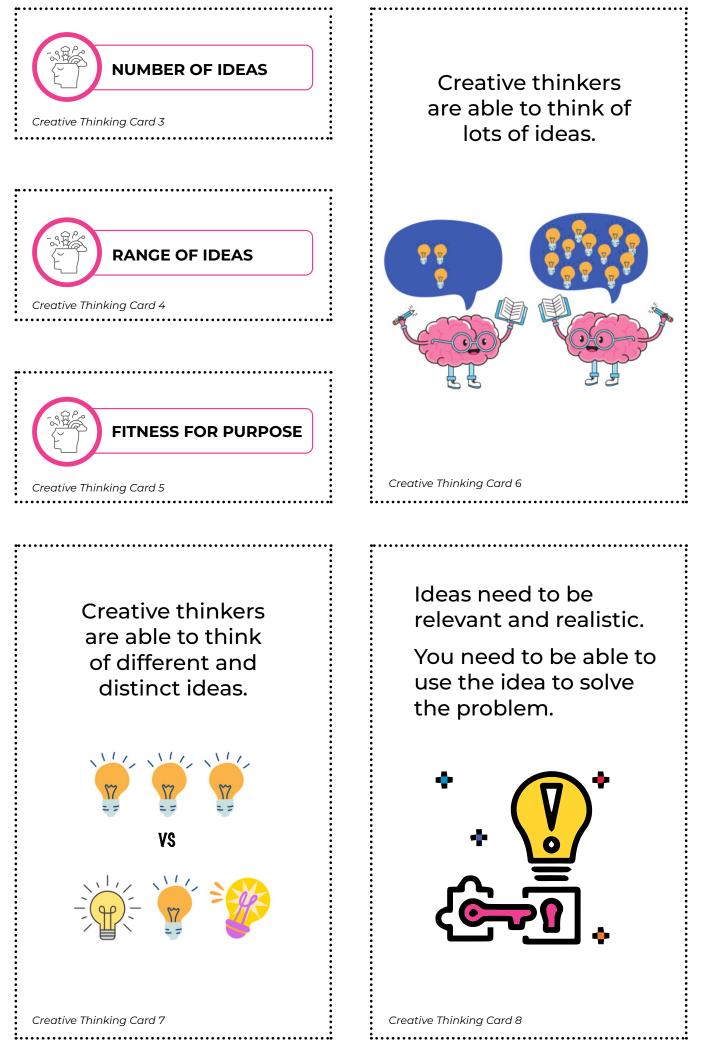
earner's name	ті	Tick each time you see the skill being used														Notes	
																L	

## **PRINTING TEMPLATES**

Preparation: Print the pages you need and cut where required along the dotted lines.







21st-century skill Toolkit Templates



111

### NPAT Game - Let's Play!



Name	Place	Animal	Thing	Points

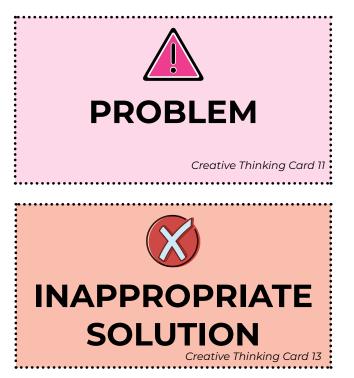
А	В	С	D	E	F	G	Н	I	J	К	L	М
N	0	Ρ	Q	R	S	Т	U	V	W	Х	Y	Z

Creative Thinking Card 10

21st-century skill Toolkit Templates



#### **Header cards**





### **Problem description cards**

Nandi really wants a biscuit but cannot open the glass jar.

Creative Thinking Card 14

Creative Thinking Card 16

Jane often struggles to find her pencils in her bag, because both the pencils and bag are grey. A teacher wants to cross a busy road with her learners.

