

Some Critical and Creative Thinking Situations.

Learning Organising Testing Estimating Listening Patterning Representing
 Experimenting Inferring Validating Classifying Comparing Explaining
 Questioning Predicting Debating Deliberating Devising Adapting Refining
 Varying Combining Responding Criticising Reflecting Analysing Assessing
 Appraising Evaluating Discussing Distributing Arranging Establishing Allowing
 Allocating Extending Developing Consulting Interpreting Judging Consuming
 Working Talking Drawing Painting Valuing Examining Challenging
 Researching Monitoring Employing Coaching Incorporating Displaying
 Reviewing Recommending Observing Communicating Measuring Checking
 Proving Buying Inventing Selling Defining Controlling Growing Hypothesising
 Selecting Rejecting Creating Understanding Exploring Gathering Participating
 Banking Saving Spending Co-operating Building Determining Demonstrating
 Enhancing Investigating Investing Promoting Improving Clarifying Forecasting
 Formulating Identifying Applying Examining Generalising Recognising Arguing

These ‘Top 12 Tools’ for Critical and Creative Thinking consists of twelve information generating and processing tools each with a specific function. As the tools are process based they are not content or situation bound. Thus they can be used for information generating and processing in all situations across the learning/teaching continuum. What’s more the ABC effect can be capitalized on. The alphabet consists of 26 letters which when taught, selected and sequenced can make up a vast number of words. So too, these twelve tools which when taught, selected and sequenced can cater for a vast range of thinking situations. Thus skilling your students in this core of tools becomes a very time efficient and outcomes effective solution to support your teaching of Critical and Creative Thinking across the school curriculum. Especially suited for teaching thinking in the General Capabilities area of the Australian Curriculum.

Check out the program’s support and student materials!

<https://braintoolseducation.selz.com>

Constructing Envisioning Leading Guiding Performing Negotiating Relating
 Responding Training Adjusting Deconstructing Reading Viewing Listening
 Addressing Defending Protecting Writing Fencing Budgeting Convening
 Convincing Parenting Educating Deciding Counselling Mediating Supervising
 Working Planning Competing Contracting Tendering Enterprising Adventuring
 Assessing Evaluating Valuing Manipulating Dancing Acting Influencing



Brain·tools
Just think about it.

Education

Age (5 to Adult)

Course One. Version 2.

**A
Learning to Learn
Program**

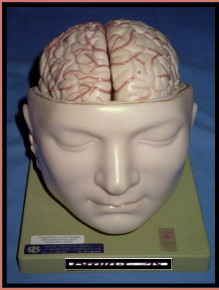
Critical and Creative Thinking

Course: 1.2

Supports the teaching of
the Australian Curriculum's
General Capabilities

Play these 12
simple fun games
and give your students
A Tool Kit for Thinking

Lester W. Hardwick



Contents

Goal:

To skill students in a basic tool kit to learn from others with others and by themselves.

(To support the General Capabilities area of the Australian Curriculum.)

Brain-t Ols
Just think about it.

Lifelong Learning

From Others

With Others

By Myself

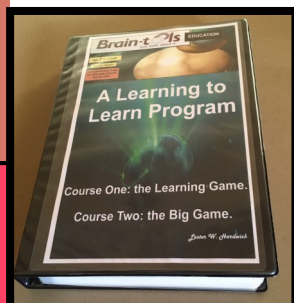


The Games Why play this game?

Pages A to W. An introduction to the Braintools Program and your Learning Brain.

0. Lesson/Course Design
1. The Recognize Game
2. The Factors Game
3. The Points P & N Game
4. The Alternatives Game
5. The Views Game
6. The Effects Game
7. The Change Game
8. The Invent Game
9. The Explore Game
- 10&11. Right/Wrong Game
12. The Do Game

Plus: Notes & Assessment



Select from these activities and adapt so that your particular students gain an introductory understanding of *how your brain works and how you can make it work for you.*

Sheet 0.1 Implementation Instructions. Sheet 0.2/0.3 Focus Question for an inquiring mind and engaging learning.

Game 1. To skill your students to notice and think about things because the sooner you can recognize something the sooner you can utilize it.

Game 2. To skill your students in searching for the range and number of factors in a situation and in detecting crucial, key factors.

Game 3. To enable your students to override their emotions in a particular situation and develop a balanced view before deciding and acting.

Game 4. To skill your students to look for the many ways of doing or knowing something before deciding on the most suitable action to take.

Game 5. To skill your students to look for who else is involved in a particular situation and what might be the different views and goals of all involved.

Game 6. To train your students to identify the now, soon and later probable Effects of an action before the action is carried out.

Game 7. To train your students to develop new ways of doing things by changing existing objects and processes.

Game 8 To teach your students to put two or more old ideas together to create something with a new function.

Game 9. To skill your students to escape from set ideas and to generate new, creative possibilities from which to select better ideas.

Game 10 & 11. To train your students to make a considered assessment of a situation to determine if it is most likely Right or most likely Wrong.

Game 12. To train your students to develop and put their intentions and plans into actions. To have your students develop a Proactive, learning mindset and not be predominantly Reactive or Inactive in their behaviour.

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Publisher

L.W. & M. A. Hardwick Consultants
95 Framara Drive
Kelso, Australia. 4815.

Print the download and place in plastic slip insets in a ring binder folder to make a Teacher's Classroom Workbook.

Poster

A.



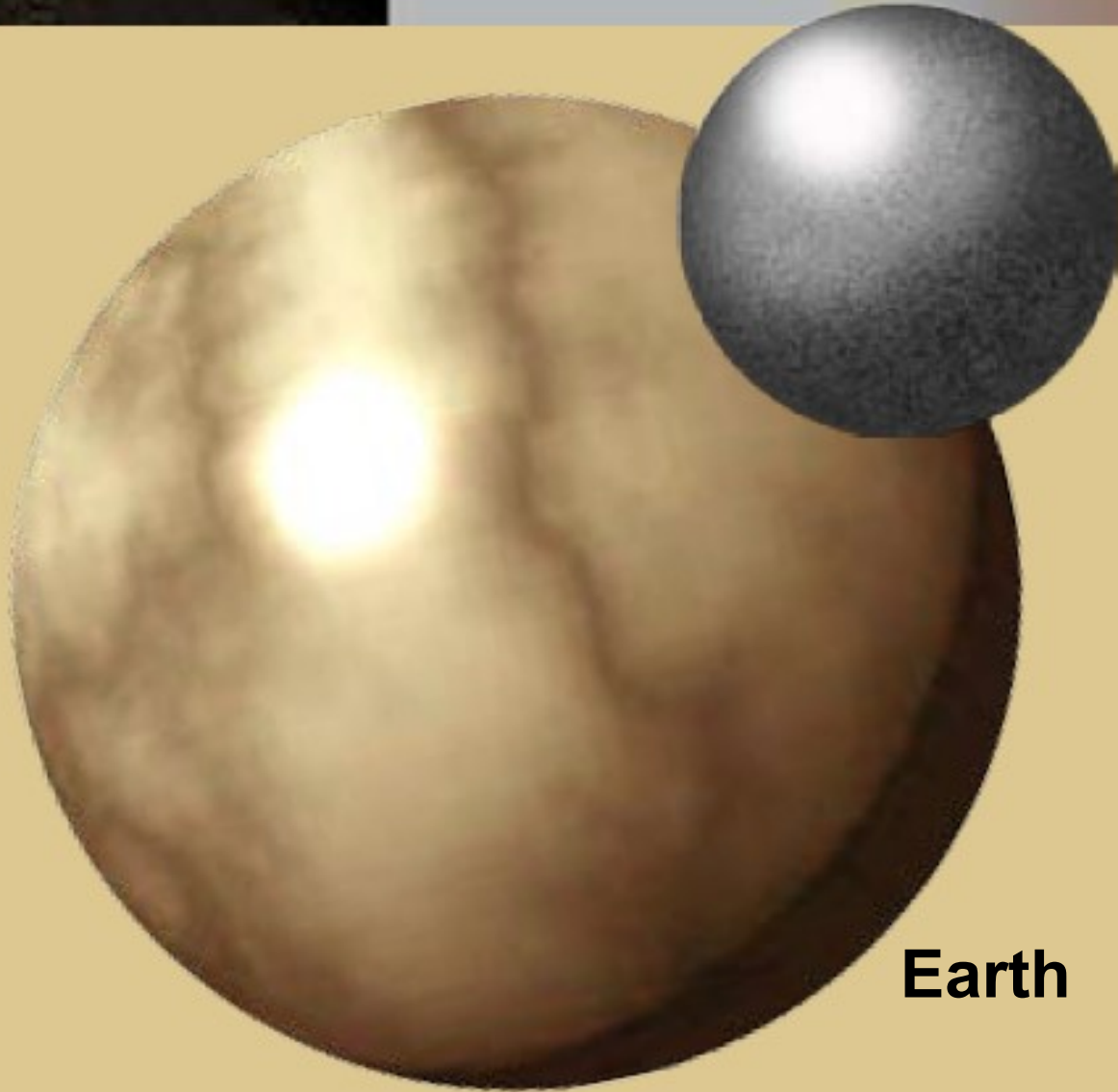
**How well can you make your brain
work for you?
Try these
Critical and Creative Thinking Tools.**

B.

Brain·tools
just think about it.

Education

Goal



Earth

**A Proactive Population
Skilled in
Critical and
Creative Thinking
and Committed to
Sustainable Success.**

An Introduction




A Learning to Learn Program

To develop Critical and Creative Thinking

Success

Success in this changing world of ours depends greatly on how well we solve present and emerging problems and how well an innovative, learning culture is supported by our institutions. *At present the impact on our environment of the interaction between the power of our technology, the power of our ideology and the lack of power in our thinking is of some concern.*

Program



This is a Process centred program that can be adapted to cater for the P-12/Adult range of learners. You can use the program to skill all students in a basic strategy and system of tools for Critical and Creative Thinking. It can also be used to set up the scaffolding for the growth of a learning culture in an institution. There is a need in the education of our students for a comprehensive Learning to Learn curriculum and associated subject to increase the general power of our reasoned thinking.

Mastery

Mastery of the strategy and basic set of tools is achieved through active, group sessions designed and led by the teacher that engage the student while also exploring content across their curriculum and investigating real situations.

Goals

Through immersion, modelling and explicit instruction:

The students develop and demonstrate an effective learning strategy based on self talk.



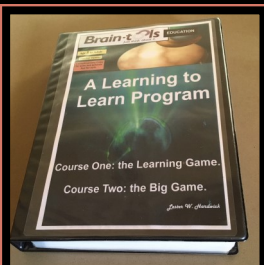
They name, select and use a set of twelve tools to give power and range to this learning based on questioning.

Software
for your
brain.

They display an inquiring mind and interest in learning.

Thus they gain the fundamentals of reasoning, the fourth and sometimes forgotten "R" in education, Reasoned-thinking. They are on the path to becoming skilled, self-directed, lifelong learners equipped with Critical and Creative Thinking Tools.

Course Preparation



This Program provides a resource of ideas from which Administrators, Teachers, Trainers and Home schoolers can draw upon to design and deliver their own *Critical and Creative Thinking* Courses that match the needs and abilities of their particular students. It is easy. Just copy, expand and modify the sample Units of Instruction at the end of this Course to develop as many units as you need for your class.

D.

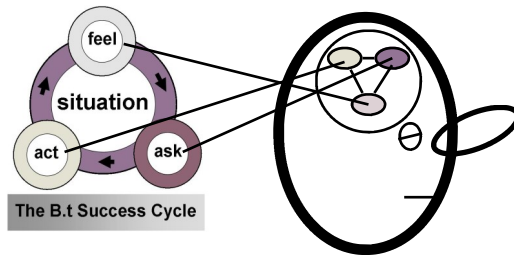


Brain.tools Program: A Simple System of Practical Tools for Teaching and Learning.

Its Three Key Concepts and Program Objectives.

Conscious Control

Modes & The Three Learning Roles.

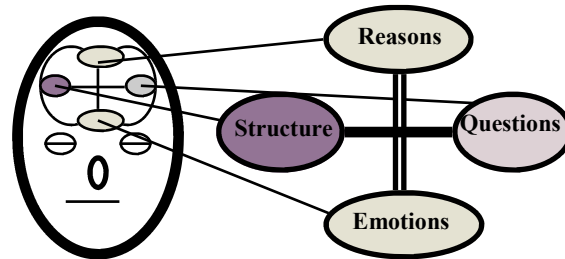


The Proactive Mode

Skill Students in how to learn From Others, With Others, By Themselves.

Strategy Skill

The Learning Tools.

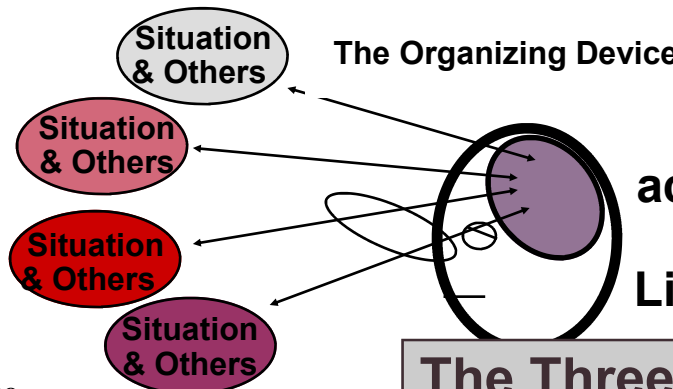


The Brain Tool

Skill Students in Tools that provide Power and Range in this Learning.

Organised Transfer

The Learning Settings



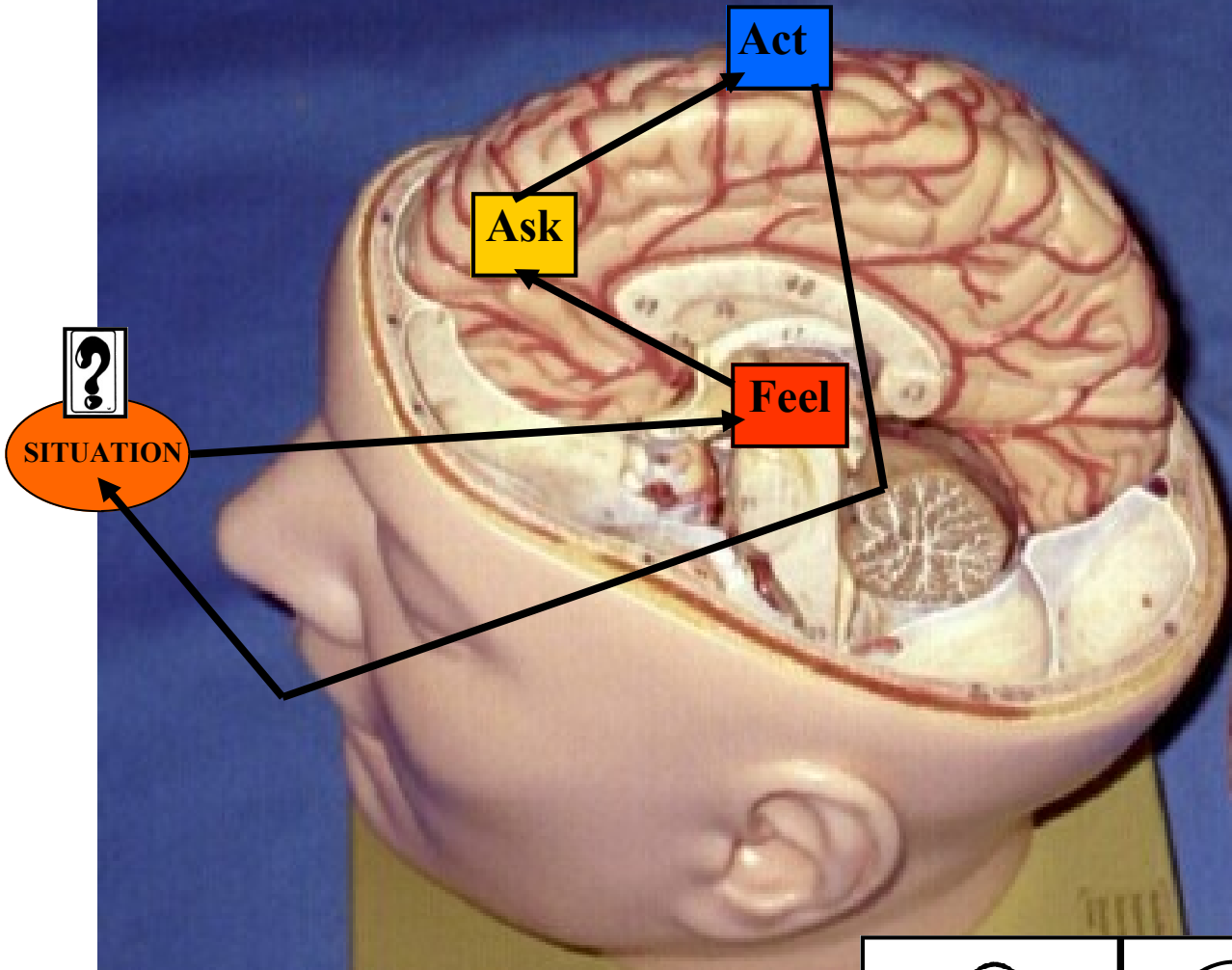
Skill Students to Transfer this Learning across the Curriculum and into Lifelong Learning.

The Three Key Concepts

Poster

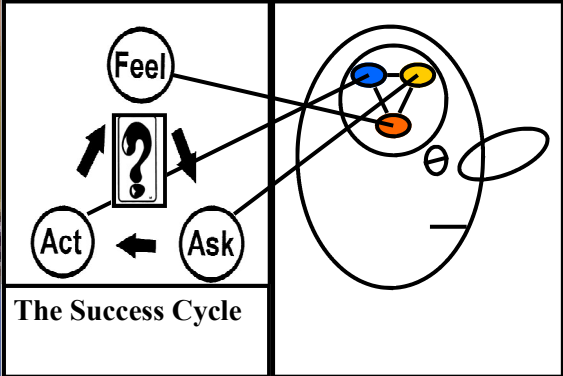
Brain-tools

Just think about it.



Locus of Control

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Key Concept 1: Conscious Control

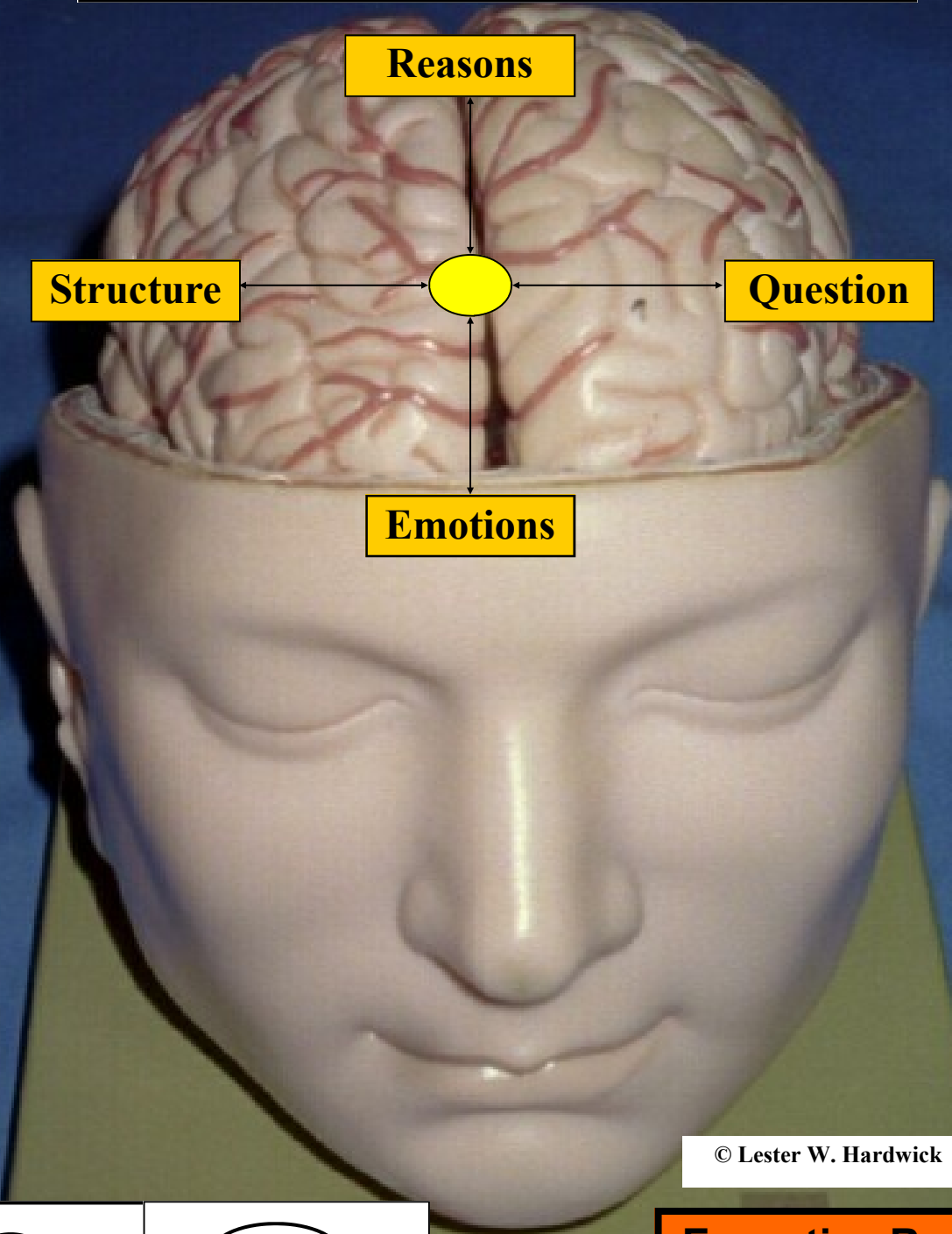
See Page (W) : Notes on the Introduction, for background.

We come to school to grow powerfully functioning, learning brains so that their owners may enjoy life long success.

F.