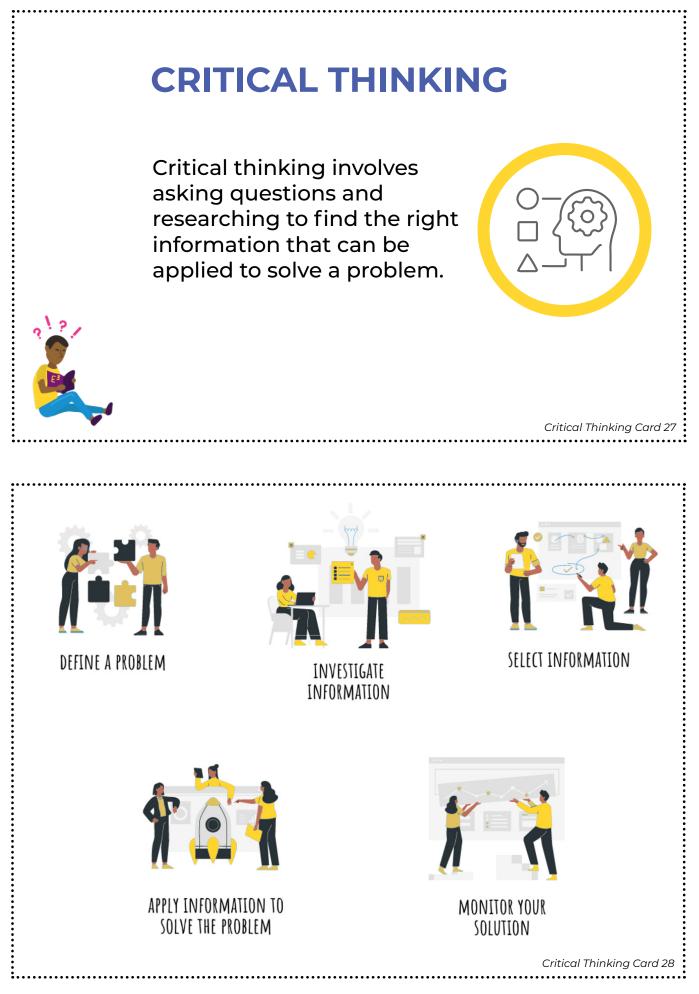
Creative Thinking Card 15

Pens didn't work in space. The American Space Programme needs to find something they can use to write in space.

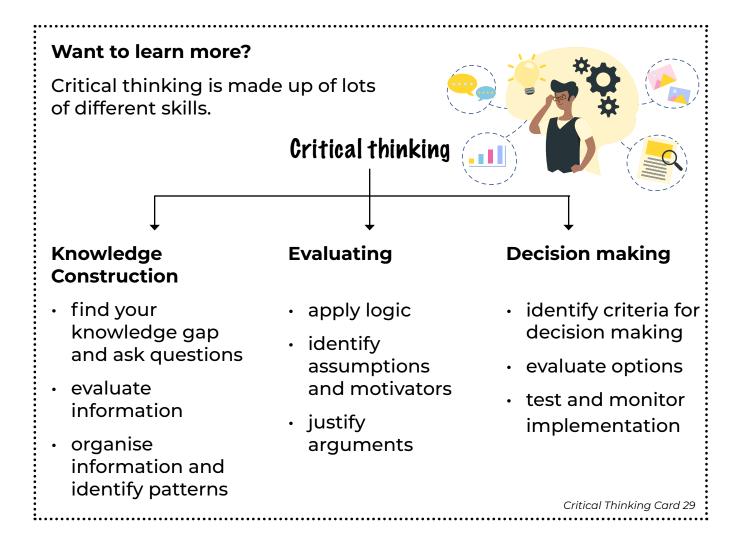
Creative Thinking Card 17

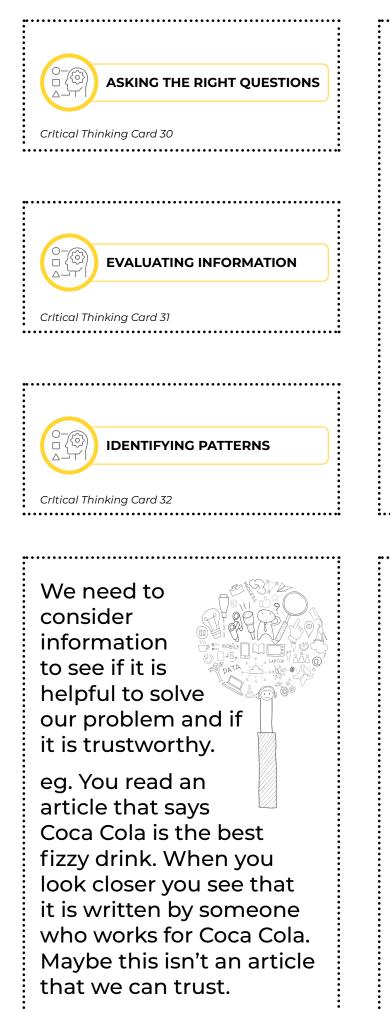


PROBLEM	APPROPRIATE SOLUTION Creative Thinking Card 12	INAPPROPRIAT SOLUTION
Nandi really wants a biscuit but cannot open the glass jar. Creative Thinking Card 14	Ask her mom to help her open the jar. Creative Thinking Card 18	Throw the jar on the floor so that the glass breaks and she can get a biscuit. <sup>Creative Thinking Car</sup>
A teacher wants to cross a busy road with her learners.	Get someone to stand in the road and signal for the cars to stop. Creative Thinking Card 20	Build a bridge over the road so that they can cross safely. Creative Thinking Card
Jane often struggles to find her pencils in her bag, because both the pencils and bag are grey. Creative Thinking Card 16	Stick a red sticker on her pencils that allows her to notice them more easily. Creative Thinking Card 22	Jane must carry her pencils in her hand so sh does not lose them. <sup>Creative Thinking Carr</sup>
Pens didn't work in space. The American Space Programme needs to find something they can use to write in space.	Use a pencil. Creative Thinking Card 24	Spend lots of money designing a new type of pen that would work. Creative Thinking Care



21st-century skill Toolkit Templates



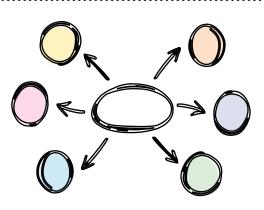




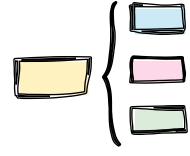
To get the answer we are looking for, it is important that we ask the right questions.

e.g. If we want to know which month comes after June, we need to ask "What is the *order* of the months of the year?"

CrItical Thinking Card 33



Mindmaps, flow charts and drafts are excellent tools to help organise information.



CrItical Thinking Card 35

#### **Header cards**



Query description cards

# ...what time the pizza will be delivered.

Critical Thinking Card 39

# ...which day comes after Tuesday.

Critical Thinking Card 40

# ...when our bicycle will be fixed.

Critical Thinking Card 41



#### **Question cards**

What time will the	Can you deliver	
pizza be delivered?	the pizza tonight?	
Critical Thinking Card 42	Critical Thinking Card 45	
What is the order of the days of the week?	What are the days of the week? Critical Thinking Card 46	
When will my	How long will it take	
bicycle be ready	you to fix my bicycle?	
for collection?	Critical Thinking Card 47	

QUERY We want to know Critical Thinking Card 36	THE RIGHT QUESTION Critical Thinking Card 37	THE WRONG QUESTION Critical Thinking Ca
what time the pizza will be delivered. Critical Thinking Card 39	What time will the pizza be delivered?	Can you deliver the pizza tonight? <sup>Critical Thinking Card</sup>
which day comes after Tuesday. Critical Thinking Card 40	What is the order of the days of the week? Critical Thinking Card 43	What are the days of the week?
when our bicycle will be fixed.	When will my bicycle be ready for collection?	How long will it take you to fix my bicycle?

### Information cards

### INFORMATION

You are researching soccer teams and want to know who the best team in the competition is. You have found two sources.

One is an article saying that Liverpool is the best team in the world. It is written by the coach of Liverpool. The other is the log of matches, showing who has had the most wins.

Which source would you use?