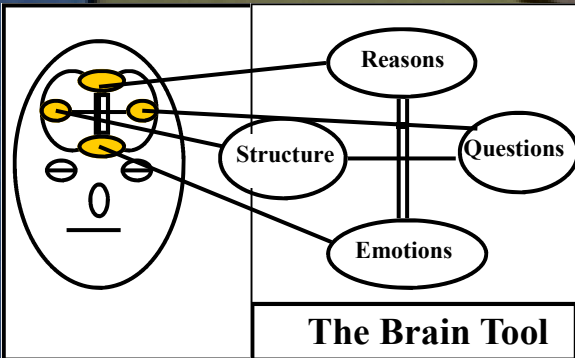


Poster



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Executive Realm



**Key Concept 2:
Strategy Skill**

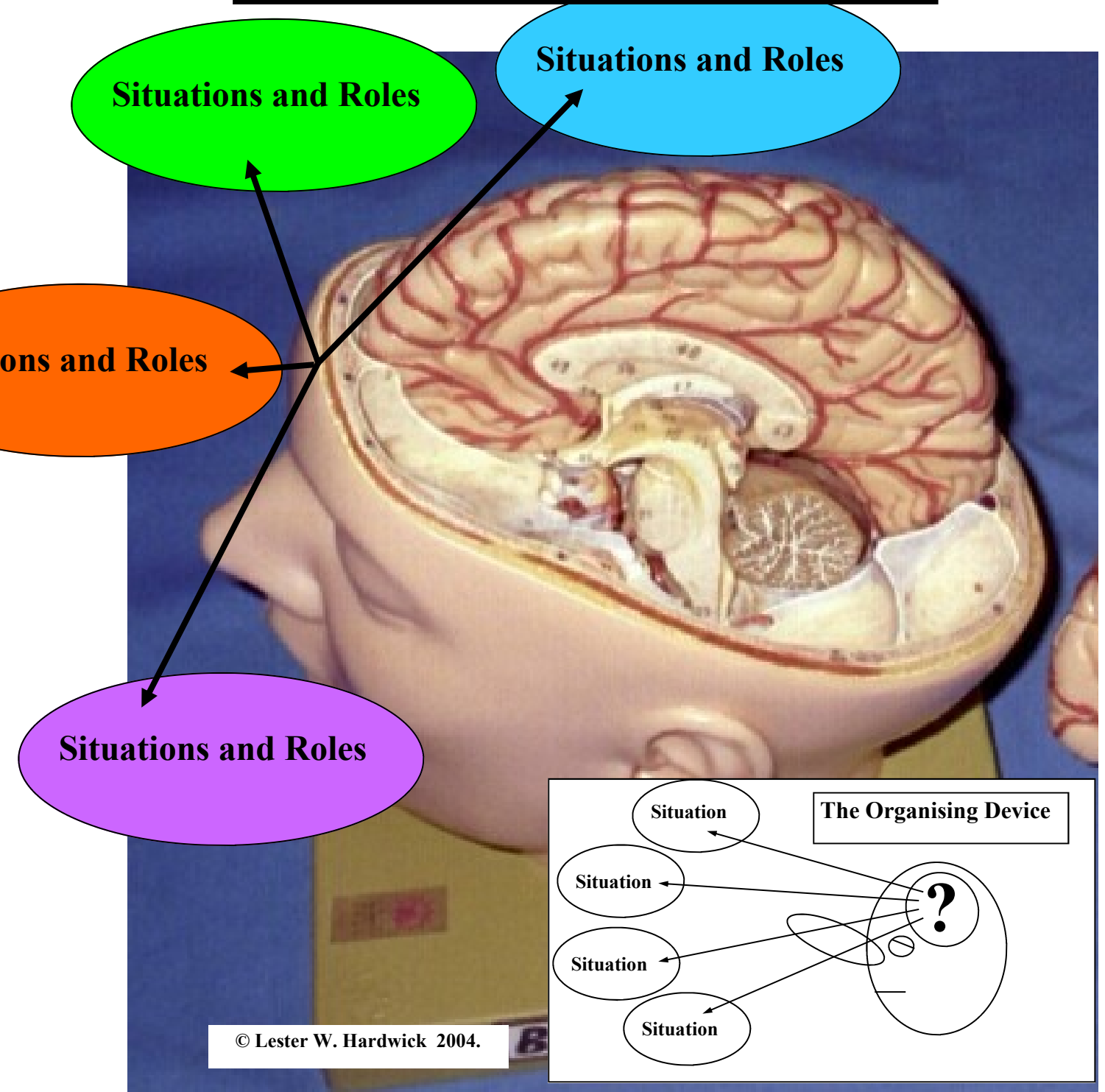
See Page (W) : Notes on the Introduction, for background.

Poster

Brain-tools

Just think about it.

G.



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Key Concept 3: Organised Transfer

Attention and Transfer

See Page (W) : Notes on the Introduction, for background.

H.

Mindset and Roles

Brain-tools
Just think about it.

A Student's Code

Education



**I am a Student.
My job is to be a Learner.**

**I use self-talk
to make myself learn
From Others, With Others
and *By Myself*.**

**I work for me,
and so I want to be,
the very best learner
I can be.**

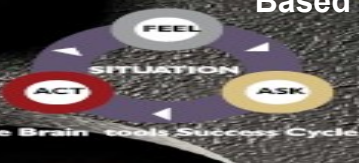


Question

Based

Learning

Roles



Name:

School:

Brain.tools Mindset & Learning Roles

Aim:

To provide a description of a worthwhile, student mindset and show students that it is a great guide for their learning behaviour.

Why:

All of the brain tools are constructed around the question. Questions initiate and direct learning. This provides a framework for learning and teaching. Who asks the question controls this learning. Here are the three teaching/learning roles in which students need to be skilled.

Three Learning Roles

I can learn **from others**, **with others** and **by myself**. These are the three basic roles of conscious learning.



Learning **from others** is **Guided Learning**. Here the teacher explicitly and implicitly poses questions to guide the students' learning. The students have to engage with the teacher's questions and corresponding solutions and ask clarifying questions. Thus they actively make meaning and internalise new learning. The teacher adopts a lecturer/trainer role.

Brain-t.Ols
Just think about it.

Lifelong Learning

From Others

With Others

By Myself

Learning **with others** is **Co-operative Learning**. Here all are students and teachers as various participants alternatively pose questions or engage with others' questions. Contributions to the learning are relative to each participant's abilities. The meaning and learning developed are similar for each participant. The teacher adopts a facilitator/collaborator role.

Learning **by myself** is **Self-Directed Learning**. Here the student poses their own questions that initiate and direct their own learning. It is the highest level of metacognition calling for the integrated use of all the Brain.tools' key concepts. The meaning and learning developed are personal to each participant. The teacher adopts a mentor/patron role.

Our Learning Brain

Guided Learning (From Others) Co-operative Learning (With Others) Self-Directed Learning (By Myself)

Questions are the basis of conscious learning. Who asks the questions controls the learning.

Types of Lessons

Guided Learning (From Others) Co-operative Learning (With Others) Self-Directed Learning (By Myself)

The nine Combinations of Control in Learning

How:

Unpack the three key ideas in this poster (Job, Role and Reward). Introduce the concept of Self Talk, thinking about your thinking or metacognition. Have students learn the words in the speech bubble and be able to write and recite them from memory.

Describe how the students can exploit the three learning roles to maximise their success in learning at school and elsewhere.

Have students describe the three roles from memory and explain how they can be exploited for their success.

J.

**Engage
Learning**

Brain·tools
Just think about it.

Unlock Your Potential

Education

**Choose
Your
Thinking
Mode!**



**Learning Mode.
Learned Mode.
Inactive Mode.**

Brain·tools
Just think about it.

ATTENTION

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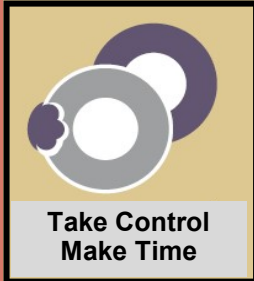


Use the Brain Dance to remember the Modes and to aid the Choice of the appropriate Mode for the present Situation.

Aim: To enable students to choose the appropriate Mode for a Situation.

Why

We have **three thinking modes** to choose from to maintain or improve our level of success: (A) Learning behaviour (Proactive Mode) is where we think up new ideas and ways of acting to improve our level of success. It is how we consciously learn and innovate. "Yeah!" It is our brain's energy guzzling mode. (B) Learned behaviour (Reactive Mode) is where we use learned ideas and behaviours to improve or maintain our level of success. Most times it is great. "Yeah!" However, if the situation changes the old idea and behaviour may not work. "Nah!" it is our brain's energy saving default mode. (C) Unresponsive behaviour (Inactive Mode) is where we choose not to respond because we have no interest, "Nah!", or we are unable to respond because we do not have the learning or learned ability. "Nah!"



Engaging the learning mode involves asking yourself questions.

How

Describe the three choices and explore with the students various situations where each choice would be appropriate and lead to success.

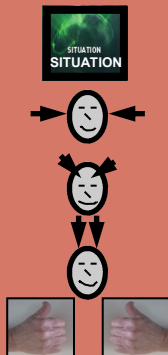
Teach the students the Brain Dance below as a fun way to remember these modes. Have the students stand and ask them what do they learn with. Ask them to point to their brain. Have them make two fists touching to simulate their brain. Take them slowly through the words and actions. Practice and gradually build up style and flair until they know and enjoy

Words

Actions

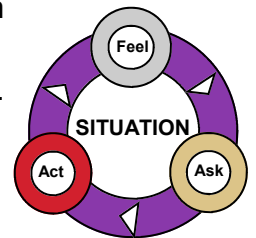
Logo

Proactive Mode



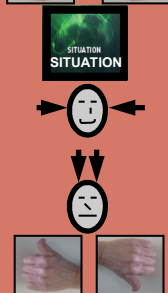
Situation Say: "SIT-U-A-TION", and draw a square in front of you with your index fingers.
Feel Say: "FEEL", point just in front of your ears.
Ask Say: "ASK", and point to your forehead.
Act Say: "ACT", and point to your crown.
Yeah! Say: "YEAH!", and put your thumbs up in front.

(This is **learning** behaviour)



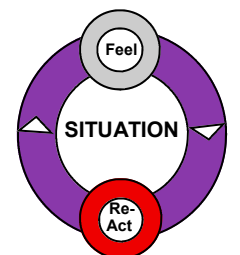
Proactive Mode

Reactive Mode



Situation Say: "SIT-U-A-TION", and draw a square in front of you with your index fingers.
Feel Say: "FEEL", point just in front of your ears.
React Say: "REACT", and point to your crown.
YeahNah! Say: "YEAHNAH!", and put one thumb up and one down.

(This is **learned** behaviour)



Reactive Mode

Inactive Mode



Situation Say: "SIT-U-A-TION", and draw a square in front of you with your index fingers.
Feel Say: "FEEL", point just in front of your ears.
Huh! Say: "HUH!", and put your hands out palms up and shrug your shoulders.
Nah! Say: "NAH!", and give the thumbs down.

(This is **unresponsive** behaviour)



Inactive Mode

L.

The Learning Logo

How I can make my brain work for me through this four step model of the Proactive Thinking Mode.

Brain·tools
Just think about it.

Unlock Your Potential

Education

Step 1. Situation

Actively seek out learning Situations to improve your level of Success.

Step 2. Feel

Monitor your feelings to these Situations and use their energy to drive your learning.



Step 4. Act

Put your plans into action and learn your way to Success. Be a Proactive Learner.

Step 3. Ask

Use the Tools to generate ideas and plans for success through learning.

Invest in Your Success... use the logo's 4-Steps to 'Unlock your potential.



Brain.tools Learning Logo

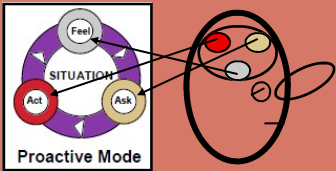


Aim:

To show your students how they can make their brains work for them through using the Braintools Learning Logo as a four step model of learning.

Why:

Ask your students to clasp their hands, fingers intertwined, in front of themselves then do it again with the other thumb on top. Next have them fold their arms and do it again in the opposite fold. Ask them if they noticed that the second position felt uncomfortable and required some thought to do it. You see we are not in conscious control of our actions for most of the day. We mostly instigate and are generally aware of our actions but our subconscious learned programs run our actions. There are two possible ways to clasp hands and fold arms yet we tend to always do it in the same learned way. Why is this so? The brain is a gas guzzler using one quarter of all the food energy we put into our mouths. Learning is its high energy mode, while learned behaviour is the brain's everyday, energy saving default mode and so is naturally favoured. This is great until the situation changes and we need a new, successful way of behaving. The Learning Logo is designed as a mechanism for us to take control and move this control around the brain in a way that simply models the complex learning process. Thus it enables us, at will, to kick our brain into its learning mode and make it work for us.



Locus of Control



How:

Show the poster to your students and then use the above information and activities to explain its use.

Have them practice drawing the logo free hand until they can do this from memory.

Use the information below to expand on the detail of the Learning Logo.

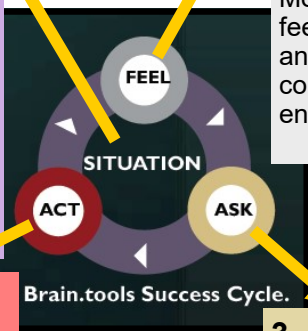
Phases of Learning

1. Situation
 A Situation is something that attracts our attention because it is an opportunity or threat or just interests us.
 We can usually name it and/or describe its who, what, how, when, where and why parts. It is how we make meaning of our environment.
 We have different Mindsets to different Situations based on our values, attitudes, experiences, role and goals. Our Mindset can warp our perception of a Situation

2. Feel (Engage)
 When we become aware of a situation we notice an emotional response to it along the range from positive through neutral to negative.
 Monitoring and clarifying these feelings enables us to pause and if desirable, take conscious control of our thinking and engage this proactive learning



Learning about Learning



4. Act (Learn It)
 Plans without action are only expressions of intent. Here we decide and act, and when we do we change the situation.
 It may be what we desire or we may find ourselves entering the next learning cycle on our way to achieve success.

3. Ask (Make new Meaning)
 Learning requires asking yourself questions and expending energy.
 Here we select our question based Braintools and use them to generate ideas, behaviours and plans for success.



The Learning Mode

N.

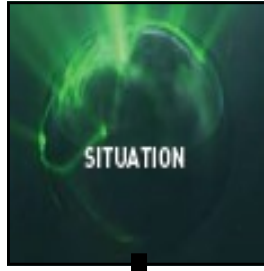
Use this Feelings Filter at Step 2. to help decide.



Education



**The UIUE Scale.
Is this Situation...**



No ← → Yes

UNKNOWN
to me?

1.	2.	3.	4.	5.
----	----	----	----	----

IMPORTANT?

1.	2.	3.	4.	5.
----	----	----	----	----

URGENT?

1.	2.	3.	4.	5.
----	----	----	----	----

EASY?

1.	2.	3.	4.	5.
----	----	----	----	----

CHOICE!

I need to learn about it ...or ...
I do not need to learn about it.



How well can you make your brain work for you?

Feelings Filter

Monitor your feelings that are generated by these situations of opportunity or threat.

Use the UIUE scale opposite to rank and to decide if you need to learn about the Situation by setting up a File to 'Think Tank It'.

The **UIUE** scale for Thinking Mode choice.:
Unknown, **I**important, **U**rgent and **E**asy.
 To rank; respond, record and total your score.

Is this situation **UNKOWN** to you? You do not know about it nor have the skills to be successful here.

1.	2.	3.	4.	5.
----	----	----	----	----

Is this situation **IMPORTANT**?

1.	2.	3.	4.	5.
----	----	----	----	----

Is this situation **URGENT**?

1.	2.	3.	4.	5.
----	----	----	----	----

Is this situation **EASY** to work through?

1.	2.	3.	4.	5.
----	----	----	----	----

Rank total and Decision to 'Think Tank It'.

--

Aim:

To have the student consciously make a decision whether or not it is in their best interest to engage in Learning.

Why

This decision is directly related to our time and energy expenditure and our desired level of success. The following ideas can put this decision into context.



A learning response requires more time and energy than a learned response. Generally if we are happy with our learned response we just keep automatically doing what we have always done without much conscious thought. However, if we have the time and self awareness, great improvements can be made by challenging this learned behavior and putting effort into learning to do things even better.

If we are unhappy with what is going on or are excited by an opportunity, we may improve our level of success by investing time and effort in learning. That is to consciously engage in learning.

Sometimes things are not relevant to our perceived level of success and we simply ignore them. At other times things are relevant but we do not have the learning ability to be successful here, so we need to make plans to accommodate these things and minimize their impact.

How

Display the poster, paper and/or digital, and explain why the scale is of use in terms of their time, effort and success. Draw attention to the five point range of the scale and discuss the meaning of each of its four items.

Model the use of the UIUE scale at the beginning of lessons and curriculum units by displaying the poster and guiding the students through its process. Next have the students draw up their own scale freehand and then record their own responses in it.



Use the scale as a basis for discussions and interviews with students regarding their school work in the various curriculum areas.

Remind the students that the scale is not an absolute instrument but simply clarifies the decision they make and are responsible for.

P.

Purpose Tool

Learning Driver



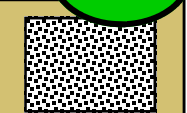
A possible Purpose:



MOTIVATION



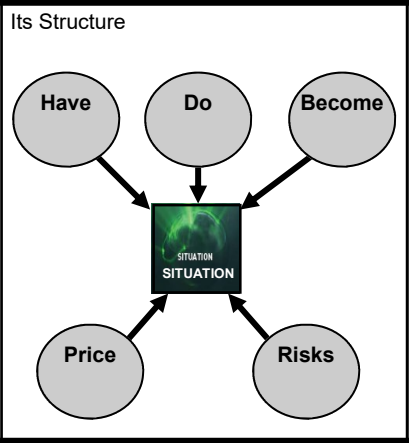
How well can you make your brain work for you?



Purpose Tool

Motivation. Its Questions:

What do I want?
What do I want to do?
What do I want to become?
What price am I prepared to pay?
What risks am I prepared to take?



Its Why Use:

a) The Purpose Tool is the most important in the program because a Purpose (Dream, Mission, Aim) provides you with direction, determination and motivation. Record and display to keep you focused.

b) A Purpose gradually unfolds over time and is multi-faceted reflecting our various life roles. However, at its core our Purpose is what makes us feel important, valued and worthwhile. And so it deeply affects the behaviour of individuals and groups.

c) There are no free lunches. All things that we consider worthwhile have a price and risks which we need to identify and accommodate.

Motivation 1. Purpose

Aim: 1) To enable learners to gradually clarify and define a Purpose which will act as a focus for motivation and direction in their life and so drive learning.

2) To provide learners with techniques to ensure that this Purpose retains its impact on their learning and life by developing the habit of reviewing, adapting and modifying it to meet the changing needs of their life's roles, goals and situations.

Why use this Tool?

The Purpose Tool is the most important in the program because a Purpose (Dream, Mission, Aim or Life Goal) provides you with direction, determination and motivation.

Your life time is your most precious possession. Having a purpose helps to spend it well.

A Purpose is fundamental to being a learner, it gradually unfolds over time and it usually takes effort and reflection to find one that is worthwhile. As such it is tailored to the individual learner.

There are no free lunches. All things that we consider worthwhile have a price and risks which we need to identify and accommodate.

How to use this Tool.

Spend some time reflecting on what you want to have, want to do and want to become. Build up initial lists for the Have, Do and Become.

Review over time to develop comprehensive lists and make adjustments as your desires change. Update your lists regularly and record.

Draw out of these lists a simple statement which describes your general purpose and includes those things and roles that are important to you. Keep this in view and modify as necessary.

Identify related Risks and Price or personal costs. Indicate how serious you are about this Purpose by recording what you are prepared to do to achieve it.

Set tasks to do to achieve this Purpose. Monitor your progress and set more tasks.

Look for mentors who will help you clarify your purpose and offer advice as you go forward.

R.

Training Activities: Young Learners.

Hand out A3 sheets and show your students how to draw a large square (10x12cm) in the centre. Have them write ME under this square then draw in it and colour a picture of themselves when they are 44 years old.

Next invite them to go through magazines and cut out things they would like to have, things they would like to do and things they would like to become by the time they are 44. They might draw on slips of paper if a desirable item can not be found in a magazine.

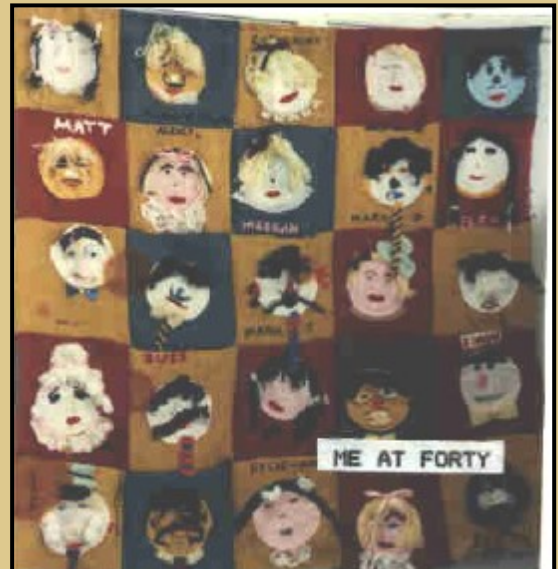
Then have them place these cut out pictures on the A3 paper in an interesting layout around their ME drawing, show to the trainer for comment, then glue in place.

Now the students in groups display their sheets to the rest of the class. Then students find a partner and tell each other about their picture. Follow these conversations with a class discussion around the types of roles, jobs and careers that people take on in life that give them a purpose. Direct the students to look at their picture to see if it fits with any of these purposes. Emphasise that while purposes can be similar they are different for each person.

Finally encourage each to stand and talk about their picture and what they might become. Remind them to dare to set big goals. Dare to Dream. If you reach for the stars you rarely come up with a fist full of mud.

Vary this activity by having the students use cloth, felt, yarn and other materials to make a ME collage as these tend to capture more of their personality .

As well as exploring careers, roles and jobs, reading short stories or biographical extracts about famous people is a good aid to help others understand and define a Purpose. When working with participants who have not spent much time reflecting on this area of Motivation, especially if they are young, teachers need to resist the urge to produce comprehensive descriptions of Purposes. Keep the initial outcomes simple and focus on developing the habit of using the tool.

**Training Activities: Older Students.**

A) Have the participants think of people they admire and write down three or four of their names.... Next ask the participants to recall what it is that these people *have*, *have done* or *have become* which causes this admiration..... Then suggest that they choose one name off the list, tell it to a person nearby and explain their choice and also listen to other participants explain their choices.

B) Provide each of your students with a copy of the Purpose Tool's poster and have them fill in its circles with their corresponding questions. Next give an overview of the structure on the worksheet in relation to these Questions and describe the aims of the lesson.

C) Ask the participants to recall Step A. and then set them the task of reflecting on their own needs, wants, interests, assets and abilities in order to produce lists of all the things they would like *to have*, *to do* and *to become* during their lifetime. Developing such lists takes time and so it is best to start the listing during the lesson and then set the participants to complete more comprehensive yet tentative lists in their own time before the next lesson. Tell your students to flip their poster over, rule up a three column page, title first column the Have, next the Do and finally the Become column for recording space.

D) Generalising purposeful roles in life from the gathered data in Step C. is a difficult task and is one that requires reviewing and clarifying over time. Very few people identify a clear Purpose early in life. To help the participants construct a first draft Purpose, revisit the admirable people from Step A. Ask for examples from the group and then model generalisation by saying, "That person's Purpose in life seems to be an entertainer, parent, athlete, politician, scientist, singer or carer etc".

Point out that one's Purpose is always multi-faceted and is reflected in a number of roles. However, at its core our Purpose is what makes us feel important, valued and worthwhile. It also deeply affects our behaviour. Tell the participants to write a sentence on the their poster, which describes a Purpose that would possibly make them feel important, valued and worthwhile.

Suggest that the participants make copies of this Purpose and put them where they will see them often, e.g. clothes cupboard door, loo door, diary, purse/wallet, mirror, mobile phone etc.

Explain this. There is a story about a person admiring a famous violin player and saying, "I would give my life to be able to play like you." The Violinist replied, "I have !!" What would be worth trading your life time for? Have you really identified an important Purpose? Keep exploring until you have identified one that fires you up. It will probably have several parts and roles. However, keep it brief when writing it down

E) Now have the participants focus on all those things that are going to prevent them from achieving this Purpose. Challenge them by asking, "*What risks are you prepared to take and What price are you prepared to pay* to show that this Purpose is really important and worthwhile to you?".... "Are you prepared to attempt things that you are not sure of?.... Are you prepared to give up some pleasures and at times to work hard?.... How strong is your Purpose?" Suggest they record an example or two in each risk and price rectangle.