Give a reason for your answer.

### INFORMATION



Crltical Thinking Card 48

You want to learn how to identify the trees around you.

You find a book titled "Trees in Cape Town".

Would this book be useful if you lived in Durban?

Give a reason for your answer.

### INFORMATION



You would like to find out what a healthy meal is.

You have an advertisement from a fast-food place that says their burgers are healthy.

You also have a book written by a dietician titled "Healthy Eating".

Which source would you use?

Give a reason for your answer.

CrItical Thinking Card 50

### INFORMATION



You want to know what life in Johannesburg was like in the year 2000.

You find a photograph from 1940.

Would this photograph be useful?

Give a reason for your answer.

CrItical Thinking Card 49

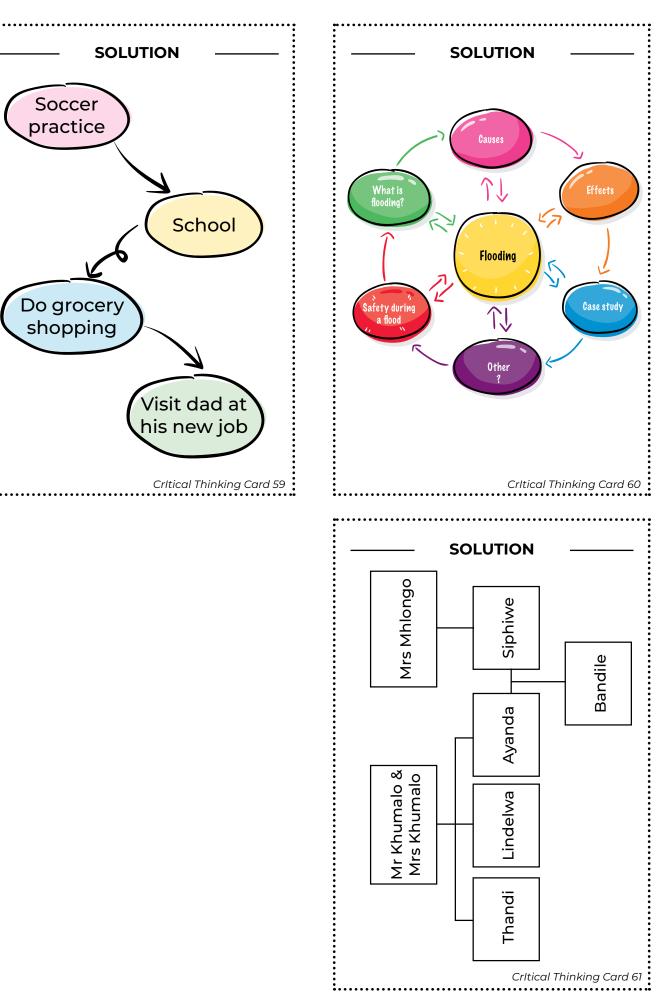
CrItical Thinking Card 51

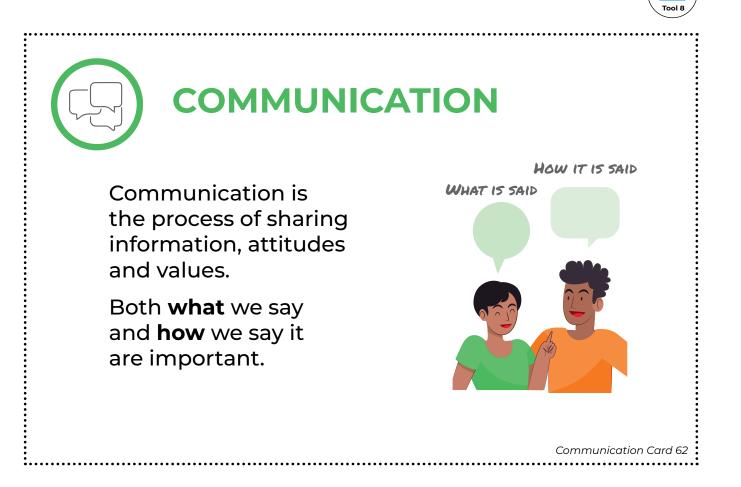
### **Evaluation cards**

EVALUATION	EVALUATION
The book will from the dietician would be more factually correct. The advertisement might exaggerate information to try and sell the product.	Article about Liverpool: As the article is written by the coach, it might contain BIAS. Log of wins: This will show you the true results of the season. It will not have any bias.
Critical Thinking Card 52 EVALUATION	Critical Thinking Card 54 EVALUATION
The photograph from 1940 is unlikely to give you an idea of what life in Johannesburg was like in 2000 as things would have changed a lot during the 60 years that have passed. The information would	The book would be useful if you lived in Cape Town but not useful if you lived in Durban as different trees grow in the different regions of South Africa. The information would not be RELEVANT or
not be CURRENT or from the CORRECT TIME.	APPLICABLE.

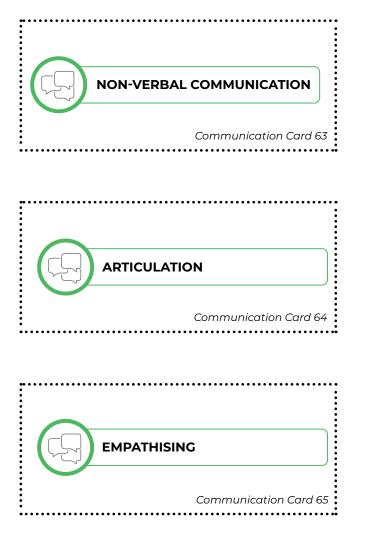
ORGANISE IT!	ORGANISE IT!
You are doing a project on flooding and have found a long list of information.	Johnny and Max are planning their day. Before school they have soccer
<ul> <li>Some of the information speaks about:</li> </ul>	practice. After school they are going to buy groceries
<ul> <li>What flooding is</li> </ul>	for home. After that
$\cdot$ The causes of flooding	they are going to see their
$\cdot$ The effects of flooding	dad in hospital.
<ul> <li>Ways to ensure safety during a flood.</li> </ul>	Use a tool to organise this information.
Use a tool to organise this information.	
CrItical Thinking Card 56	CrItical Thinking Card 58
ORGANISE IT!	
Mr Khumalo is married to Mrs Khumalo. They have three daughters: Thandi,	
Lindelwa and Ayanda. Ayanda is married to Siphiwe. Siphiwe's mom is Mrs Mhlongo. Siphiwe and Ayanda have a son, Bandile.	
Use a tool to organise this information.	
CrItical Thinking Card 57	

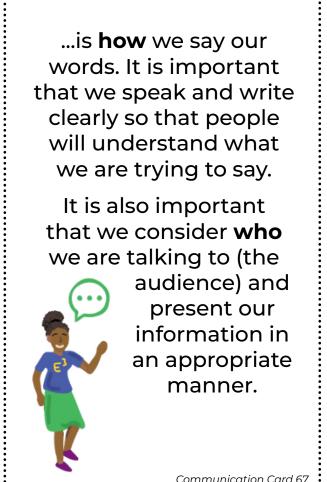
Tool '





117





...refers to how people say things.

Their tone of voice, body language and expression can give us clues about how they feel about what they are saying.



Communication Card 66

...involves understand how other people are feeling and taking their emotions into consideration.



Communication Card 68

communication Cara 67



Use your face to show your friends that you are feeling

## Angry

Ask them to guess how you are feeling

Use your face

that you are feeling

**Excited** 

Ask them to guess

how you are feeling

Communication Card 75

Communication Card 76

Communication Card 77

to show your friends

Use your face to show your friends that you are feeling

Use your face

to show your friends

that you are feeling

Shy

Ask them to guess

how you are feeling

Communication Card 78

Communication Card 79

Communication Card 80

## Scared

Ask them to guess how you are feeling

Use your face to show your friends that you are feeling

## Nervous

Ask them to guess how you are feeling

Use your face to show your friends that you are feeling

## Bored

Ask them to guess how you are feeling

21st-century skill Toolkit Templates

Use your face to show your friends that you are feeling

## Sad

Ask them to guess how you are feeling

Communication Card 81

Communication Card 82

Communication Card 83

Use your face to show your friends that you are feeling

# Anxious

Ask them to guess how you are feeling

Use your face to show your friends that you are feeling

# Rushed

Ask them to guess how you are feeling Use your face to show your friends that you are feeling