F) The secret to clarifying and developing a powerful Purpose is viewing and reviewing. Set up a review date that is suitable to the group. Have the students write their Purpose on a piece of paper. Place this paper in a self addressed envelope. Do not seal yet. There is another sheet to come from a things I need to Do and Learn session before the next review. Have students write three things I need to do and three things I need to Learn before next review. Collect and retain. These envelopes are handed back at the review date. The Purpose and Do Tools are used to review. The students are then to set their next review date. Encourage this habit of review. I tie this *Review of a Student as a Learner*, to the time table of the Monitoring, Assessment and Certificates section at the back of this program. (See Teacher's Notes page 4.)

G) Mentors can be introduced to this review process. **Activity One, Obtaining Mentors** : Ask the your students to identify a list of people who might be their mentor. Usually these people are older. They might be relatives, friends or people who the participant does not know well. The central requirements for mentors are that the student values the mentor's opinions and knowledge, and the Mentor has a desire to help someone. The students approach their prospective mentors to ask if they would consider being a practice mentor. These people need to be informed of their commitment in terms of time and role. The time at the beginning should be around 30 minutes per session, during which the students use their Purpose activity sheets as a basis for the discussion. Four to five such sessions are enough to demonstrate the usefulness of mentors. The mentor's role is to encourage, clarify ideas, make suggestions and express opinions.

Activity Two, Mentoring Session : Form the students into pairs and have them role play the mentoring session. Reverse roles to allow both to experience both mentor and participant roles. At the first real session the mentor is given a copy of Activity One for their information. During or immediately after the session the participant takes notes in their Success Diary or alters other Brain Tools' Worksheets. Remind your students of the need to thank their mentors for the help. During Recount Activities or Progress Interviews teachers indicate the usefulness of establishing long term, personal mentors.

T.

The Learning Brain



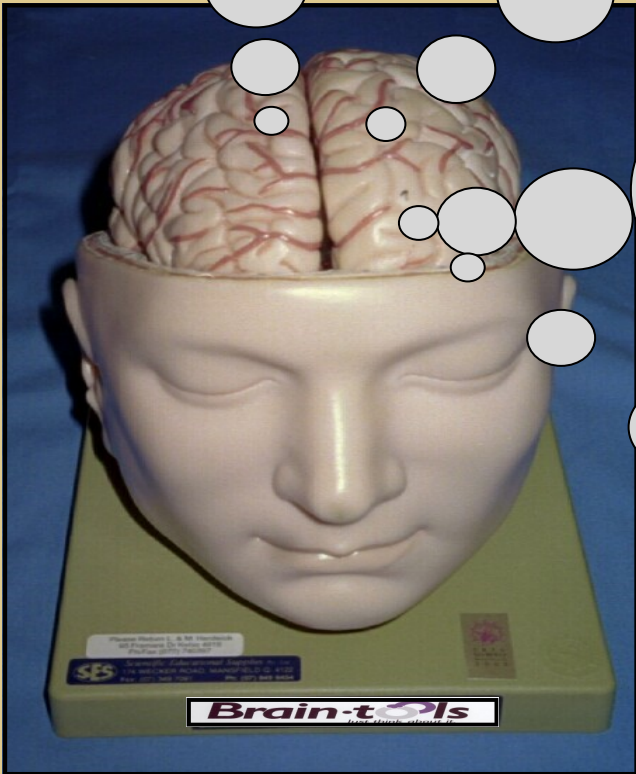
How I can make my brain work for me.

Motivate it.

Have a present Purpose to drive learning and a current list of things to do and learn.

Understand it.

Know about the three thinking Modes, three learning Roles, the four step learning Model, Questioning and integrated processing Tools.



Control it.

Monitor feelings and use Self Talk to decide to kick the brain into its learning mode and select suitable tools.

Skill it.

Become competent in a set of learning Tools and the Proactive Learning process.

Use My Critical and Creative Thinking Tools

Engage



Education

**Choose
Your
Tools!**

*



**Select Them.
Draw Them.
Use Them.**

V.



How well can you make your brain work for you?

Information Page

Using the Tools

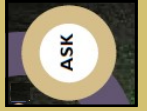


Hint: After using a Tool for a while sleep on it then return to it. Doing this prompts your subconscious to generate new ideas through the Tools.

Select It: Scan the tools and select a suitable one to use to work on this situation. You may also increase the power of your work by selecting a sequence of tools. There are many combinations to give you a vastly increased power. Keep the Tool/s you are about to use in view.

Draw It: Turn to a page in the you use for Brain.tools and draw up its structure. Note its arrows' directions. This is what the tool looks like. It provides you with the scaffolding upon which to grow and store the many ideas generated from using the tool. Leave room to expand it.

Use It: Ask yourself its question/s and then follow the structure's word prompts to generate ideas. Record the ideas in its circles. Add more circles and arrows as needed. Accept and record all ideas no matter how strange. You need to use a tool for at least three minutes as your energy conscious brain will first draw on its memory before making up new ideas. Usually the more brains using the tool the better the job. Groups of up to five work well and only one member needs to record. Members of large Think Tanks work apart & pool. Use a larger writing surface if desirable.

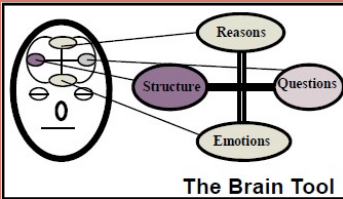


Aim:

To have the students understand how a tool works, what it looks like and how to use it to provide power and range in their learning.

Why

A Braintool is used to consciously integrate the functions of the brain to provide power and range to our thinking in any given situation. Each tool has three components, Question, Structure and Statement. Of the four basic types of sentence (Statement, Question, Command and Exclamation) that we use to communicate and think with, the question is the only one that can initiate and direct learning and so it is the keystone of a tool.



The Brain Tool

Using the tool's Question/s further kicks our brain into its learning mode, while the tool's Structure acts as the scaffolding upon which to grow the many new ideas that result from this questioning. The functions of reason and emotion are combined in the Statement which drives the use of a tool. It provides the "Why use" this tool component for the student.

The tools can be divided into two basic forms, Generating Tools which have a growth process and Reflecting Tools which have a range process. They are easily distinguished because the Reflecting Tools have five point ranges in their structures and Generating Tools have circles in their structures.

As the Braintool is composed of the verbal, spatial, emotional and rational components of memory it is able to accommodate a range of student learning styles. The intent is to progressively imbed this system of tools into the students developing neural networks so that they are provided with a readily available box of tools for lifelong learning.

How

First describe the Braintools components, forms and operation. Next, the above, "Select It, Draw It, Use It", describes the three basic steps for training students in how to use a tool. Select suitably engaging situations for this training and practice from the subjects that you teach (see the Support Activities Booklet and download).

Now put your students into groups of three. Assign the task of recorder/reporter to a student. Walk them through the three steps until they have completed the three minutes or more of group use, then have the recorder/reporters stand and report their group's ideas and tally of different ideas. Encourage applause for great ideas. The focus is on excitement, fun and valuing excellent performances and products. In future sessions vary the group size and finally have students work on their own. Conclude the training by providing the situation and having the students select and use tools of their own choice. Use this lesson for skilling in each tool. (See page 0.1 for details.)





Notes on the Introduction



Why Bother

Suggest, “ All this learning stuff seems to require a lot of effort and hard work. What’s in it for students? Why bother doing this difficult job?” Discuss all the various reasons for students going to school to learn such as to please parents, because it’s the law, it can be exciting and interesting etc. Draw the conclusion from the discussion that ultimately we are working for ourselves and how well we do this job at school has an impact on how successful we will be in life for ourselves and others.

Three Areas

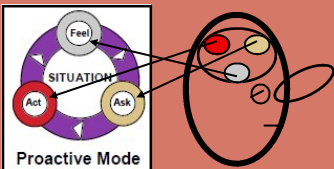
This is the way the students are introduced to the three areas of the brain that are used in this training course.

Have the students show hands for each of the following questions.

1. Who has ever been sad?.... angry?.... happy?.... frightened? Tell them that these feelings come from the Feel area in our brain and have them point in front of their ears.

2. Who has made up a game?.... solved a puzzle?.... told a story?.... told a lie? Point to your forehead and indicate that this is the area where we ask questions and make up new ideas, and so we call it the Ask area.

3. Who can ride a bicycle?.... brush their teeth?.... type a text message? Have them point to their crown and tell them that this in the area that we use to do things, to make our muscles act and so we call it the Act area.



Learning Logo

Simplistic Model

While this simplistic model suggests particular functions for various areas of the brain and thus provides a suitable, concrete framework for the training of preschool age children on, it must be remembered that these areas are not necessarily fixed and where exist are only involved as a key part of an holistic, integrated, network of pathways that makes up any particular brain function. The concepts of plasticity, integration and Locus of Control are presented to the secondary students as they gain more knowledge of the brain and more ability in abstract thinking.

Process/ Content

As this course is based on the knowledge and performance of a number of processes and skills, it is suitable for the P-12/Adult range of learners. The content and context of the lessons can be adapted and designed to suit your particular students’ range of interests and abilities.

Assessment

The introductory activities are designed to provide the knowledge and experience to take on the development of a Proactive Learning Mindset. We need an assessment of this ongoing development for each student and also need to revisit the lessons to consolidate this ongoing development. A checklist is provided in the assessment section to assist with this. Teachers need to develop their own assessment instruments based on their particular units of instruction from the introduction lessons. While the following process based tools are taught in a game like lesson atmosphere, their mastery must also be closely monitored with respect to their assessment criteria and certificate level.



Brain·tools
Just think about it.

Education

BrainTools Education
An Easy Access Extract

Activities and Games
to promote
Critical and Creative
Thinking

The Tools

Play these 12
simple fun games
and give your students
A Tool Kit for Thinking



Playing Instructions

Why play these games?

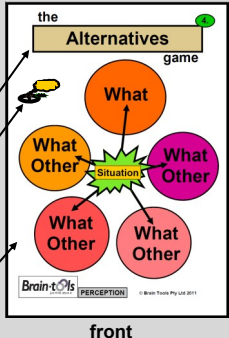
- ☺ You can give your students a basic tool kit for thinking and learning through playing these simple, fun games. It is an introductory Learning-2-Learn course.
- ☺ A bonus is that you can also use the games' tools as an aid for teaching students from tots to teens during your direct instruction, discussions, negotiations and general class conversations as they learn their way to success.

Steps for playing these Games with your students.

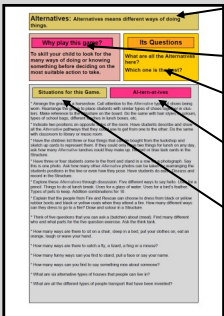
Step 1. Choose a game to play with your students by checking out the information in the contents page and on the backs of the game boards. There is no order to learning these skills so start with any game you like. Here, for demonstration, I will choose the *Alternatives Game*. Arrange your students in a horseshoe or other class arrangement that supports whole group learning and viewing of a board (black or white). **Remember the key is to have lots of fun and value performance.**

Game Board
Format
(print boards
& laminate)

Title
Focus Question
Structure
& prompt words



(Print & Laminate)



Name and definition
Why play this game?
Question prompts
Syllables
Game Situations

Step 2. Name the tool. Show the game board around to each of your students then display it at the top of your work space (screen, white or black board). Explain the type of game by saying its name and having your students repeat it. Then break the word up into its syllables and chant it while clapping the syllables like this:-

Al-ter-na-tives... Al clap, ter clap, na clap, tives clap.

Repeat it until your students can say it and clap it on their own.

Step 3. Now ask, "What does this word mean?" Discuss its meaning and use the definition provided to help your students arrive at a simple understanding of the word's meaning and what this game is about. Next ask, "Why play this game?" Explain that apart from having fun with ideas it gives us a tool to make learning easier for us. Use the information in the 'Why play this game?' box to describe the particular skill that this tool provides for learning.



Step 4. Now indicate, *“This is what the tool looks like”*. On your work space draw up the tool’s structure in large format and title it. Copy from the displayed game board at the top of the work space. Pay special attention to the direction of the arrows as they indicate how to use it.

Step 5. *“And, this is how we use it”*. Write the words in the circles of the structure. Indicate that we use these word prompts to make up questions that enable us to think up many different ideas about any situation.

Asking yourself questions (self-talk) is the key to skilled learning from others, with others and by yourself.

Finally, write the question/s below the structure.

Step 6. Take down the Alternatives’ game board and select a practice situation from the list on its back. Say, *“This is the first game situation we are going to use”*. Read it to your students while indicating the situation box in the structure drawn. Ask the Key, Focus Question, **“What is going on here?”** Next model the use of the tool by asking its question/s aloud and generating answers while referring to its structure and word prompts (self-talk modeling). Put tally marks, sketches or notes in the circles on the screen/board for each different idea generated. Add more circles!

Ask for help from the group as you continue asking the tool’s question/s (guided practice). Give praise for answers and their help. Encourage shy students to contribute. Encourage spontaneous applause from students when they spot great thinking. Have one student take over the job of putting the tally marks on the structure. Encourage exhaustive use of the tool. This forces students to go beyond memory and to engage learning.

Debrief by tallying the ideas, discussing their interesting ideas and giving them a group score out of ten for both effort and performance. Consolidate the skill by using other situations. Ask the group to score.

Step 7. Play the game a number of times. Make up your own situations. Next place the game board on display. Add other game boards over time to set up your students’ Learning Tool Kit, like putting up young students’ alphabet or number banners around the classroom for reference. Modify this basic lesson format to suit the skill and maturity of your students. e.g. Set competitive groups of 3 - 5 to work for 3 - 10 minutes using a tool on a situation. Nominate a recorder/reporter for each group who at the end of the given time reads out their ideas and gives the number generated.

Step 8. During everyday teaching/learning situations involving instruction, discussions, negotiations and concept/skill development say, *“Let’s play the (Alternatives) game!”* or *“Let’s use the (Alternatives) Tool here!”* or *“What Tool or Tools do you think would be helpful here?”* (Select & sequence). Thus you can incorporate the Games’ Tools into your general teaching repertoire. You will find them useful when teaching students from tots to teens to become skilled learners and to engage with your teaching. When your students model you through initiating tool use by injecting the tools and their questions into incidental, informal and formal learning settings, you can confirm their incorporation of these tools for learning.

the

0.2

Focus Question

for Thinking and Learning

Brain·tools
Just think about it.



Education



What is going on here?

Note about Questioning.

Questions:

Pause mental processing.

Override established neural pathways.

Generate templates for alternative or altered neural networks.

Deliver the control to select and consolidate these new brain functions.

Brain·tools
Just think about it.

ATTENTION

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Goals



A) To train students in the habits of an inquiring mind by using this focus question to continually monitor situations to identify opportunities for learning, because learning is a human's key for success in life. That is to develop in students a proactive learning mindset based on questioning.

B) To train students in a decision making process that assists them to rationally and emotionally engage in this learning through self-talk. That is to decide to invest their time and effort so as to maximize their level of success in life.

How to use

Discussion: Use the poster to introduce the focus question and questioning to your students. Next explain its usefulness to them through discussing the above goals and how conscious attention is our first step in learning and improving our level of success. Discuss the idea of self-talk. Display the poster. Tailor the discussion to the students' maturity and abilities.



Self-Talk for the Focus Question

Focus Question

What is going on here?

The Possibilities

- 1) Don't know, but want or need to learn.
- 2) Know this, but want or need to improve.
- 3) This is beyond my present abilities.
- 4) Know this and I'm happy with results.
- 5) This is not of interest, or relevant, or needed.

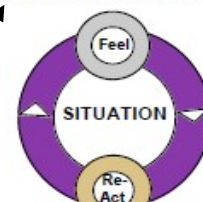
My Decision

- 1) Engage and use tools to assist learning.
- 2) Use tools to find a way around it.
- 3) Keep doing what I've learned to do.
- 4) Do nothing.

Types of Behaviour to use.



Proactive Mode



Reactive Mode



Inactive Mode

Descriptive Modeling: Frequently use the focus question and associated self-talk aloud as you go about your own teaching and learning in the classroom.

Guided Application: Direct the focus question in the form, "What do you think is going on here?" to activate your students' attention and elicit a learning response.

Personal Application: Set up a climate where students are valued for their ability to consciously direct and maintain their attention on learning tasks. Recognize and reward proactive learners with inquiring minds. See Observer's Checklist in the assessment at the back.

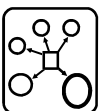
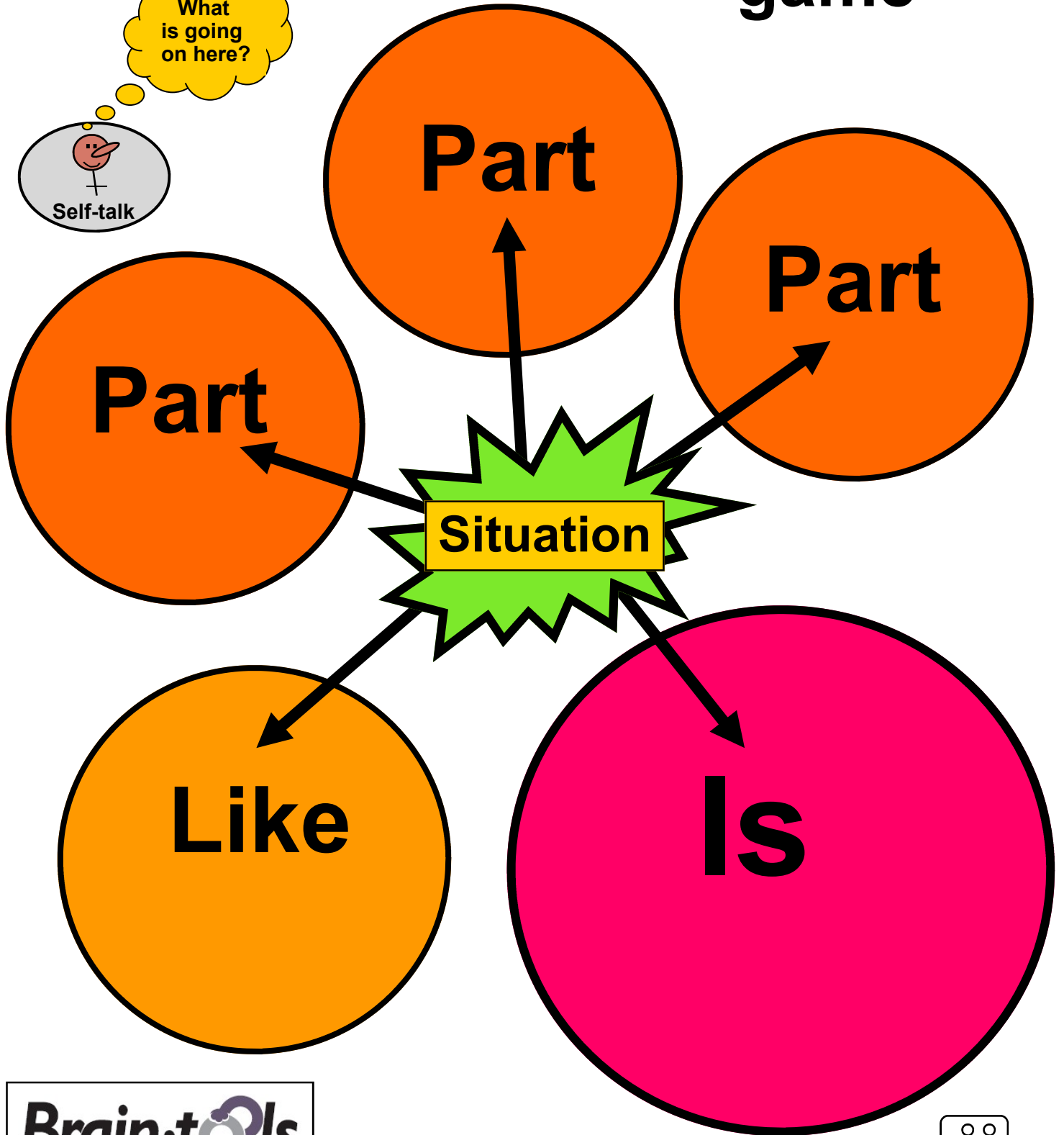
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1.

Recognize



game





Recognize: To recognize a thing means it is the same as something you have seen or known before.

Why play this game?

To skill your students to notice and think about things because the sooner you can recognize something the sooner you can utilize it.

Its Questions

What is going on here?
What are its parts?
What is it like?
What is it?

Situations for this Game.

Rec-og-nize

* *What's in the bag?* Put various objects singly or in pairs in a coloured plastic bag. Ask your students in turn to *Recognize* these objects by putting their hand in the bag while you model asking its three Questions. "*What are its parts? What is it like? What is it?*"

* *What's in my hand?* Put your students into pairs and have one turn around and place their hands behind their back. The other places an object in their hands to be *Recognized* by feel. Have them use the tool and its three questions. Talk with them about the process as they go through it. Pairs change jobs. Encourage them to play this game with others.

* *Picture expose/reveal.* Place a piece of card over a picture or photograph and gradually reveal until the Situation is *Recognized*.

* *Concept Development.* Show your students a piece of fruit like an orange and ask them, "What are its parts?" Help them list all they can see, smell, feel, hear, taste and know about an orange. Ask, "What is an orange like? And why is it not a lemon or mandarin?" Try this game with other fruit and the concepts of animals, car models, toys, houses, food or any concept that you wish to play with. How about learning the letters of the alphabet.

* *Social Situations.* How do you recognize? A joke, a robbery, an apology, a wedding, a birthday, a family, a game, a concert, an accident, music, an argument, news, a gift.

* *What's that used for?* Show unusual tools or objects and ask your students to *Recognize* its possible and probable use.

* Ask your student, "If you want to draw a playground, cubby house, party, motel, etc. What parts will you put in it so others will be able to *Recognize* it?" Have them do some drawings of various things and situations and see if other class members can recognize the subject.

* *Tell me.* Why is a light house like an ear, a refrigerator like a home, a fan like a bird or a worm like a river? Can you recognize how they might be alike? (Think up other ideas!)

* *Play Twenty Questions* (vegetable, animal or mineral) *with your students.* Here you think of something then your students can ask up to 20 questions to discover what you are thinking. Again, discuss how you use questions to discover its parts on the way to *Recognizing* it. Change roles in the game.

* **Most likely Wrong:** To decide when something is *Most Likely Wrong* you need to be able to recognize what a *mistake, a lie, a trick, an exaggeration, an opinion and prejudice* are because any of these could make it most likely wrong. What are they? Can you do it?

* **Most likely Right:** To decide when something is *Most Likely Right* you need to be able to recognize what *consistency of use, expert opinion and proof by experiment* are because any of these could make it most likely right. What are they? Can you do this?