## Нарру

Ask them to guess how you are feeling

Communication Card 84

Communication Card 85

Communication Card 86

Use your face to show your friends that you are feeling

# Confident

Ask them to guess how you are feeling

Use your face to show your friends that you are feeling

## Interested

Ask them to guess how you are feeling

21st-century skill Toolkit Templates







## **EMPLOYING EMPATHY**

Read this card out loud and then answer the discussion questions.

There was recently bad flooding in KwaZulu-Natal and a lot of houses were washed away. Many people were taken to big halls, mosques and churches to stay. Lots of water pipes burst - people couldn't shower or bath, and they didn't have much water to drink. One afternoon, a giant water tanker came driving down the road. The people rushed to the window. They thought that they were finally going to get water. The water tanker got closer and closer to the hall. Then it arrived at the hall. But it didn't stop. The tanker continued driving until it reached one big house near the end of the street. It started unloading all the water there.

### **Discussion questions:**

- How do you think the people in the hall felt?
- What would you have done if you had been in the hall?

Communication Card 99



## **EMPLOYING EMPATHY**

Read this card out loud and then answer the discussion questions.

There was a man who worked very hard. He had three jobs and was slowly saving money to send his daughter to university. His friends started talking about him, saying that he was stealing jobs from other people. "Why can't he be happy with just one job?", they asked. One day, they were feeling so jealous that they lied to his employer about him and he lost his job. His employer told his other employers, and within three days the man had lost all three his jobs.

### **Discussion questions:**

- How do you think his friends had been feeling?
- How do you think the man felt?
- Were his friends' actions fair?
- What do you think the man should do now?
- How does this story make you feel?

Communication Card 100



## **EMPLOYING EMPATHY**

Read this card out loud and then answer the discussion questions.

All the girls class are talking about Jane's upcoming birthday party. From the minute they arrive at school they start planning the decorations. They talk about the cakes and sweets they will get to eat and about who will be there.

Sally sits quietly in the corner. She hasn't been invited.

### **Discussion questions:**

- How do you think Sally is feeling?
- How would you feel?
- What would you do?

Communication Card 101

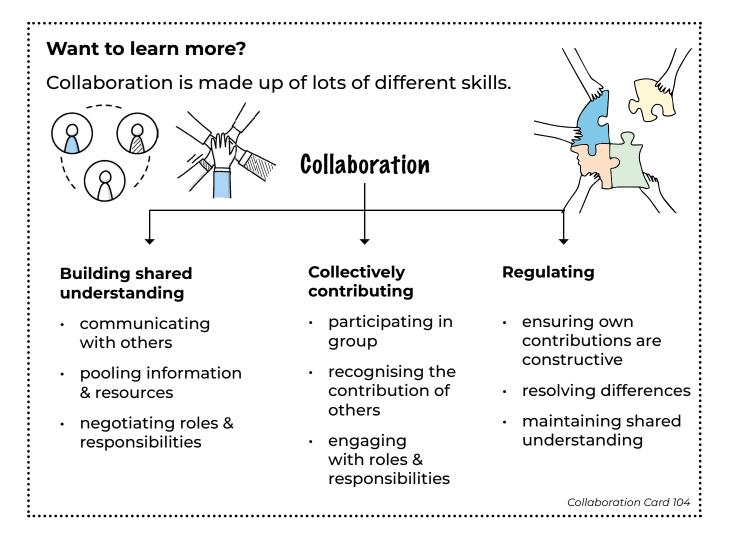






Interdependent means that each group member relies on the other members.

Interdependence is achieved when group members share responsibility and pool their information and resources to develop a shared understanding of the problem and their solution to it.