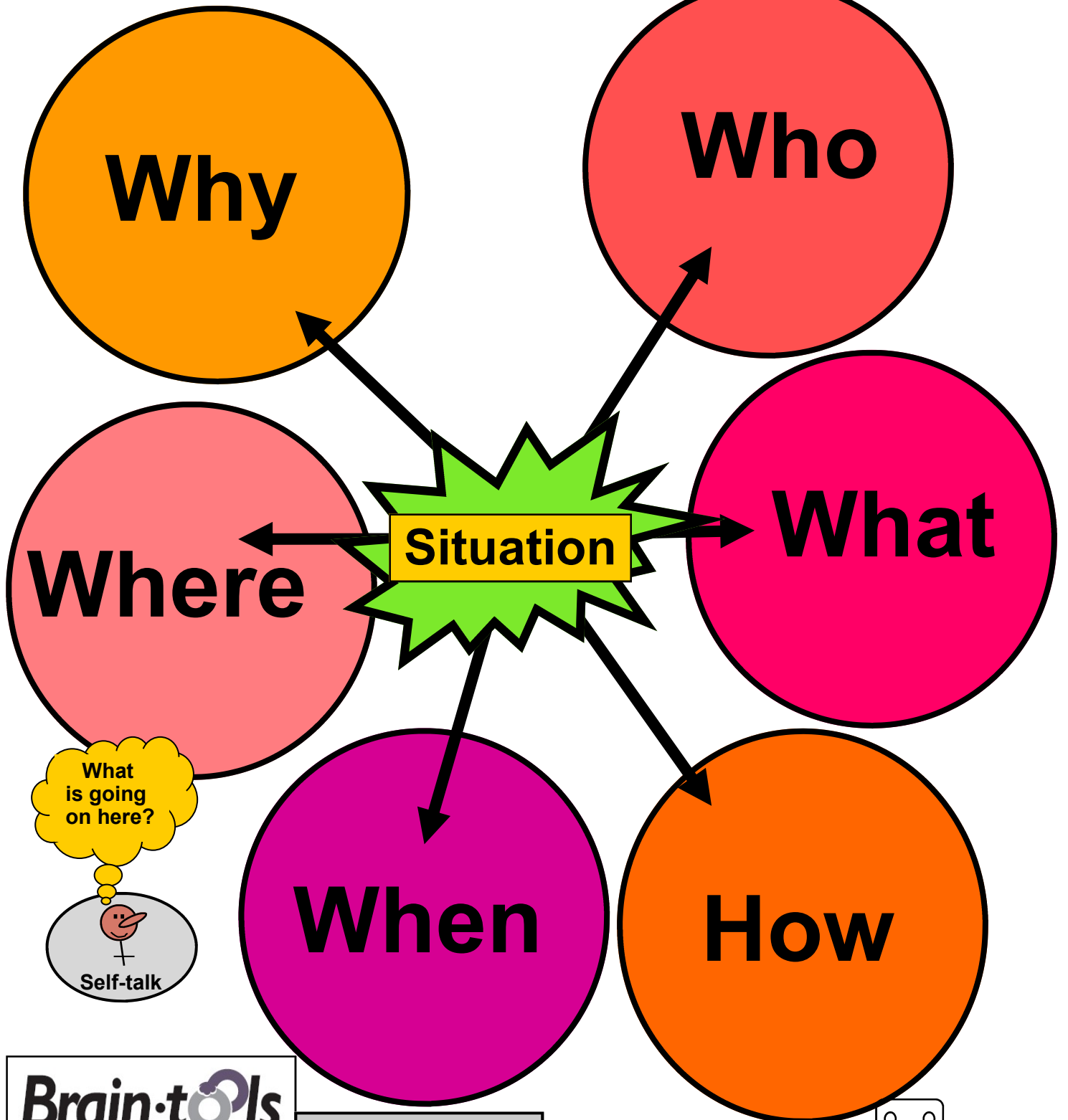
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2.

Factors



game





Factors: A Factor is anything at all that makes up the Situation.

Why play this game?

To skill your students in searching for the range and number of factors in a situation and in detecting crucial, key factors.

Its Questions

What are all the factors in this situation?
Are there any key factors?

Situations for this Game.

Fac-tors

We use the Factors Who, What, How, When, Where and Why strategy to force us to look into all the corners of a situation.

* *Situation Stimulus Pictures.* Collect several pictures or photographs from magazines. Take one and name the Situation. Then through guided discussion verbally list the Who, What, How, When, Where and Why *Factors* in this Situation. Ask if your students can find any *Key Factors*. Consolidate by using some other stimulus pictures.

* *Robot Factors.* Play as a pairs, one describes the *Factors* in a Situation. The other, a Robot, follows these directions only and exactly. Situations such as cleaning teeth, putting on a shoe, opening and drinking a can of drink, making a sandwich. Note what happens when a *factor* is left out of the process, particularly if it is a key Factor. Challenge them to think of other common tasks and invite their families to play.

* *Kim's Game.* Place several objects on a table out of sight. Send your students in threes to observe the *What* and possible *Where Factors* for 30 seconds then return and draw the items displayed on this table. Next go with your students to the table and see how well they have played. Start with four objects and gradually extend this number to make the game more challenging. Discuss techniques for observing and recalling *Factors* in a Situation. Recall the Factors game board. Extend with other observing situations for example, what was each member of the class wearing yesterday?

* What *Factors* would you consider when you are choosing an ice cream, game to play, clothes to wear, to spend/save money or video/TV to watch?

* You are in a shop purchasing a present. How could you use the *Factors* tool to help you? Try other purchases. e.g. a bicycle, house, car, pet, a toy, a loaf of bread, play equipment.

* You are about to go on a holiday, stay over night at a friend's place or go to the beach for the day. Use the *Factors* Tool to prepare for the adventure.

* You have a problem. You have lost your pet, hat or parents in a super market. Use the *Factors* tool to help you resolve the problem.

* *Role Playing.* The government is making a law so that all children will be paid for doing work at home. As a paid adviser what factors will you recommend that the government consider before telling everybody? Role play the Factors that might affect common decisions made by parents, teachers, sports coaches, police, judges, etc.

* Have your students describe various situations using the *Factors* tool when they might be happy, sad, excited, ashamed, angry, proud, frightened, anxious, satisfied or pleased.

the

Points P. & N.

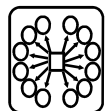
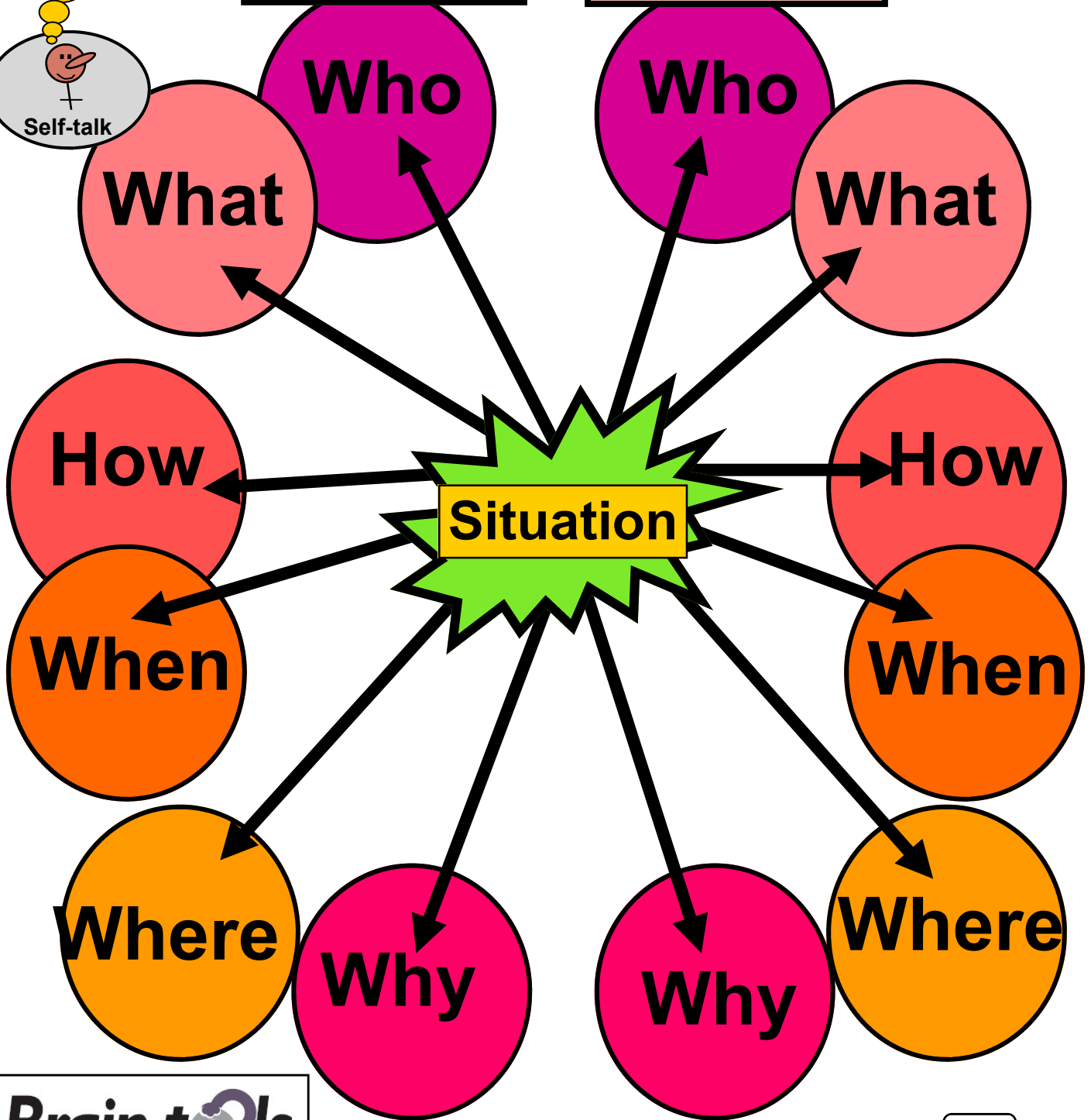


game



POSITIVE

NEGATIVE





Points P & N: Positive Points are those things that I like and Negative Points are those that I don't like.

Why play this game?

To enable your students to override their emotions in a particular situation and develop a balanced view before deciding and acting.

Its Questions

What are the Positive Points here?

What are the Negative Points here?

Situations for this Game.

Points-P-&-N

Use the Who, What, How, When, Where and Why prompts with your students to find the range and types of P & N Points of the following:-

* *Face Making.* Associate Positive emotions (happy, joyful, enthusiastic, satisfied, blissful) and Negative emotions (angry, sad, hurt, frustrated, disgusted) with facial expressions. Have your students practice some of these Positive faces and Negative faces. Then have your students show an emotive face of their choice and see if you can identify it and vice versa.

* *Feeling Fingers.* Obtain two coloured plastic bags. Tag A. and B. Put what you consider are Positive feeling items in one and Negative feeling items in the other. Ask your students to put a hand in each bag in turn, feel its items and decide which is the Positive and Negative bag. Next show the contents of each bag and discuss why each item might feel positive or negative. Next explore with your students the P & N Points of situations when they might feel Positive or Negative.

* *P&N Pictures.* Use photographs, stimulus pictures, advertisements, posters, etc. to show to your students. Ask them if the picture is mostly Positive or Negative. Have them explain their choice. Extension. Now find the P&N's in each picture. (Every Situation has Positives and Negatives). Try other media such as film and video and forms like music and poetry.

* *P/N Mimes.* In pairs group members prepare a short mime of a Positive or Negative incident. Present to the rest of the group and have them indicate why it is a P or N incident and then name the incident.

* *P/N Story.* Make a P or N statement then take turns with your students to make up a P & N story along these lines: "Two mice flew on a bird. *That's Positive.* The bird had a sore wing. *That's Negative.* The bird had a bionic wing and it fixed itself. *That's Positive.* The bionic wing's bionic cord snapped. *That's Negative.* The bird fell out of the sky into the sea. *That's Positive.* A shark swallowed them alive. *That's Negative.* The shark was caught in a fisherman's net and the fisherman cut the shark open, set them free and put a big band aid on the bird's wing. *That's Positive.* There was a giant tiger waiting for them outside. *That's Negative.* The mice tickled the tiger under the chin and they ran away while he was chuckling. *That's Positive.* They ran straight into an elephant's trunk. *That's Negative.* The elephant sneezed and launched them into space. *That's Positive.* But, they weren't wearing their spacesuits!!!!!! *That's really, really Negative!!!!!! (6 year olds).* Sketch the story path.

* What are the P & N's of these situations? If everyone told the truth. If everybody had to eat with their hands. If we didn't need to sleep. If Birthday parties were banned. If our arms reached to the ground. If TV had not been invented. If one piece of a newly discovered fruit that was easy to grow at home gave you all the food you needed for the whole day.

* Summer, Autumn, Winter and Spring. What are the P's & N's of these seasons?

* The way 3D computer printers are developing soon we will be able to make most things we want at home. This might even include our food!!!. Buy the program and print out a new bicycle. Buy the program and print out a new bed. What might be the P & N Points of this invention?

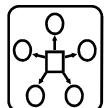
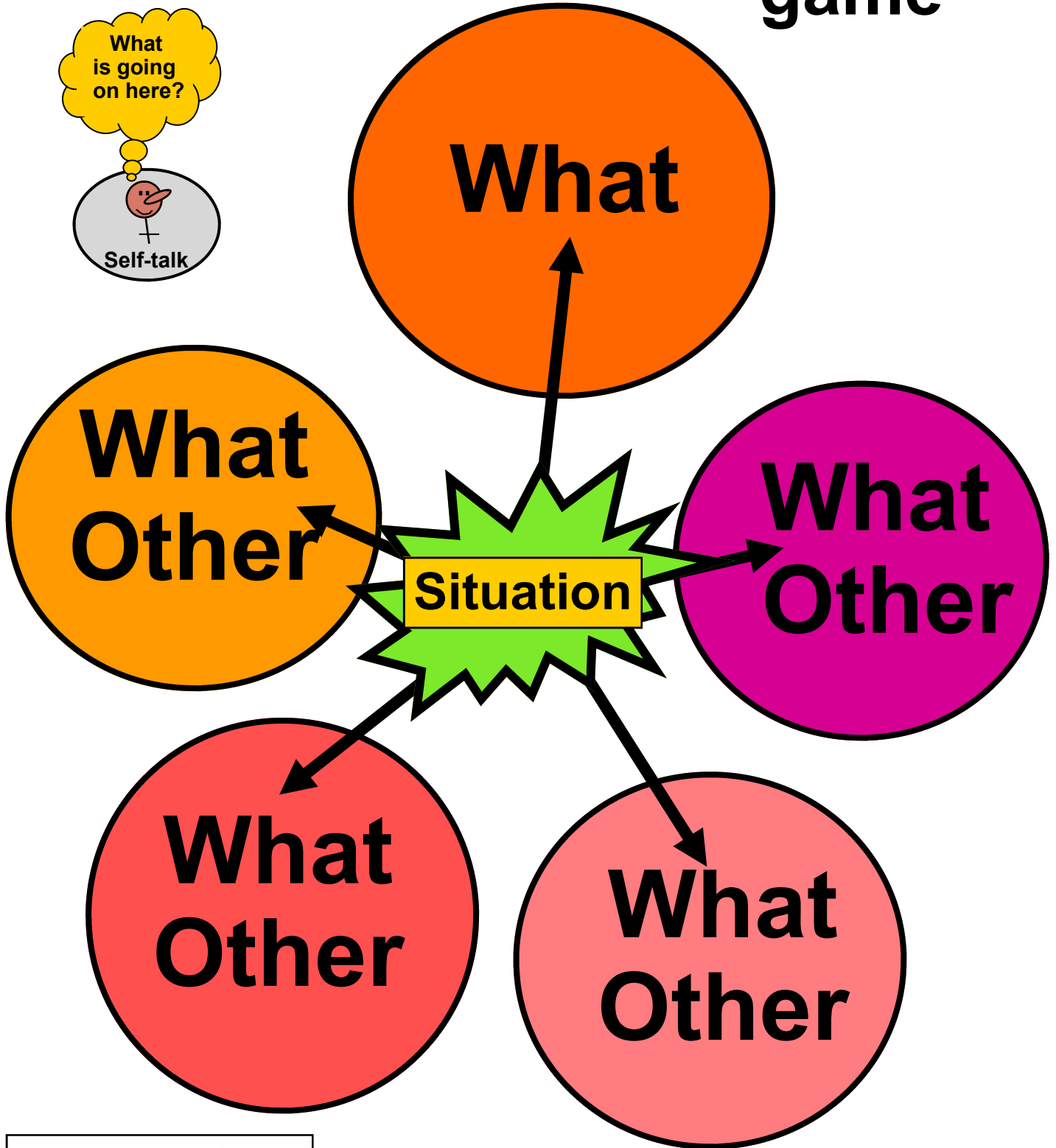
the

4.

Alternatives



game





Alternatives: Alternatives means different ways of doing or knowing things.

Why play this game?

To skill your students to look for the many ways of doing or knowing something before deciding on the most suitable action to take.

Its Questions

What are all the Alternatives here?

Which one is the best?

Situations for this Game.

Al-ter-na-tives

- * Indicate two positions on opposite sides of the room. Have your students show by moving all the *Alternative* pathways that they could use to get from one to the other.
- * Have your students list three or four things that can be bought from their school tuckshop and sketch up cards to represent them. If they could only have two things for lunch on any day, ask how many *Alternative* lunches could they make up. Record or blue tack cards in the Structure.
- * Find three or four students and stand them in a row for a photograph. Say this is one photo. Ask how many other *Alternative* photos can be taken by rearranging these people's positions in the line or even how they pose. Have your students try out the different photos that can be taken of these people. It is almost endless. Discuss and record in the Structure.
- * Explore these *Alternatives* through discussion: Five different ways to say hello. Uses for a pencil. Things to do in the evening. Uses for a glass of water. Uses for a bird's feather. Types of pets to keep. Addition combinations for 10. Toys in a toy shop!
- * Explain that the people from Fire and Rescue can choose to dress from black or yellow rubber boots and black or yellow coats when they attend a fire. How many different ways can they dress to go to a fire? Draw and colour in a Structure.
- * Think of five questions that you can ask a (butcher) about (meat). Find many different who and what parts for the five question exercise. Think of other trades and professions.
- * How many ways are there to sit on a chair, sleep in a bed, put your clothes on, eat an orange, laugh or wave your hand. Show us.
- * How many ways are there to catch a fly, a lizard, a frog or a mouse?
- * How many funny ways can you find to stand, pull a face or say your name?
- * How many ways can you find to say something nice about someone?
- * What are six alternative types of houses that people can live in?
- * What are all the different types of people transport that have been invented?
- * How many ways are there to make up with your friend?
- * Give your students three building blocks and challenge them to find how many different structures they can build with all three blocks touching. Try with four and then five blocks.
- * Jokes are funny because they have an alternative, unexpected but sensible punch line. Find some jokes and tell them. Have a go at making up your own joke.

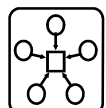
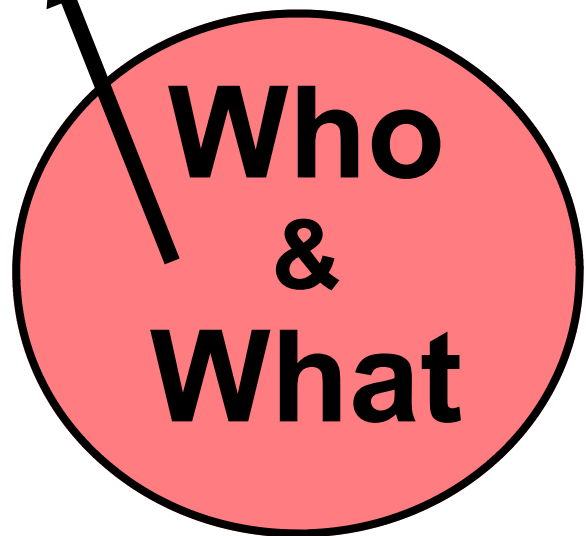
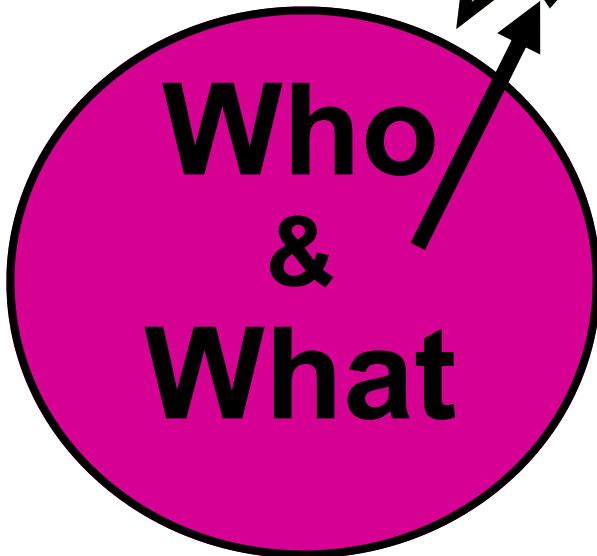
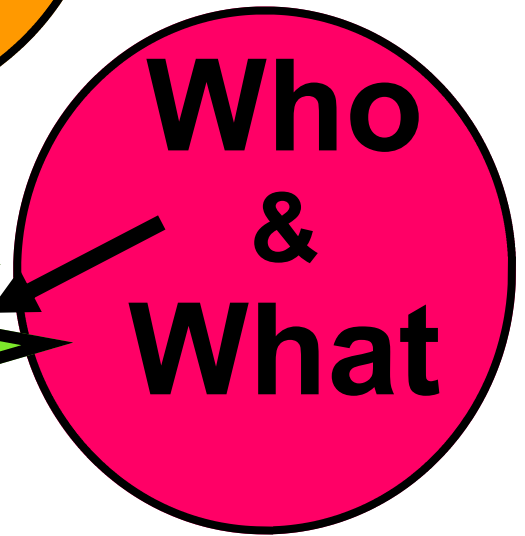
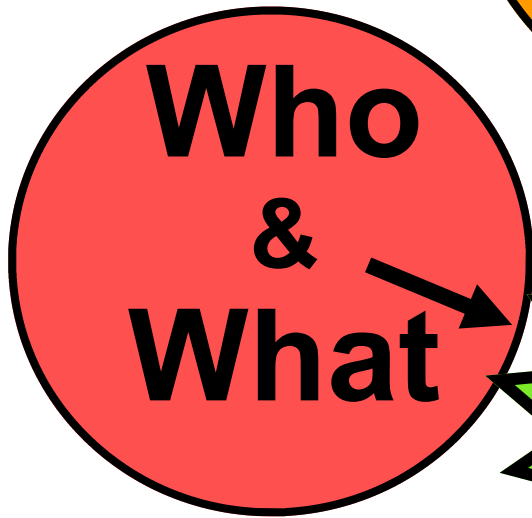
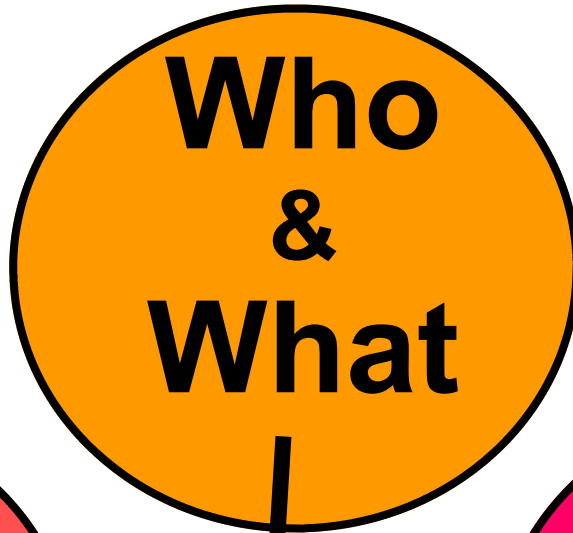
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5.

Views



game





Views: Views means the different ways different people see the same situation.

Why play this game?

To skill your students to look for who else is involved in a particular situation and what might be the different views of all involved.

Its Question

**Who is in this situation?
What are their views?
What might be their goals?**

Situations for this Game.