Each group member brings their own individual knowledge, skills and life experiences to a group.

Combining these resources is beneficial to a group as there is a larger "pool" of knowledge and skills to draw from.



Group members decide together who will be responsible for which tasks.

It is important to consider who would be the best person to perform the task and negotiate the roles accordingly.

Collaboration Card 108



Means actually fulfilling your role, submitting what is required of you on time and being present and hard working.

Are you doing your part?

Collaboration Card 109

Collaboration Card 110



## LET'S NEGOTIATE ROLES!

Sizwe, Lily, Corné and Nandi are in a group together. They are going hiking next week. Corné lived in the Drakensberg until he was 10 years old and knows the area very well. Sizwe's uncle has a farm in the Drakensberg that they can stay at.

The group needs to decide who will be responsible for:

- Planning and leading the route.
- Organising the accommodation and transport.
- Making the snacks.
- Managing the finances.

### **Discussion Questions**

- Who do you think should be responsible for which role?
- What personal knowledge and experience is helping the group?

Collaboration Card 111

## LET'S NEGOTIATE ROLES!

Sizwe, Lily, Corné and Nandi are in a group together. They are going to be hosting a table at the town market next Saturday. They will be selling pasta. Lily's mom is from Italy and she has a special recipe. Nandi's dad is an accountant and she has been learning about



balance sheets from him. He is always happy to help his daughter.

The group needs to decide who will be responsible for:

- Making the pasta.
- Finances.
- Making the decorations.
- Advertising their stand.

### **Discussion Questions**

- Who do you think should be responsible for which role?
- What personal knowledge and experience is helping the group?
- If Lily was from India instead, and had a family curry recipe, should the group still make and sell pasta?

Collaboration Card 112

## LET'S NEGOTIATE ROLES!

Sizwe, Lily, Corné and Nandi are in a group together. They are going to be directing the school play.

Nandi is an excellent dancer, Corné is very organised, and Sizwe takes drama as a subject.

The group needs to decide who will be responsible for:

- Writing the script and directing.
- Designing the props.
- Organising rehearsal times and booking the stage.
- Choreographing the dances.

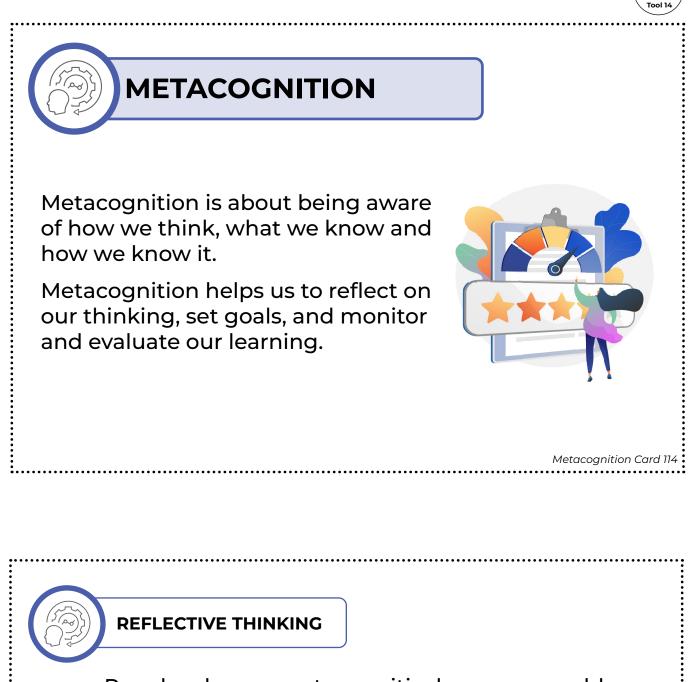
### **Discussion Questions**

- Who do you think should be responsible for which role?
- What personal knowledge and experience is helping the group?

Collaboration Card 113



Metacognition Card 115



People who are metacognitively aware are able to reflect on their thinking and feelings and change their ideas, behaviours, or goals as a result of their reflection.

This is often a very personal process that might even happen without our realising it.