Views

* *I like & I dislike*:- Ask your students to list some of the things they like or dislike. For example flavour of ice-cream, type of take away food, best game to play, best and worst TV program, best and worst computer game to play, best and worst present to receive. On the Views game board select a circle and say, "This is your view circle. Can you think of anybody else with the same view? Who has a different view and what might it be?"

* *Everyday Situations for your student.* Who has a view and what might it be? Its bed time for me but I don't want to go to sleep just now. Its family TV time. What show shall we watch? We are going to visit grandma but I want to stay and play with the children next door. I was given a lot of clothes for my birthday, I don't like them much yet Dad says I have to put them on. All my friends are going for a sleep over but my parents won't let me go. I am really good at this game but they won't let me play. Do I have to clean my teeth? All my friends have a smart phone, iPad, facebook page, internet in their room. Why can't I?

* *Make suggestions like*:- keeping a whale at home, painting the family car pink, keeping calves on the back lawn, putting children in charge of the fridge for a day, letting 12 year olds drive a car, giving children \$200 pocket money each week or making everything free at your school's tuckshop. Ask, "Who would have a *View* on this?" and "What might their *View* be?" Ask your students to make up similar situations to use and play on.

* A student is walking up to the teacher's table and another student kicks him in the leg. When asked why she kicked him the second student replied, "My leg just went up and kicked him". Who has a *View* in this Situation and what might it be?

* A boy is standing on a bridge fishing. People passing by stop to watch. The boy takes out a big, fat, live worm and begins to push the hook through it. Who might have a view and what would it be? What are other situations where we use animals to help us?

* You are going to live on the Moon. You can only take four others in your space ship. Yet these six people want to come. (A doctor, a teacher, a musician, chemist, soldier and mechanic.) Each tries to convince you by telling you their *View* as to why they would be most useful. What is each of these *Views*?

* You are at a Christmas party and Santa's Helper separates all the children into a group with blue eyes, a group with brown eyes and a group with any other colour eye. Which group would you be in? To the group of blue eyes she gives three presents to each child. To the group with brown eyes she gives two presents to each child and to the other group she gives one present to each child. Who would have a *View* on this and what might it be? Are there any other situations where different groups of people are treated differently like this?

* Some people say that because children have to obey a lot of rules they should have a say in making these rules. Who would have a *View* on this and what might it be?

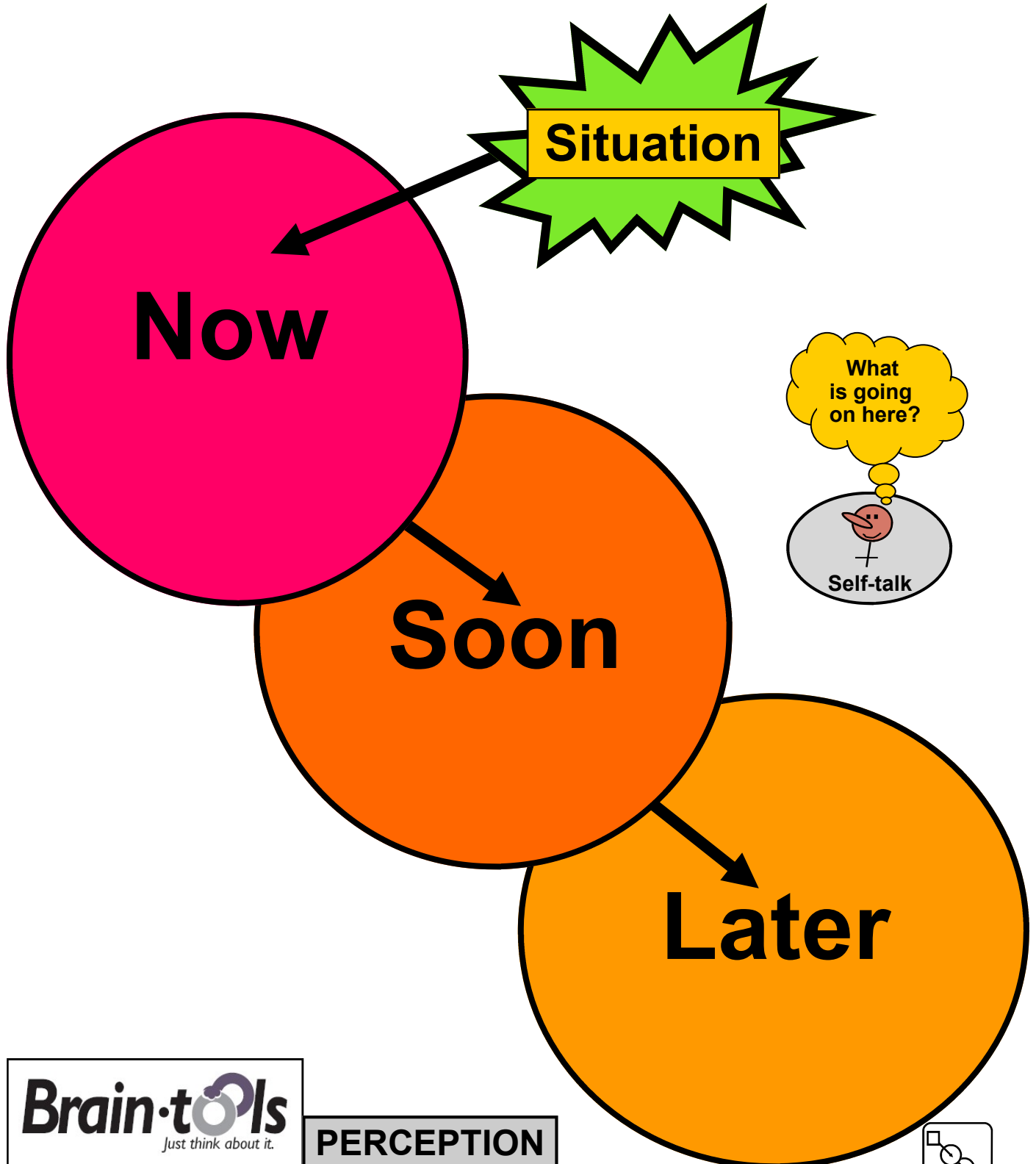
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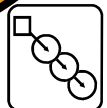
Effects



game



PERCEPTION





Effects: The Now, Soon and Later effects means that things change as time goes by.

Why play this game?

To train your students to identify the now, soon and later probable Effects of an action before the action is carried out.

Its Question

If this is done:-
What will happen Now?
What will happen Soon?
What will happen Later?

Situations for this Game.

Ef-fects

- * What are the Effects of not sharing toys with friends, brother, sister?
- * Draw a sketch or picture of yourself as you are Now, then what you will look like in five years and when you are grown to an adult. Place side by side. Try other things!
- * Ask your students to consider the Now, Soon and Later *Effects* if all the water in the taps turned to coke soft drink or shops gave away free hats.
- * What would you put on a poster to show the Effects of eating as much chocolate as you wish? Make one up and show it to others to see if they think it is effective.
- * Obtain a food scrap. Ask your students, "What will be the Now, Soon and Later *Effects* of leaving this food on a shelf in the room and/or sealing it up in an air tight container. Check and record over the next five days.
- * Explore the *Effects* if all computers broke down, petrol ran out, everybody slept in, parents were only allowed to have one child, people began walking sideways like crabs, school was only on Saturday and Sunday, if you saved a dollar a day for the rest of your life or of only eating hamburgers and drinking soft drink.
- * What would be the *Effect* of trying to fold a sheet of newspaper in half nine times or if everyone had to use their left hand instead of their right hand. Try these to see if you are correct.
- * Take the lid off a drink bottle. Roll up a piece of paper in a ball to half the size of the bottle's opening. Place the bottle horizontal and put the paper inside the opening's lip. Now ask your students, "What will be the *Effect* of blowing the paper ball into the bottle?" Give them several tries. This task cannot be done as the back pressure in the bottle pushes the paper ball out. Some times the effect we think up might not be true in real life and so we should test our ideas. Try dropping different rubber balls or dropping drawing pins, spoons or coins onto a table to see if what your students think will happen actually does.
- * Cut a strip of paper 30cm long by 2-to-4cm wide. Hold each end, put one loose twist in it and tape or glue ends. Now what will be the Effects of cutting this paper in half along a line in the middle of the 2-4 cm strip? Discuss possible *Effects!!* Try a thirds cut!
- * Chinese Whispers. Send four players outside. Tell one of the remaining students this message. *The boy went into the shop to buy his dog a green coat because it was cold.* Call in one of the players from outside and have the message conveyed to them by this student. Repeat with each outside player conveying the message to the next until the last receives the message. Compare and discuss the Now, Soon and Later *Effects* of this chain on the content of the story. Try with different players and stories.

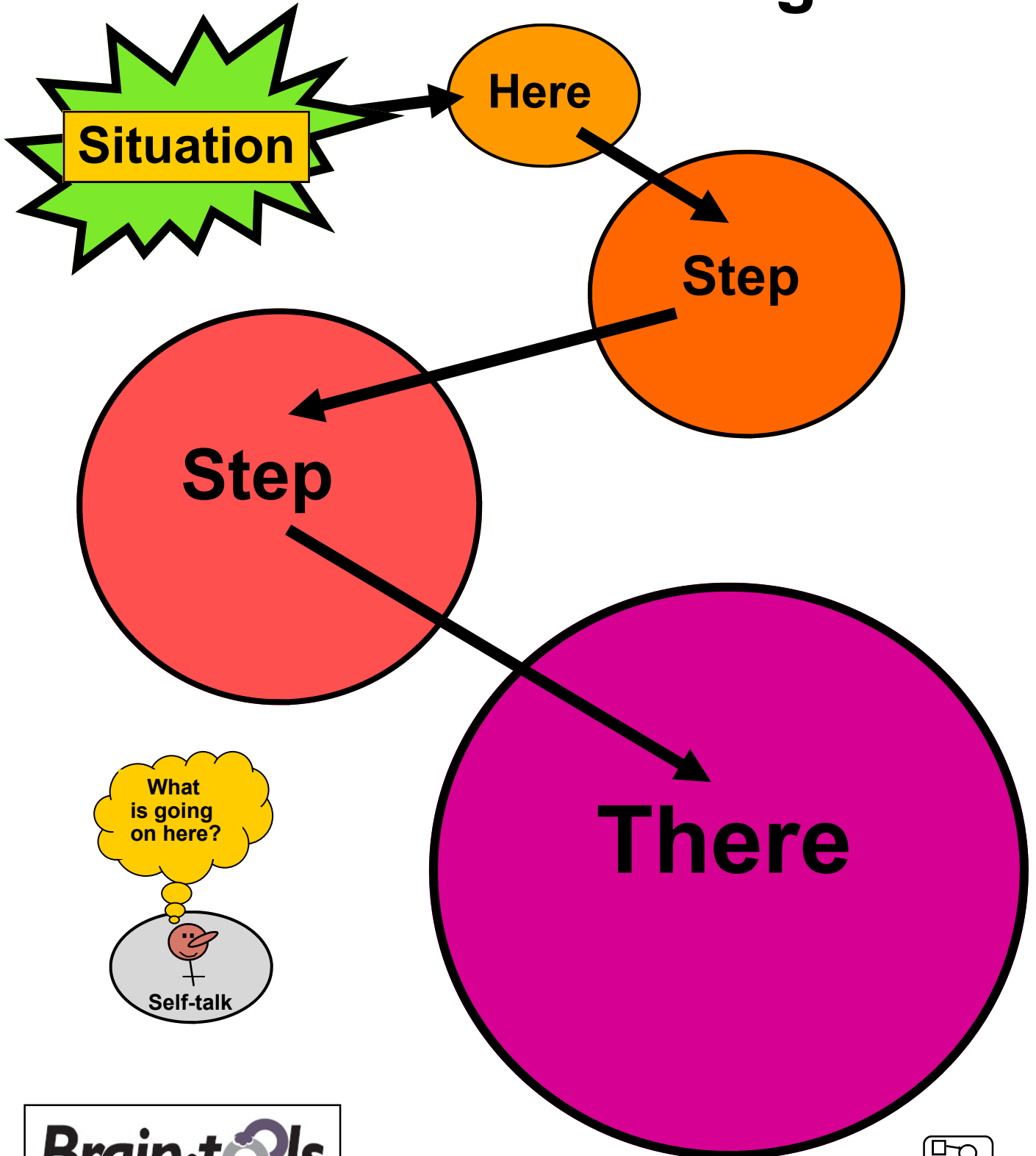
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7.

Change



game





Change: Change means to alter something to make it different.

Why play this game?

To train your students to develop new ways of doing things by changing existing objects and processes.

Its Questions

**What is this?
How can I make it different?
What can it now do?**

Situations for this Game.

Change

- * *Changing Bodies..* Direct your students to take up their start position. This is knees bent slight crouch. On a clap and the command, "Jump", they will spring into the air, land, take up a changed body stance (happy, twisted, jagged, tall, low, sad, scary, ugly, spiky etc. or any combination these) and then freeze. Inspect their efforts and comment on how well they have made the change.
- * *Bending Wire..* Describe how a simple length of wire has been changed to make a range of useful items, such as a paper clip, safety pin, hair pin, key ring. Ask if they can think up any more ways to *change* a small piece of wire. There are many!
- * *Changing Hair..* Comment on the different hair styles. Challenge your students to *change* their style to make it interesting. May be wet, but no cutting or colouring!
- * *Changing Walk..* Demonstrate a silly walk in the style of John Cleese. Have your students find some space and experiment changing their walk. Next have them present their silly walks.
- * *Changing Name..* Challenge your students to change the names of pets, streets, toys, foods, clothes, friends, etc to more appropriate names and tell you why.
- * *Changing Room..* Choose a room in your school and with your students suggest changes so that it is more interesting or comfortable to live in. Perhaps try out the changes and see if they work.
- * *Changing Story..* Read or recall a well known story (The Three Pigs, Little Red Riding Hood, etc.) or show video of one. Challenge your students to *change* the ending and then tell you their twist. Maybe substitute popular movies or TV stories.
- * *Improvement Challenges..* How can you improve a (paper plate) by changing it. Replace the paper plate idea with any object or way of doing something and set them to make improvements. E.g. fishing, selling, dancing, arguing, driving, swimming or tissues, eye glasses, drinking straws, steps.
- * *Change Behaviour..* How can you *change* the behaviour of your dog, cat, pet rat, gold fish, brothers and sisters to make them better to live with? How can you *change* your behaviour to make you better to live with?
- * You work as a home designer. Choose any household appliance (fridge, stove, toaster, bed, TV, microwave, etc) and change it so that it is more useful and interesting. What if instead you were a car designer, fashion designer or house designer?

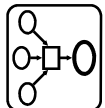
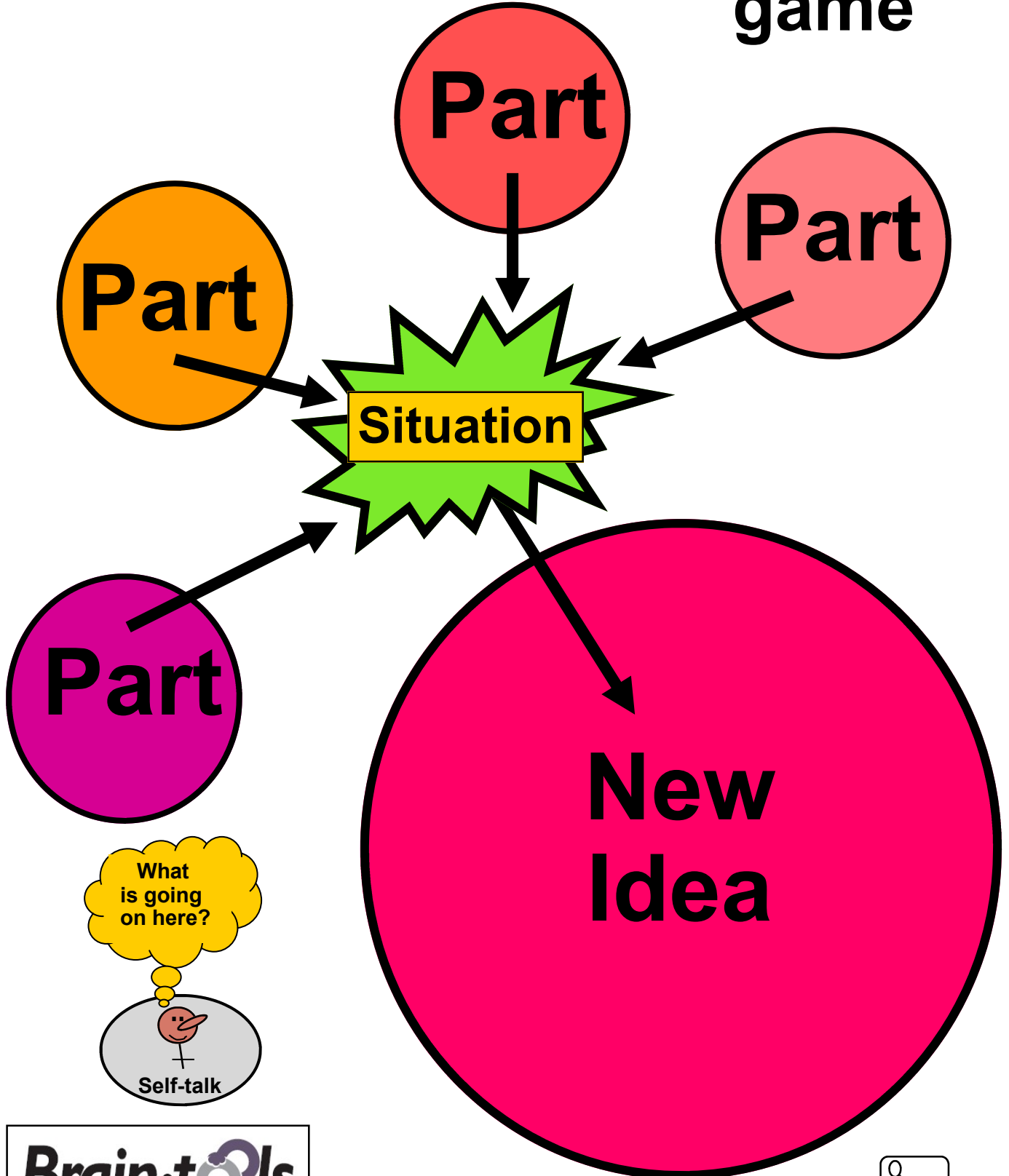
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8.

Invent



game





Invent: Invent means to put two or more things together to make something new.

Why play this game?

To teach your students to put two or more old ideas together to create something with a new function.

Its Questions

What can I put together?
How can I do this?
What is invented?

Situations for this Game.

In-vent

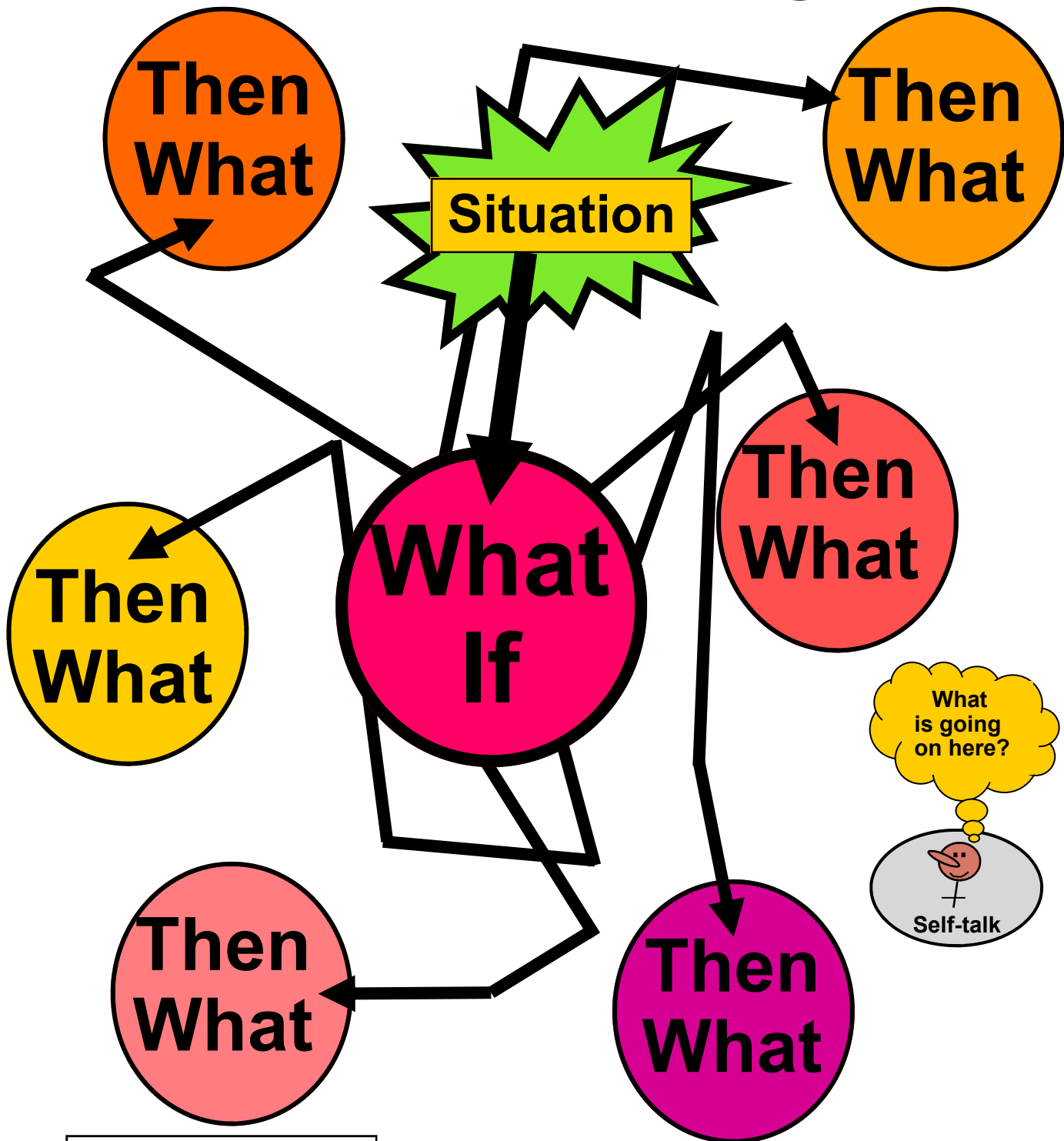
- * Have your students write names of ten things on separate pieces of paper or tell you what to write. Place names in a container. Have a student pick three names from the container and then have your students *invent* a play or story involving the three things. Replace names and repeat. Have the students work in groups.
- * Talk about different animal parts. Have the students *invent* a new animal from any existing animal parts, draw it and describe how it lives based on its design.
- * Use your body alone or in groups to *invent* a common object (car, tree, bicycle, blender, door, helicopter, etc.). Next step, if possible make it move.
- * Collect 3 to 5 objects from around the room and *invent* a sculpture from them.
- * Collect 3 – 5 objects from around the room and *invent* a game using them.
- * Have your students *invent* hats from materials close at hand and model them. Or have them use various lengths of material plus other odds and ends to *invent* a costume. Model and describe the invention.
- * Have your students *invent* a new sandwich, hamburger, meal, drink or confection. Invite them to describe orally, as a recipe or poster or perhaps even make it.
- * Give your students some answers (42, nine chickens, underwater house, John Jack, 2.30 pm, etc) and have them *invent* backwards to their questions.
- * Invite your students to *invent* new words and give their definitions.
- * Pose a problem and invite the students to *invent* a solution. Examples; How to safely milk a snake, a suitable bicycle for a post person, a safer car, a comfortable bed, keeping your pencil sharp, waking up on time, cleaning your room, the next communication gadget, etc. They might sketch and label their invention.
- * Someone or something is stealing the parcels delivered to your front door. *Invent* a trap to catch the thief. Invent a trap to catch something of your choice without hurting it.
- * *Invent* a face or person by cutting parts from magazines and gluing them on paper. *Invent* a name and life story for this person.
- * *Invent* a way to keep cool in a hot summer while walking around outside.
- * *Invent* something to sell. Invent something that nobody really needs and say why.
- * *Invent* a clothes fashion that does not use woven cloth, draw and write an ad for it.

the

Explore



game





Explore: Explore means to look for unusual ideas.

Why play this game?

To skill your students to escape from set ideas and to generate new, creative possibilities from which to select better ideas.

Its Questions

What If this Situation existed?
Then What useful ideas might come out of it?

Situations for this Game.

Ex-plore

* Activity One: Take a *What If* idea and then spend some time using this prompt to generate a list of *Then What* ideas. Finally check this list for useful new ideas.

- What If people had four legs/arms/heads?
- What If school was at night?
- What If people slept hanging from their hands?
- What if we had no way of lighting the dark?
- What If all the trees in the world vanished?
- What If all buildings were underground?
- What If all people had square heads?
- What If food was free?
- What If you had to buy air to breathe?
- What If people could only walk backwards?
- What If Children worked and parents went to school?
- What If dinosaurs lived today?
- What If there were only four days in a week?
- What If all the sand in the world turned to gold?
- What If plants could talk?
- What If all chairs had only one leg?
- What If everyone stayed in bed for a week/month/ year?
- What If it stopped raining?
- What If people of earth spoke only one language?
- What If people could fly by wings/jet pack/magic?
- What If TV also projected smell and climate into the room?
- What If we could change bodies like clothes?
- What If people chased cars like dogs?
- What If the world ran out of soap?
- What If all the money in the world vanished?
- What If soldiers fought using jokes/stares/funny faces?
- What If monkeys could do Mathematics better than calculators?
- What If cats chased dogs?
- What If people lived for ever?
- What If we could only see in black and white?
- What If people's bodies were round like a ball?
- What If computers taught us while we were asleep?
- What If all food tasted the same?

* Activity Two: Read out some of the *What If* prompts above and have your students add to the list and *Then What* these ideas.

Right Tool

Is this most likely Right?



No

Can't Tell

Yes

Because of:


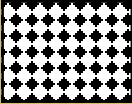

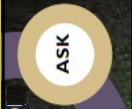
Use

Experiment

Expert

Decision



	<h2>How well can you make your brain work for you?</h2>																						
<div style="border: 1px solid black; padding: 5px; text-align: center; background-color: #f08080;"> <h3>Right Tool</h3> </div> <p>Evaluation. Its Questions:</p> <p>Is it likely to be Right because it has been shown to be so through use, experiment or expert knowledge?</p>	<p>Its Structure:</p> <div style="text-align: center;">  </div> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 15%;"></td> <td style="width: 15%;">No</td> <td style="width: 15%;"></td> <td style="width: 15%;">Yes</td> </tr> <tr> <td>Use</td> <td style="background-color: red;">█</td> <td style="background-color: orange;">█</td> <td style="background-color: lightgreen;">█</td> </tr> <tr> <td>Experiment</td> <td style="background-color: red;">█</td> <td style="background-color: orange;">█</td> <td style="background-color: lightgreen;">█</td> </tr> <tr> <td>Expert</td> <td style="background-color: red;">█</td> <td style="background-color: orange;">█</td> <td style="background-color: lightgreen;">█</td> </tr> <tr> <td>Assessment</td> <td colspan="3" style="background-color: blue; height: 20px;">█</td> </tr> </table>		No		Yes	Use	█	█	█	Experiment	█	█	█	Expert	█	█	█	Assessment	█			<p>Its Why Use:</p> <p>a) The tool helps us to overcome our dislikes and to test if the idea or action is most likely Right.</p> <p>b) You know that something is likely to be right if it has been shown to be so through a series of experiments that produce the same answer.</p> <p>c) You know that something is likely to be right if it has been used by many people over a long period of time and has consistently worked for them in the same manner.</p> <p>d) You know that something is likely to be right if a number of experts agree that it is so.</p>	<p>Evaluation 1. Right</p> 
	No		Yes																				
Use	█	█	█																				
Experiment	█	█	█																				
Expert	█	█	█																				
Assessment	█																						

Aim: To train the participants to make a considered assessment of the truth of a situation that would indicate if it was most likely Right.

Why use this Tool?

This tool helps us to stand aside our emotions and test if the idea or action is most likely Right.

How to use this Tool.

Look at the grid and place a tick along each of the five step ranges from *No* through *Can't Tell* to *Yes* for each of the following questions:-

- Is it most likely right because it is used and works?
- Are there experiments that show it is most likely right?
- Do the vast majority of experts claim it is right?

We take the above into consideration and decide, yes it is most likely Right, can't tell or no and record our reasoning behind our decision.

Wrong Tool

Is this most likely Wrong?



Because of:

No

Can't Tell

Yes

Mistake	Red	Light Red	Grey	Light Brown	Green
Trick	Red	Light Red	Grey	Light Brown	Green
Lie	Red	Light Red	Grey	Light Brown	Green
Opinion	Red	Light Red	Grey	Light Brown	Green
Prejudice	Red	Light Red	Grey	Light Brown	Green
Exaggeration	Red	Light Red	Grey	Light Brown	Green
Decision	Light Red				



How well can you make your brain work for you?



Wrong Tool

Evaluation. Its Questions:

Is this most likely to be Wrong because of a mistake, a trick or a lie?

Is it most likely Wrong because of opinion, prejudice or exaggeration?

Its Structure:

	No	SITUATION	Yes	
Mistake				
Trick				
Lie				
Opinion				
Prejudice				
Exaggeration				
Assessment				

Its Why Use:

a) The tool helps us to overcome our likes and to test if the idea or action is most likely Wrong.

b) You know that something is likely to be wrong if there has been incorrect processing of information, i.e. information missed out or incorrectly included and/or a mistake in fact or procedure.

c) You know that something is likely to be wrong if emotions override reason, i.e. opinions, desires and prejudices override fact and exaggeration overrides exactness.

Evaluation 2.
Wrong



Aim: To train the participants to make a considered assessment of the truth of a situation that would indicate if it was most likely Wrong.

Why use this Tool?

This tool helps us to stand aside our emotions and test if the idea or action is most likely Wrong.

How to use this Tool.

Look at the grid and place a tick along each of the five step ranges from *No* through *Can't Tell* to *Yes* for each of the following questions:-

Is this most likely wrong because of a mistake in fact or procedure?

Is this most likely wrong because it is a trick and information has been hidden?

Is this most likely wrong because we have been told a lie and the information given is not true?

Is this most likely wrong because it is not fact but is opinion?

Is this most likely wrong because of someone's prejudice?

Is this most likely wrong because exaggeration has overridden exactness?

We take all of the above into consideration and decide yes it is most likely Wrong, can't tell or no and record our reasoning behind our decision.

Right & Wrong Tools

(Operating tools for Evaluation)

A Trainer's Introduction to the Tool : The **Right** Tool focuses on *Use, Experiment, and Expert Opinion*. The **Wrong** Tool focuses on *Mistakes, Tricks, Lies, Opinions, Prejudice and Exaggeration*. Right or Wrong.... There is always more than meets the eye. Our emotions tend to cause us to quickly jump to conclusions about things being Right or Wrong instead of taking time to think before we decide.

Aim and Function. The students will:

a) Make a considered assessment of the truth of a situation that would indicate if it was most likely Right or most likely Wrong.

Set-Up:

Use the information on each tool's description page to give your students a brief introduction to the tool. Select the first box below for your first training episode and describe it to your students. Display the Posters.

Training :

Indicate the possibility of the following statements being Right or Wrong by placing one of the following words after it :- Use, Experiment, Expert Opinion or Mistake, Trick, Lie, Opinion, Prejudice, Exaggeration or Can't tell.... *Fords are better than BMW's. All people on welfare are bludgers. The Weather Bureau says today will be fine. After tasting both beers this one is by far the better. Doctors say that we should wash our hands before handling food. Hamburgers for sale, only \$300 each. Millions say that I am correct. Take this medicine three times a day. University tests show that this washing powder removes tomato sauce stains. It is always best to plant crops this month.*

Divide the participants into two debating teams and have them prepare a debate on a topic of their own suggestion or from the following :- *Books are better than videos. Plastic should be banned. One food outlet is better than another. You can't get too much of a good thing.* Group reporters alternatively present their group's points . The opposing group can cancel their opponent's point by showing that it is wrong by naming the reason. ie 'Strawberry ice cream is better than chocolate ice cream.' Wrong – Opinion. It depends on who is tasting it. The trainer is the judge. Part points may be given. The points that survive are tallied and the winner declared. **Putting this activity into a court case context , role playing lawyers and judge, ensures student engagement.**

As the editor for a vast media organisation your task is to scan all media for articles and advertisements to identify possibly Right or Wrong statements so as to protect your company from litigation. Choose a media source and demonstrate your skill. Present a report to your group. The advertising industry provides a host of situations for students to explore.

Or simply ask your students to critique media for examples of Right and Wrong advertising, comment, news or discussion to share with the class.

Display the Right and Wrong posters and walk your students through each grid.

Use the examples in the first box above for your students to practise making a considered decision with reference to the Right and Wrong grids.

In box two set your students to work for an agreed, suitable period (between 3 and 15 minutes). Direct them to identify and record points that support their side of the debate and can be defended using the Right and Wrong tools. Conduct a debate or court case using the above rules.

For extension or homework set your students to undertake the activities in box three.

Extension Activities 1: I like tea better than coffee. Clothes fashion harms the environment. Playing computer games for more than one hour a day is harmful to gamers. Cats are better pets than dogs. Eating a lot of fast foods/take away is just plain lazy and a waste of money. I don't like Irish people because they play a stupid game called Gaelic football. Cars made in Japan are superior to cars made in USA. I say a holiday by the sea is much more enjoyable than a hiking holiday in the hills. Credit cards have many better features than cash. Women are on the whole better bosses than men. The moon orbits the earth. The earth spins right around every 24 hours. Did you know the Earth is really flat? Humans are not making the climate change it is just a natural phenomenon. Children under the age of fifteen should not be out alone after eight pm at night! *Have the class build up a list of such statements to be challenged.*

Extension Activities 2: Find examples of these misleading communications;

- A) Buy one. Get one free. (Why would a business want to give you anything for free?)
- B) A claim that this product or service is better than X Y Z products/services and not explaining why, just having some people in lab coats in the background.
- C) Increasing the packet size and price but having the same amount in the packet.
- D) Misleading illustrations, "the pack shot".
- E) Coloured lights over fruit, veg, etc. Oranges in red net bags to make them seem ripe.
- F) Angel dusting by adding a tiny amounts of vitamins etc that have little or no effects.

Some of these statements are Right and some of these statements are Wrong. Some change from right to wrong or vice versa depending on the particular situation involved. Some are part right and part wrong. While humans can't be absolute, the use of these Right and Wrong Tools can give us some sense of security when acting. Most of human knowledge is tentative. History shows that much of what we believe to be true is in whole or in part false.

You know that something is likely to be right if it has been shown to be so through a series of experiments that produce the same answer.

You know that something is likely to be right if it has been used by many people over a long period of time and has consistently worked for them in the same manner.

You know that something is likely to be right if a number of experts agree that it is so.

You know that something is likely to be wrong if there has been incorrect processing of information, i.e. information missed out or incorrectly included and/or a mistake in fact or procedure.

You know that something is likely to be wrong if emotions override reason, i.e. opinions, desires and prejudices override fact and exaggeration overrides exactness.

How about using some of these tools to check out the statements at the beginning of this section and to also search for these advertising scams..

Note that, while using these tools we must be determined to be right in our actions, being able to recognize and admit that we are wrong generally causes a great leap forward in being right.

the

12.

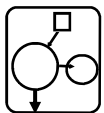
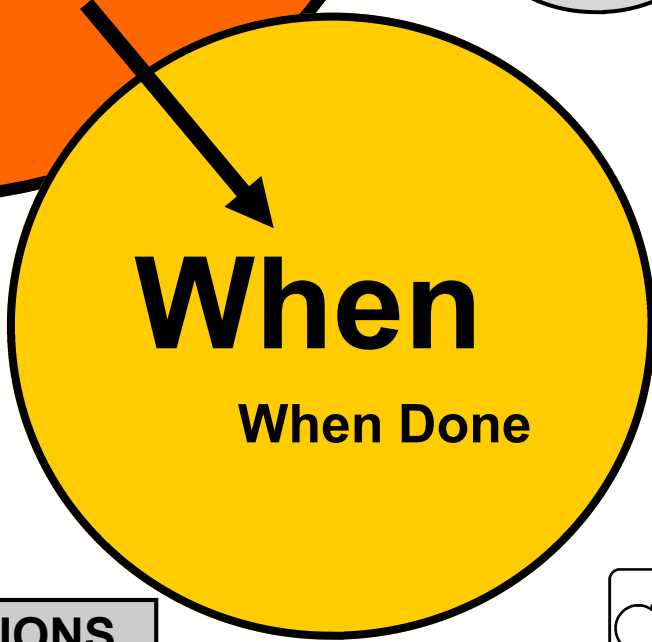
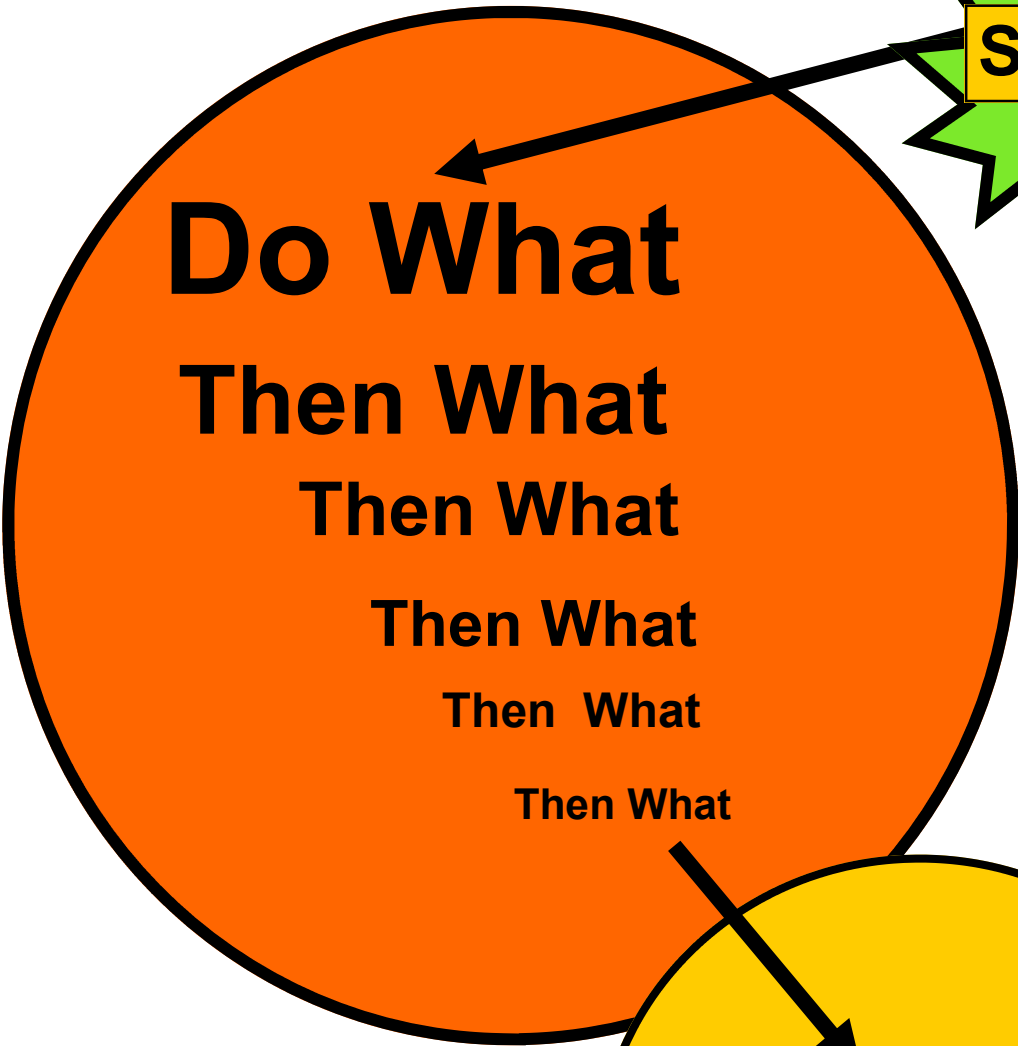
Do



game



Situation





Do: Do means to decide and act now.

Why play this game?

To train your students to develop and put intentions and plans into actions.

To have your students develop a Proactive mindset and not to be predominantly Reactive or Inactive in their behavior.

Its Questions

- Do I have to decide now?
- What have I decided to do?
- When will I do each part?
- Am I proud to do this?
- Can it be undone?

Situations for this Game.

Do

- * Make up a plan to make someone laugh and do it.
- * Make up a plan to get dressed in the morning in the shortest possible time and do it.
- * Make up a plan to legally obtain \$5 and do it.
- * Make up a plan to fit homework/work with all the other interesting things that you want to do this week and do it.
- * Make up a plan to make one new friend this week and do it.
- * Make up a plan to improve your fitness starting tomorrow and do it for one month.
- * Make up a plan of what to do during a school lunch break.
- * Decide on a game for four people and play it.
- * Make up a plan to obtain the best value for \$5 at a food outlet (the school tuckshop) and use it when you next go to buy lunch.
- * Make up a plan for your next birthday party and tell your others about it.
- * Make up a plan to impress someone (your parents) and do it.
- * Make up a plan for an ideal holiday and tell us about it.
- * Think up a way to quickly separate a pile of 5c. and 20c. coins and try it.
- * Make a musical instrument from objects around the room and play it for us.
- * Find in two minutes any three items from the following list and show us: Something that has been eaten. Something that makes you happy, sad or angry. A red pencil or sock or container or word. Something that is lighter than it looks. Something that you have not got but want. A lie. Something that is broken. Something you don't want. An advertisement for something. Something that is round, flat and thick. Repeat with any other three from the list.
- * Find someone that you have not talked to lately and start up a conversation.
- * Keep the World clean. Decide to keep your area clean of rubbish and keep a count of how many things you clear away today. Tell us your total tomorrow.
- * Use a sheet of A4 paper to support a book 15cm above a table. Use a sheet of A4 paper, a drinking straw and sticky tape to carry a button test pilot 3m on a breath powered flight through the air.

Selecting and Sequencing The Tools

13.

Aim: To increase the power and range of our students' Critical and Creative Thinking Capabilities.

Rationale: You can use Selecting and Sequencing as a technique in the training of your students in any discipline process, cross curricula skill or general capability. How can just a small number of tools have the power and range to cover this suggestion? Simple, its Maths and its like the power of the alphabet where twenty-six letters when selected and sequenced have the power to build all the words in the English language. So too, these Braintools can be selected and sequenced to build combinations which can underpin most processes, skills or capabilities. Thus skilling your students in this core of tools becomes a very time efficient and outcomes effective solution to support the teaching of Critical and Creative Thinking across the curriculum.

Here is an example to illustrate what is meant by this. How do you train your students to Observe and Infer? To train them using this Braintools technique you simply teach them to always remember and use the following tool sequence :-

Factors Tool ⇒ **Alternatives Tool** ⇒ **Right Tool.**

In a Science lesson, the **Situation** presented to the students is a picture of animal footprints in sandstone that have just appeared after a flood. They were asked to Observe and Infer what had happened using these tools.

Factors Tool generated these ideas: Large prints and small prints both with three toes. At the fifth step the small prints are placed together and the next step is in a different direction. The small steps in the new direction are wider apart. The large prints have a bend in the outside toe. Both tracks curve and move off in the same direction. The large prints gradually increase in their distance apart until there is a muddle of prints. In this muddle the prints of both face in all directions. Only the large prints leave the muddle. These leaving prints become wider apart as they go.

Alternatives Tool generated these ideas: It is a baby and an adult and the baby hitches a ride with the adult. It is a predator and prey, and the larger eats the smaller. This happened at different times, the large animal spotted the tracks of the smaller and followed until there were no more, looked around then walked off. It is predator and prey, and the smaller flies away. They were made by the local tourist association in an attempt to attract tourists.

Right Tool generated these ideas during a discussion: There are displays like this set up by experts who say they are dinosaur stampedes. So it might be one of the predator/prey Alternatives based on expert opinion. Place one tick in the almost yes on the Expert row. From knowledge of Use, the facts that the little one stops and runs off in a different direction and that the large one speeds up before they meet suggests a chase. Also, it is possibly an unsuccessful chase because the spaced out steps of the larger leaving the muddle suggests that it is following the flight of the smaller one as it flies away. A weak point, but possible. A tick in the almost yes of the Use row! Decision time... Based on the data and this thinking it is *most likely* a predator and prey situation with the possibly of an unsuccessful chase. More data needed to firm up on this decision. Also we are not too sure about the tourist association. Need to look into it.

Practice Selecting Tools. Have your Students:-

Read each Activity. Students then select a Braintool that they consider useful to complete the activity. They conclude by writing a brief reason for their selection.

1. Describe how to make a cheese sandwich and cup of tea so they are both ready to serve at the same time.
2. Do a mime about putting a worm on a hook.
3. Design an add to sell your pencil.
4. Write a report on your favourite music or place to visit.
5. Draw a map to show a visitor how to get from the airport to your house in a hire car.
6. Construct a musical instrument from drinking straws.
7. Make a proposal to protect whales.
8. Decide what to do about a friend who has started shoplifting.
9. Decide on the purchase of a birthday present.
10. Arrange a group of four students to make a human sculpture.

Note... There is no one correct answer in this activity. It is up to the students to justify their selection. During your daily teaching ask students to select tools from your tool display to give power and range to their thinking.

Selecting & Sequencing

- A) Read each Practice Situation alone or in a group.
 - B) Select and Sequence Braintools to successfully complete this activity.
 - C) Record your selection and sequence in the Braintools column.
 - D) Provide a brief reason for this selection and sequence.
- Note... There is no one correct answer in this activity. It is up to you to justify your selection.

Practice Situations	Braintools	Reason
(Also use your students' Subject Situations, assignments, task sheets for this practice.)		
<p>1. A small boy who has been playing football falls into a fast flowing stream. There is an overflowing weir a little way downstream. You are riding your bicycle past and see this along with a person fishing and a group of children who are playing skipping. What Tools could help you in this situation?</p> <p>2. There are many different special days such as Mother's Day, Easter, Christmas and national days. You have been employed by a new nation to create a new special day with all the trappings . What tools will you use to assist with this task?</p> <p>3 Tourism can bring a lot of money into an area. Consider your local area and all it has to offer. In your position as a business adviser, what possible new tourism business could you suggest to the local people ?</p> <p>4. You have a chance to win a \$100000, four months, around the World holiday. However, a condition is that an interesting itinerary is planned within one day and presented to the judges. You are one of five possible winners!!!! To collect the prize plan your itinerary.</p> <p>5. A teenager's room is very messy. So cluttered that it is usually difficult to push the door fully open. Unfortunately, this door opens onto the main lounge. As a parent, how can you resolve this situation ?</p> <p>6 There are eight children visiting their grandparents. There is no TV, no computer and no games equipment. As the eldest you are given the job of selecting four or five items from around the house to invent a new game to entertain the group. What is it and what are its rules ?</p>		

Finally show our core list of Critical and Creative Thinking Skills and have your students Select and Sequence Braintools to perform these skills.



Presentation Options

After you have played a game with your students to generate ideas about a particular situation, extend the activity by setting them to develop a presentation of their ideas and show it as information and entertainment to any audience that can be found. This consolidates the development of the skill and is fun.

Some prompts for Presentations

1. **WRITE** :- (a) a song, (b) a ballad, (c) a movie script, (d) a poem, (e) a jingle, (f) a description, (g) a synopsis, (h) a manual, (i) a recipe, (j) a list of instructions, (k) a diary, (l) a report, (m) a parliamentary bill/law, (n) a business plan/prospectus, (o) a text book, (p) a course, (q) a design brief, (r) a quote, (s) a play, (t) a TV commercial, (u) a newspaper article/feature, (v) a pamphlet, (w) a book, (x) an essay, (y) a glossary, (z) a topic dictionary.

2. **DRAW** :- (a) a cartoon, (b) a comic strip, (c) a map, (d) a plan, (e) a sketch.

3. **MAKE CHARTS** :- (a) flow sheet, (b) picture, (c) lists, (d) labelled diagram, (e) parts and relationships, (f) advertisement, (g) rules and directions, (h) instructions, (i) cause effect, (j) problem solution, (k) compare contrast, (l) concept components.

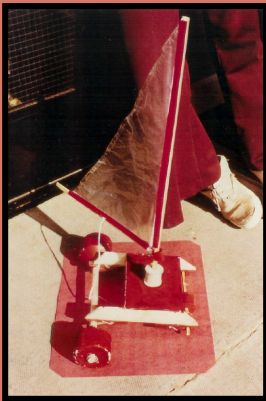
4. **BUILD** :- (a) a diorama, (b) a sculpture, (c) a model, (d) a prototype, (e) a flat display, (f) a 3D display, (g) an example.

5. **DEVELOP GAMES** :- (a) board, (b) computer, (c) simulation, (d) role play, (e) card, (f) manipulative, (g) physical, (h) team, (i) word, (j) puzzle, (k) crossword, (l) jigsaw, (m) construction, (n) TV/radio.

6. **USE INFORMATION TECHNOLOGY** :- (a) send E-mails, (b) contribute to a newsgroup, (c) establish and maintain a web site or blog, (d) make a CD, (e) an app.

7. **CONDUCT** :- (a) a debate, (b) a court case, (c) an investigation, (d) an interview, (e) an interrogation.

8. **PRESENT** :- (a) an experiment, (b) a speech, (c) a demonstration, (f) a lesson, (g) a discussion, (h) a circus, (i) a concert, (j) an exhibition, (k) a course, (l) a mime, (m) a sketch, (n) a dance, (o) a documentary, (p) a computer presentation, (q) a photo or slide sequence.



If these activities, an extract from the Braintools Education: Learning to Learn Program, have been useful for your students you can purchase the whole of Course 1., for the cost of coffee and cake from :- <https://www.braintoolseducation.selz.com> .



Making Time for Reasoned-Thinking

The human brain is lazy. It prefers to conserve energy by using a reactive response based on feelings, attitudes and values rather than proactively expend energy to generate new ideas, possibilities, inventions, notions, etc. That is, to generate intellectual capital and so have a bank of ideas to invest in your success. Hence we tend to miss out on the benefits of our brain's power.

We make time for TV, sport, recreation, hobbies, holidays, gaming, Facebook, fitness (some), work (many). We all make time for beneficial things. So why not further benefit by developing the habit of Making Time to think and so harness our brain power.

Just think about it.

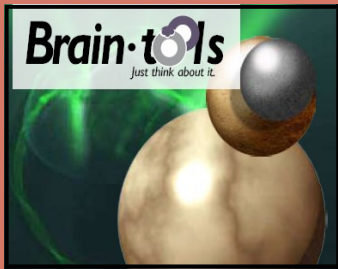
There are three types of *thinking time* associated with this program. They are Incidental Time, Informal Time and Formal Time. Following is how to harness your brain power in these three settings.

Make Incidental Time: This is the normal state of everyday affairs where the questions from the file's Mini Tool Kit can be injected, on the spot, into conversations and self-talk to give power and range to the thinking occurring. These communications maybe face to face, online or via some other media. As well we might be using self-talk to decide if we wish to engage with a particular situation and to help us to think it through.

Make Informal Time: This is when we make time to use a component of the think tank file in written form on some work surface such as a note book, sheet of paper, back of an envelope, whiteboard, sand patch, etc. Draw up the tool's structure then use its questions to generate and record ideas, either by yourself or with others in groups, teams, meetings, social settings, etc. If you have your tablet or laptop with the digital file on it, this could also come in handy in an informal setting. (See also the Learning Diary pdf to expand this informal use).

Make Formal Time: Here we use the full process of the **Think Tank Challenge 1.** that follows next. It is used where the outcomes of action or inaction are so important as to demand full attention and best brain power. (See also the Digital File pdf and the Learning Diary pdf as they support, complement and expand this formal use.)

NB: Games to aid consolidation and recall of the tools can be made up from the Mini Tool Kit (see Paper File) by printing it off, laminating it and cutting it into each tool's Question card, Structure card and Why Use card, plus making up two game boards each with a 3x5 grid whose cells have slightly larger dimensions than the cards. You will need to make perhaps five sets of these cards for your class. A set's thirty cards can be placed face down beside the game boards. Allocate a student or up to three students to a set of cards. Students first race to place all the cards in their correct cell then stand (photo one). Start by using the Mini Tool Kit as a cheat sheet and only using the Question and Structure cards. Then gradually increase the difficulty of the game until all thirty cards are used and no cheat sheet is used. This end level represents a high level of consolidation and recall. Vary the game by making a group relay out of it (photo two). Have fun. Try other card games.



6.



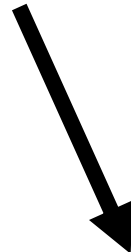
Education

Think Tank Formal Application



the Big Game
Course Two, Level B

Setting up the
Challenge
(Paper File or Digital File)



Conducting
the Think Tank



Presentation
and Feedback



Our
Challenge

and Our
Results



Assessment Criteria, Mastery: Level B

- Demonstrates the transfer of control of learning to the student by being able to independently operate the four step process of the Organizing Devise using both (a) the paper file and (b) the digital file.
- Achieves 60 or more Challenge 1. points in both group and individual Challenges.





Paper File

Brain·tools
Just think about it.

Education

Think Tank Application

A World of Innovation and Learning

WORKSHEETS **FILE**

No.

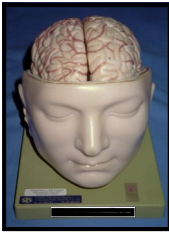
Rank:

Title:



The Brain.tools Success Cycle.

File Creator/s:
File Contributors:



Think Tank Organiser



File info.

① Situation.

- (a) Actively seek out opportunities for learning and innovating.
- (b) Keep a list of these ideas.
- (c) Select the most promising to Think Tank.
- (d) To begin, briefly describe your idea or situation here.

The Situation: What is going on here?

② Feel.

No ← → Yes

- (a) Is it:
- New to me
 - Important
 - Urgent
 - Profitable

1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

Tick, score & Decide.

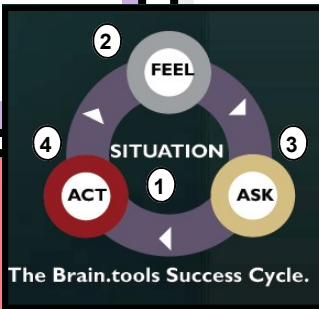
- (b) Is it worthwhile for me to invest my effort here?

- (c) Tick decision to Think Tank it!

No

Yes

The Goal:



④ Act.

- (a) Implement the action plan that you have developed, assess and reflect on its outcomes. Decide when it is done.
- (b) Conduct your presentation and gain feedback on your endeavours.

The Outcomes:

Results:

Presentation:

③ Ask.

- (a) Select suitable Braintools for this Situation from the tool kit and record their names in the ovals below.

(b) Next write each tool's name and draw its structure at the top of a blank A4/A3 page (Tool Worksheet), then refer to the Mini Tool Kit and use these tools to generate lists of ideas. Store them under a clip on the next page.

(c) The longer you use a tool and the more people you involve, usually the better the ideas. Also using a tool then *sleeping on it* and coming back to use it another day some times produces great results.

(d) Use these ideas to generate Plans (Do Tool) for Action, Presentation and Feedback.

The Tool/s: Add more as needed.

Do Tool





You can use this Think Tank to improve your general level of success in life.

It does this by providing a powerful process for you to learn and invent.

And it involves others to help you to do this.

4-Steps-2-Success Think Tank Operation

1. Situation: Develop a learning mindset and culture that actively scans your environment for situations of opportunity and threat then enthusiastically engage with them. This is the essence of an inquiring mind. Keep a 'to do' list of things to do, learn and invent.

2. Feel: Use this scale to rank and help decide if you are going to engage with a Situation. Writing down the Goal helps to clarify what is to be achieved, by whom, to what standard and in what time.

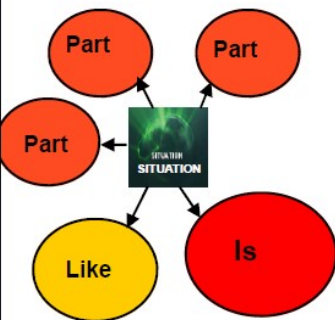
3. Ask: Here you use the Tools to generate learning and innovations as follows.
Select It: Scan the tools and select a suitable one to use to work on this situation. You may also increase the power of your work by selecting a sequence of tools. There are many combinations to give you a vastly increased power. **Draw It:** Draw up the tool's structure and write its name at the top of an A4/A3 blank work sheet. Note its arrows' directions. This is ...

Mini Tool Kit

Recognise Tool

Its Questions:
 What are its parts?
 What is it like?
 What is it?

Its Structure & Growth Process:



Why Use:
 a) The sooner I can recognise something the sooner I can act.
 b) When I recognise something I can use all my memories to take advantage of the situation.
 c) When I separate something into its parts, it is easier to understand, remember and recognise.

Factors Tool

Its Questions:
 What are all the Factors in this Situation?
 Are there any Key factors?

Its Structure & Growth Process:



Why Use:
 a) Helps me to uncover the wide range of factors in a Situation.
 b) Brings to my attention key factors in a Situation.
 c) Reminds me that key factors are related to my role in the Situation

Points P & N Tool

Its Questions:
 What are its Positive Points?
 What are its Negative Points?

Its Structure & Growth Process:

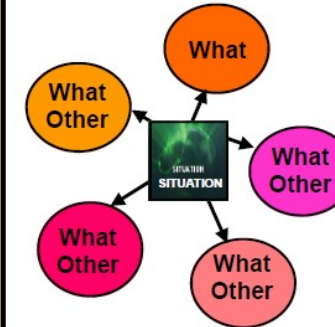


Why Use:
 a) Because my emotions will cause me to like or dislike something, it is very difficult to see both its positive and negative points. This tool helps me to look at both sides before I act and so gives me the whole story and reduces mistakes.

Alternatives Tool

Its Question:
 What Alternatives exist here?
 Which is the best?

Its Structure & Growth Process:

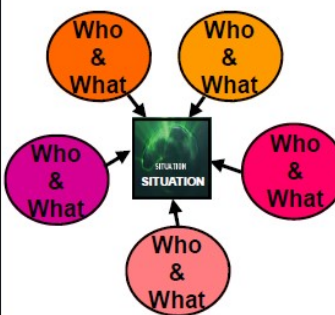


Why Use:
 a) Humans have always found better ways of doing things. This tool helps you to find and take advantage of better ways of doing things.
 b) The more Alternatives you can generate, the more chance you have of finding the best one.

Views Tool

Its Question:
 In this Situation who has a view and what is it?
 What might be their goals?

Its Structure & Growth Process:




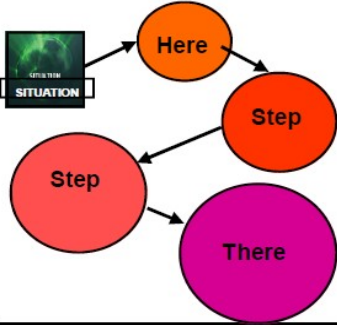
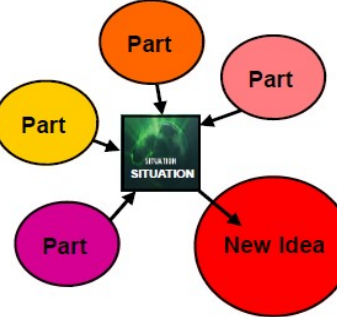
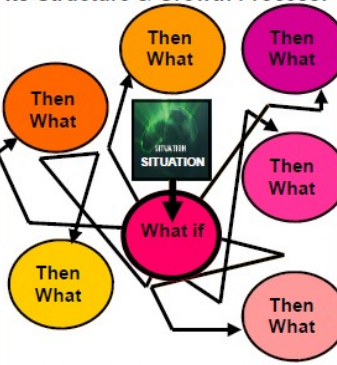

Why Use:
 a) In a Situation all will have slightly different or completely different Views. If we are not to make mistakes and so to be successful, it is necessary to find and take these Views into account before we act.

what the tool looks like. It provides you with an image of the scaffolding upon which to grow and store the many ideas generated from using the tool. List the ideas on the worksheet.

Use It: Ask yourself its question/s and then follow the structure's word prompts to generate ideas. Record the ideas in a list on its worksheet. Accept and record all ideas no matter how strange. You need to use a tool for at least three minutes as your energy conscious brain will first draw on its memory before making up new ideas. Usually the more brains using the tool the better the job. Groups of up to five work well and only one member needs to record. Members of large Think Tanks work apart & pool ideas. Finally, use the Do Tool to pull all your ideas together into a Plan of Action.

4. Act: If you are able to, implement your plan to demonstrate that it works before showing its worth to others. If not, then promote it to others who could benefit from it and who have the power to implement it. Implement your presentation plan. Use the school's Think Tank's structure to disseminate this learning and Innovation.



<p>Effects Tool</p> <p>Its Question:</p> <p>What are the Now, Soon and Later Effects of this action?</p>	<p>Its Structure & Growth Process:</p> 	<p>Why Use:</p> <p>a) The Now, Soon and Later Effects of an action can have different and even opposite impacts on us and others. The Effects Tool helps us to identify these impacts before we decide to act.</p>
<p>Change Tool</p> <p>Its Questions:</p> <p>What is this?</p> <p>How can it be different?</p>	<p>Its Structure & Growth Process:</p> 	<p>Why Use:</p> <p>a) Words and ideas set up patterns that cause us think in a particular way. This tool helps us to escape these patterns and develop new ideas and ways of doing things.</p> <p>b) As the world is changing rapidly, many old ideas are becoming ineffective, therefore we need to use this tool to develop new and improved ideas to replace the old, dysfunctional ideas.</p>
<p>Invent Tool</p> <p>Its Questions:</p> <p>What can I put together?</p> <p>How can I do this?</p> <p>What is Invented?</p>	<p>Its Structure & Growth Process:</p> 	<p>Why Use:</p> <p>a) We can use this tool to develop new ideas or ways of acting by putting together two or more old ideas.</p> <p>b) We can use the tool to invent forward to a new idea or backwards from a problem.</p>
<p>Explore Tool</p> <p>Its Questions:</p> <p>What If this Situation existed?</p> <p>Then What useful ideas might come out of it?</p>	<p>Its Structure & Growth Process:</p> 	<p>Why Use:</p> <p>a) This tool allows us to look into unusual areas in our mind and put together really creative ideas. While many of the ideas turn out to be useless, some turn out to be brilliant improvements on the ways we do things at present.</p>
<p>Do Tool</p> <p>Its Questions:</p> <p>Do we have to make a decision now?</p> <p>What have we decided to do?</p> <p>When will we do it?</p> <p>Can it be undone?</p>	<p>Its Structure & Growth Process:</p> 	<p>Why Use:</p> <p>a) The tool helps us to overcome the human urge to conserve energy... to do nothing, to get nothing, to become nothing.</p> <p>b) The tool guides us to put our thoughts and plans into actions.</p> <p>c) The Tool helps us to decide when we have done what we set out to do.</p>

Teacher Notes

age **5 to Adult**

1.

13.



As teachers we are required to teach all kinds of subjects with one notable exception. There is no subject about learning and how to learn. This set of resources is designed to provide your students with a practical, introductory course in *Learning to Learn*. Is this the fourth but forgotten basic in education?



The course's twelve tools, three roles, three modes and four step model for learning provide you with a simple vocabulary and set of processes that form its complete content which has lifelong application.



Top Tips

Skill Development: Use the twelve games to first explore the learning tools then to gradually consolidate and master them. Put the game boards up around the classroom as posters for quick reference. As this is a long-term, process based course you can develop practice situations that are suitable for the interest and maturity of your particular students. Remember the key to skilling is to have lots of fun, engage interests, to measure and value performance and to give feedback on progress.

Descriptive Modeling: This is describing how to use self-talk to initiate and direct learning. During your teaching day use the tools' vocabulary and structures to present and process information. Call your students' attention to this use of the tools and your self-talk. Also, with your class explore other people's thinking to see if you can identify the intuitive use of these roles and tools. The roles are based on responsibility and control in learning. The tools are based on the thinking strategies of successful people. The question is the fundamental component of each of these tools.

Guided Application: This is about the teacher guiding students through the application of the tools in the range of educational activities and learning roles. As teachers you plan the use of the tools into your direct teaching, group and individual work. You imbed the tools into your students' assignments, projects, tasks sheets and challenge activities. You informally introduce the tools during discussions, observations and general conversations. Formally you teach them to *Select It - Draw It - Use It...* across the curriculum. Most learning processes can be taught by teachers through skilling students to *select, sequence and use* a set of these tools.

Personal Application: This involves the student exhibiting the attributes of a Self-Directed, Lifelong Learner (See observer checklist). As teachers you acknowledge and reward the application of this system of tools to initiate and direct learning from others, with others and by themselves across the complete range of life's informal and formal learning situations. The intent is to develop inquiring minds and active learners.



Mastery

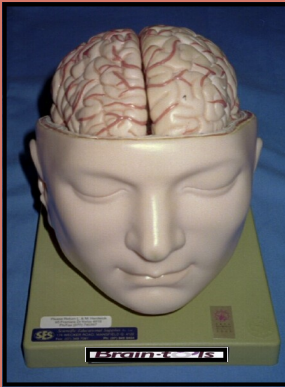
Mastery is accumulative and personal. The descriptors on the following pages are provided as a guide for teachers to assess the mastery of this System of Tools for learning to learn and for students to reflect on their progress.

Mastery focuses on the development and skilled application of three, integrated, key, program concepts. These are **Conscious Control, Strategy Skill and Organized Transfer**.

Conscious Control is based on the notions of Locus of Control and Executive Function. It requires students to consciously make decisions about engaging with and working through a learning situation. Activities on posters 0.1, 0.2 and in the introductory lessons focus on developing this concept.

Strategy Skill is based on the notions of the Integration of Functions and Working Memory. It requires the students to use tools that integrate the functions of spatial, verbal, rational and emotional working memory to generate ideas. Activities on posters 0.1 and 1to10 focus on developing this concept..

Organized Transfer is based on the notions of Attention, Transfer and Learning Organizations. This requires the students to initiate the use of the other two concepts across a range of formal and informal learning situations. It requires the educators to establish a learning culture to support these inquiring minds. Activities on all posters in this course, Course One, contribute to the development of this concept. While Course Two: The Big Game is totally dedicated to this Key Concept.



Our Learning Brain (Proactive Mode)

**Guided Learning
(From Others)**

**Co-operative Learning
(With Others)**

**Self-Directed Learning
(By Myself)**

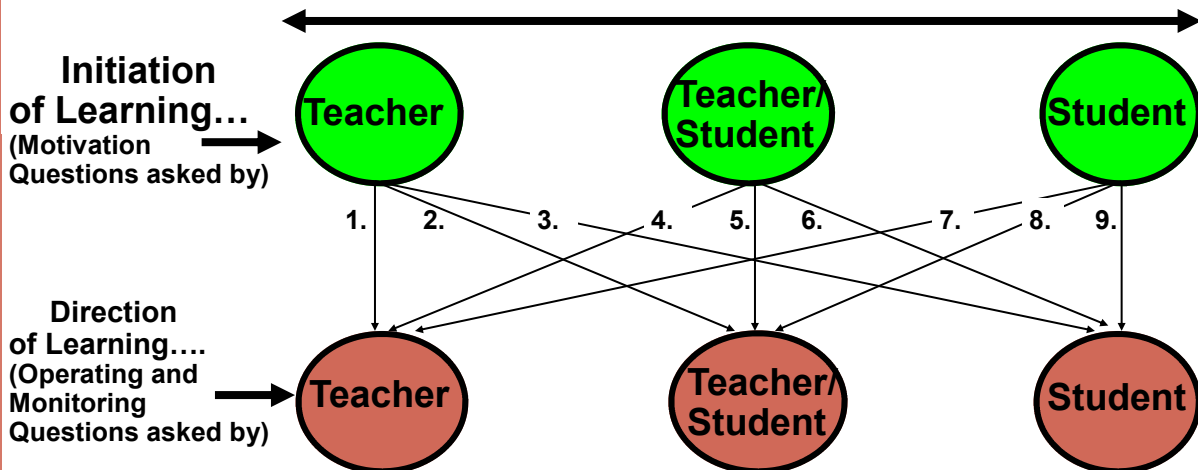


**Questions are the basis of conscious learning.
Who asks the questions controls the learning.
Types of Lessons**

**Guided Learning
(From Others)**

**Co-operative Learning
(With Others)**

**Self-Directed Learning
(By Myself)**



The nine Combinations of Control in Learning



The Nine Types of Lessons

The Initiation and Direction of learning are two distinct stages of a lesson. When they are combined with the three, complementary teaching/learning Roles give rise to nine Types of Lessons for Learning. For students to fully develop the attributes of a Self-Directed, Lifelong Learner (Proactive Mode) they need to be exposed to and become skilled at applying the proactive learning mode to these nine types of lessons. See Introduction pages G & I.

Type 1.

Teacher Initiated and Teacher Directed Lesson: Here the teacher, acting as a professional and at the direction of society, indicates that a student is required to know or be able to do something. Hence the teacher directs the students through a series of learning experiences that causes them first to engage then to achieve this knowledge and/or ability.

Type 2.

Teacher Initiated and Teacher/Student Directed Lesson: Here again the teacher initiates the lesson. However, the second stage is co-operative and negotiated. What content and processes are used to achieve the lesson's performance objective have ongoing input from both teacher and learners.

Type 3.

Teacher Initiated and Student Directed: The teacher sets the requirements for the lesson and motivates the students to achieve these requirements. The student then takes over their own learning, designs and conducts their own activity and then presents the results for the teacher to assess against the requirements.

Type 4.

Teacher/Student Initiated and Teacher Directed Lesson: Here personal interests of the group and societal needs overlap and so engagement is facilitated. During the second stage the teacher as the expert, takes control of the learning and directs the students through a series of activities to attain this mutual performance objective.

Type 5.

Teacher/Student Initiated and Teacher/Student Directed: Here again personal interests of the group and societal needs overlap and so engagement is facilitated. The second stage is co-operative and negotiated. What content and processes are used to achieve the lesson's performance objective have ongoing input from both teacher and learners.

Type 6.

Teacher/Student Initiated and Student Directed: Once again personal interests of the group and societal needs overlap and so engagement is facilitated. The student then takes over their own learning, designs and conducts their own activity and then presents the results for the teacher and other students to assess against the requirements.

Type 7.

Student Initiated and Teacher Directed Lesson: Here a student has a personal interest in learning something such as a musical instrument. The teacher as the expert directs the student to achieve their goal.

Type 8.

Student Initiated and Teacher/Student Directed: Here again a student has a personal interest in learning something. However, it also engages other students and teachers as it meets general personal and societal learning requirements. The second stage is co-operative and negotiated. What content and processes are used to achieve the lesson's performance objective have ongoing input from both teacher and learners.

Type 9.

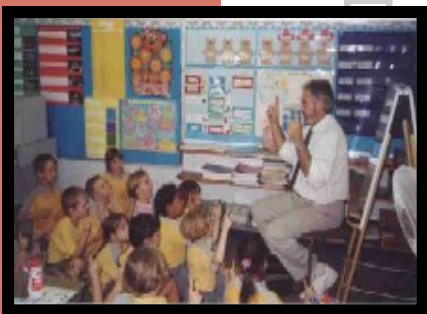
Student Initiated and Student Directed: Here each student is operating as a skilled self-directed, lifelong learner. They initiate their own learning based on their own needs and interests. The student then takes over their own learning, designs and conducts their own activity and assesses the results against their own performance objective. They are in control of and skilled at learning.

Brain·tools

Just think about it.

Education

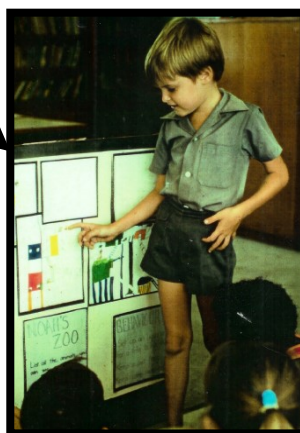
the Learning Game Course One, Level D



Guided Skills Training

Independent Application

Guided Application



Class

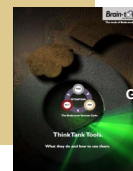
Group

Individual



Assessment Criteria, Mastery: Level D

- Can demonstrate the Brain Dance, name the Modes and their functions.
- Can say and clap the name of each of the 10 tools when shown its poster.
- Can describe the function of each tool and its usefulness when orally presented with it.
- Can generate at least two appropriate ideas using each tool given suitable situations and under the guidance of the teacher.





A sample Unit for a Teacher designed Informal Course

This is a sample four week Unit of Instruction for teachers designing *the Learning Game, Course One, Level (D)*. Teachers will design various Units as they move their students to mastery of the Assessment Criteria for this level and to support their classroom teaching.

Early Schooling

Guided Training

Guided Application

Lesson One The Brain Dance

Aim: Skill students to actively talk about and engage in learning.

Lessons Two to Four. Skilling in the Tools

Aim: Skill students in Tools that provide power and range in learning.

(Recognize, Factors and Alternative Lessons)

Revision

Assessment

Show page (E) and indicate that we use our brains to learn with. Teach the Brain Dance until the students can do it unaided. Have fun. (Pages E, J and K)

Orally check that the students understand the three modes.

Check that the students can identify the learning mode, "Yeah Thinking", and its logo.

Use the Skills Lesson format to teach the three tools at an early schooling level.

Indicate that these Tools teach us how to ask good, learning questions.

Display each tool's poster in the classroom at the end of the lesson. (*Laminated sheets from the teacher's Classroom Workbook*)

Spend the first part of a new lesson recalling and revising the previous lesson.

Set up observation checklists based on the assessment criteria to identify and help those students underachieving.

Choose Your Thinking!

In class, group and individual situations remind the students about the Brain Dance and the need to choose "Yeah Thinking" for learning.

Do the brain dance verse for "Yeah Thinking" and show them that at the Ask circle we have to use questions to start our brain learning either **from others, with others or by ourselves.**

Choose Your Tools!

When teaching in class, group or individual situations say, "Hey! Let's use a Learning Tool."

Draw the students' attention to the Braintools' posters and select a tool to use.

Guide the students through the use of the tool.

Explore opportunities to use the tools to support your teaching/learning program.

Consolidate the tools' use and vocab through this modelling of applications across the curriculum.

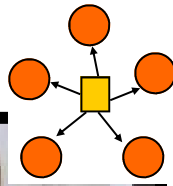
Support Activities

On the Support Activities pdf there are extension practice sessions and a range of related interesting activities that complement the training.



Education

the Learning Game Course One, Level C



Advanced Guided Skills Training

Guided Application

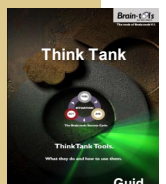
Co-operative Application

Self-Directed Application



Assessment Criteria, Mastery: Level C

- Maintains attention and engagement by asking themselves the focus question, "What is going on here?" Exhibits an inquiring mind (Checklist). Can describe the concept, 'Self talk' and describe its use in learning.
- Can recall all tools' names and describe how they are useful.
- Can draw each tool's structure, fill in its prompt words and list its questions.
- Can, given a situation, tool and role, generate more than five appropriate ideas in ten minutes.
- Can recite the student's code and explain the meaning of each of its three verses.
- Can explain in writing/words the content of four thought bubbles in the Learning Brain poster page (T).





A sample Unit for a Teacher designed Formal Course

This is a sample six week Unit of Instruction for teachers designing *the Learning Game, Course One, Level (C)*. Teachers will design various Units as they move their students to mastery of the Assessment Criteria for this level and to support their classroom teaching.

Middle & Senior Schooling	Advanced Guided Training	Advanced Applications
Lesson One Mindset and Learning Roles	Conduct the Mindset and Roles lesson on pages (H & I).	<p>Choose Your Thinking!</p> <p>At the beginning and during teaching/learning sessions remind students of which of the three roles they will need to take on and what the role requires of them to do.</p>
Lesson Two Modes of Thinking	Conduct the Brain Dance lesson on pages (J & K)	In class, group and individual situations remind the students about the Brain Dance and the need to choose “Proactive Thinking” for learning. Recall the brain dance verse for “Proactive Thinking” and how we use feelings to take control and choose to learn. Then remind them that at the Ask circle we have to use questions to start our brain learning either from others, with others or by ourselves .
Lesson Three Model of Learning	Conduct the Learning Logo lesson pages (L & M)	During conversations show students how they can kick their brain into its learning mode (Proactive) via the four step Model of Learning.
<p>Lessons Four to Six. Three Tools</p> <p>Aim: Skill students in Tools that provide power and range in learning.</p> <p>(Recognize, Factors and Alternatives Lessons)</p>	<p>Use the advanced Skills Lesson format to teach the three tools at the Middle and Senior Schooling levels.</p> <p>Display each tool’s poster in the classroom at the end of the lesson. (<i>Laminated sheets from the teacher’s Classroom Workbook</i>)</p>	<p>Choose Your Tools!</p> <p>When teaching in class, group or individual situations say, “Hey! Let’s use a Learning Tool”.</p> <p>Draw the students’ attention to the Brain.tools posters and have them select tools to use.</p> <p>Promote and reward Co-operative and Self-Directed applications of the tools.</p>
Revision	Spend the first part of a new lesson recalling and revising the previous lesson.	Embed these Learning Tools by referring to title, questions or structure as an information processing strategy when involving students in set subject tasks, assignments, projects, negotiated curricula, independent studies and the like.
Assessment	Refer to the next page for ideas on setting up an assessment program to monitor your students approach to mastery of the level (C) criteria.	Aid your teaching, promoting this advanced use of the tools and their vocab, across the curriculum and into general learning situations.
		NB The use of the Student, Learning to Learn, Workbook (pdf) complements this unit of instruction. See also the Support Activities pdf.

Monitoring, Assessment and Certificates

Informal

Have fun playing the Learning Games with your students and generating ideas. Students enjoy this playing with and sharing ideas. Display the tool's posters around your classroom and refer to them during your teaching and learning sessions. Focus on the vocabulary of the posters' titles. Monitor usefulness to you and your students. Perhaps record these uses for future classroom activity.

Formal

(1) For each course draw up a class checklist of student names against the 12 (Course One, Version 2.) Learning Map indicators.

(2) Use the assessment criteria for the mastery level concerned to gather data on each of the Learning Map indicators for each student. You could use objective tests, performance tests and the Observer's Checklist.

(3) Convert this data to a mastery score out of 10 for each indicator. It will include subjective and objective measurements that you have made. Use your own professional judgement to set your pass standard for the scores. The Certificate you award is based on your course and standards.

(4) Copy off a Learning Map sheet for each student. Transfer the mastery score out of 10 for each indicator to its line using the circle center as zero and the outside circumference as ten. Give the maps to each student and have them join up the line points, then shade the enclosed shape as in the margin example. Next, employ the Observer's Checklist to make a structured, professional decision on the present learning ability of each student.

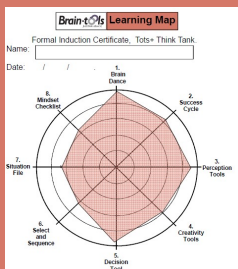
(5) I use this Learning Map sheet plus the student's Good Work Folder as the basis for discussion with the student about their learning skills and progress in general learning ability. The Good Work Folder is the student's personal collection of evidence from any source that demonstrates their learning ability. They highly value these folders which they show to their parents. The outcome is a teacher and student combined plan to improve the student as a learner.

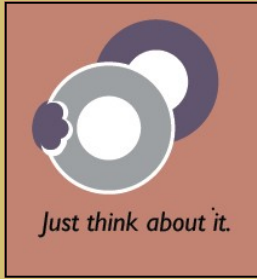
(6) After a beginning year baseline check, I do this midyear and end of the year. For those students whom I consider are meeting the level criteria, indicated by an average Learning Map Score of more than four, I draw up a Certificate and place their latest Learning Map sheet back to back then laminate and present to the student. I compare successive class checklist data to assess the impact of my teaching on my students' Learning to Learn abilities and to improve the teaching of the Brain Tools program.

This is one way to Monitor, Assess and award the Certificates. Teachers, given the criteria for each level, can devise their own way that is compatible with their teaching needs.

Brain-tools
Just think about it.

**Software
for your
brain.**

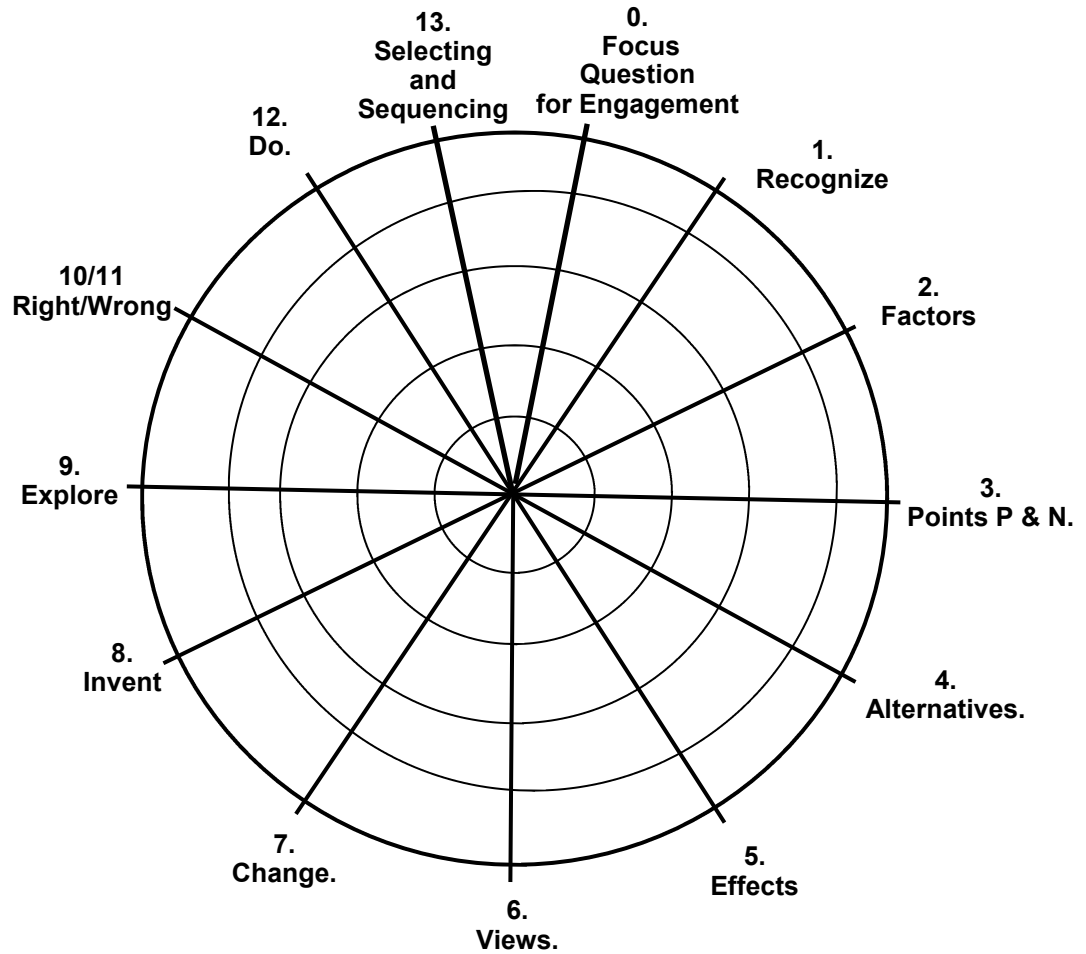




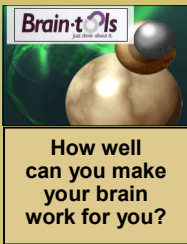
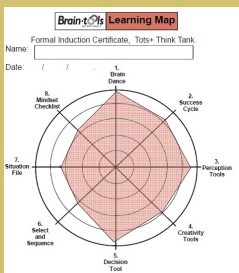
Brain-tols Learning Map

Course One. Version Two, Level C or D. (Insert Level)

Name:



Map



Check-list

Observer's Checklist for a Proactive Learning Mindset

Proactive Learners tend towards the Almost Always end of the range. Base your responses on accumulated observations. Include learning from others, with others and by themselves.

ALMOST NEVER SOMETIMES USUALLY ALMOST ALWAYS

...expresses clear personal goals.				
...initiates and directs activity for themselves and others.				
...exhibits a <i>can do</i> attitude.				
...exhibits an inquiring mind.				
...does ask clarifying questions.				
...makes perceptive statements.				
...takes responsibility for their actions and learning.				
...makes plans about what they want to do.				
...persists in the face of adversity.				
...is creative and inventive.				
...gives reasoned arguments for their decisions.				

Brain-tols
Just think about it.

Lifelong Learning

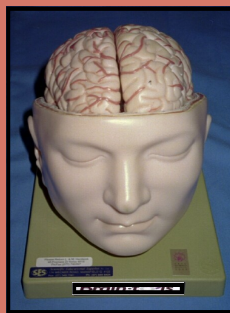


Certificate

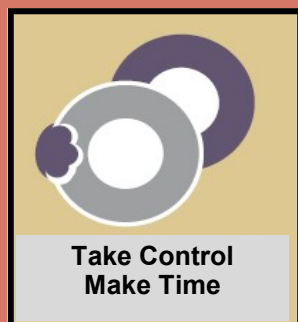
Awarded to

for
completing
Course One, Level (), Score ().
Critical and Creative Thinking

Awarded by:



The Situation



The Innovation



**Software
for your
brain.**

The Smart Society



Brain.tools
Just think about it.

The Idea.

Brain.tools is an Innovation to generate Innovations.

It has implications for education, business and being a generally smart society.

The Educational "R's" have always been a foundation for a society's success. These are Reading, Writing, Arithmetic and the fourth but forgotten "R", Reasoning. Reading and Writing have a system of tools in the twenty-six letters of the Alphabet and Mathematics has its system in the ten digits of Number. When explicitly taught these ancient innovations provide tremendous range and power in their subject areas, across the curriculum and into lifelong learning. However, there is no similar innovation in the form of a system of tools for the explicit teaching of Reasoning (Problem Solving, Innovating and Generalized Learning) that is consistently taught in schools and this shows up as a national skills crisis.

The OECD's Adult Literacy and Life Skills Survey (ALLS) monitors these four basic "R's" in its member nations on an ongoing basis. Problem Solving/ Reasoning stands out from this group as the skill in crisis. For Australia the survey shows that 70% of 15 to 74 year olds do not have this skill at the minimum required for individuals to meet the complex demands of everyday life and work in the emerging knowledge-based economy, 25% have these skills at the minimum level and only 5% at the higher levels. The age range suggests a persistent skill deficit and is backed up by personal data collected over forty years.

To fill this need Braintools has been designed and resourced as a simple, practical 'System of Tools' for the explicit teaching of Learning and Innovation. Its ten base tools (24 total), like letters and digits, each have a name, shape and function plus general operating procedure that when explicitly taught, selected and sequenced provide tremendous range and power across the curriculum and into lifelong learning.

The System is built around three, integrated Key Concepts:-

Conscious Control based on the notions of Locus of Control and Executive Function in the brain.

Strategy Skill based on the notions of the Integration of brain Functions and Working Memory.

Organized Transfer based on the notions of Attention, Transfer and Learning Organizations.

The System is designed to operate via a range of simple paper to complex digital technologies and to cater for the range from early childhood to adult.

If a society is to be smart and so gain the business and educational edge in this global, emerging economy, then there is a need to explicitly teach this fourth basic skill and also to foster a culture of learning and innovation thought out its organizations and institutions.

The Braintools Idea is one avenue through which to achieve this outcome.

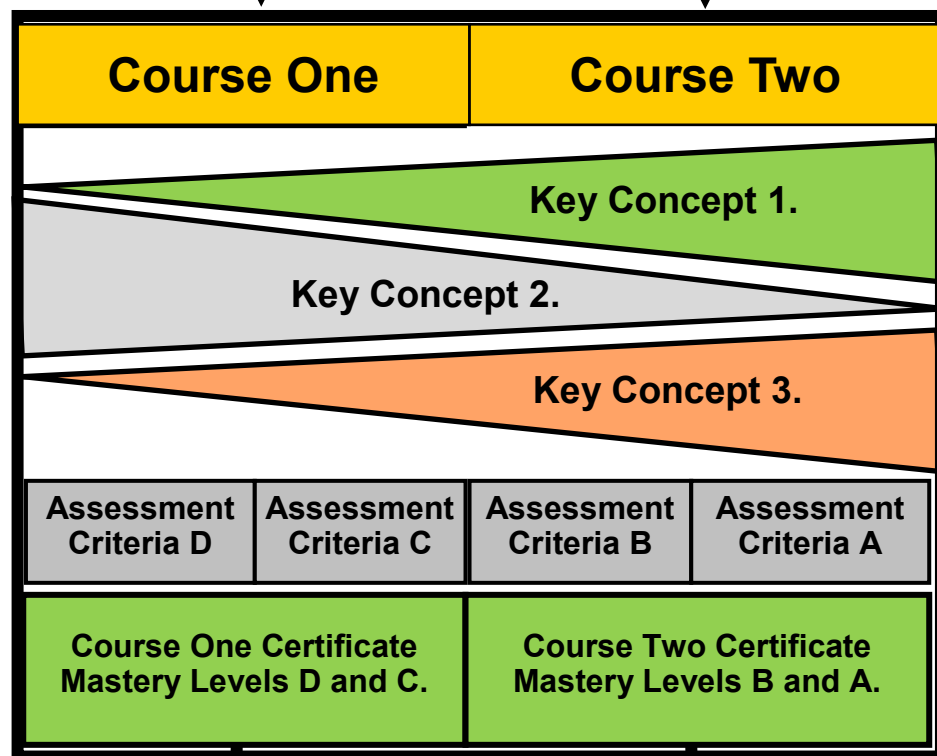
Lester W. Hardwick

Brain-tols Program Design

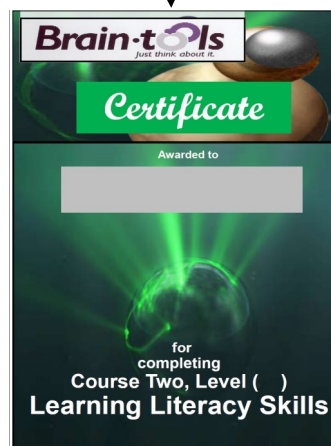
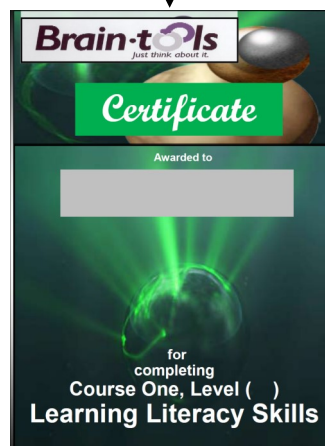
The Courses



The Design emphasis for Key Concept development



The Certificates



Brain·tools **The Materials**

Just think about it.

Course One: the Learning Game. (Version Two focuses on Critical and Creative Thinking)

Its goal is to skill students in a basic tool kit to learn from others, with others and by themselves. When mastered students have a skillset for self-directed, lifelong learning and thinking.

Course Two: the Big Game.

Its goal is to transfer the control of learning to the students and to establish a Learning Organization to accommodate this learning. This results in a school based Think Tank generating ideas and innovations while skilling students for life and work in the emerging, knowledge based economy.

Support Activities.

This consists of extension activities for the ten tools and a range of associates games and activities to add interest to the program.

Student Workbook.

Contains all the lesson's worksheets, plus accommodates practice sessions and assessments. Is a record of a students participation and progress while involved with the Braintools Program.

Digital File, 24 tools.

Used to operate the Think Tank when typing entries and sending the file over the internet. It may be used as a personal, digital storage of Braintools, formal projects. It is a vehicle for the Learning Community process. Course Two.

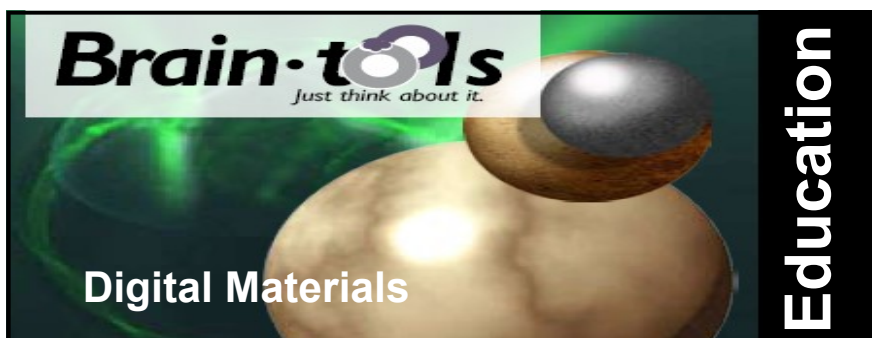
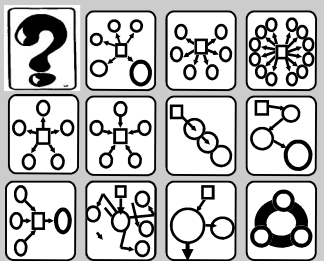
Learning Diary.

This is a paper based strategy to enable students to adopt the full 24 tools of the Braintools, complete program.

NB All materials are given in digital form so that they may be printed off for hard copy and displayed on a screen.

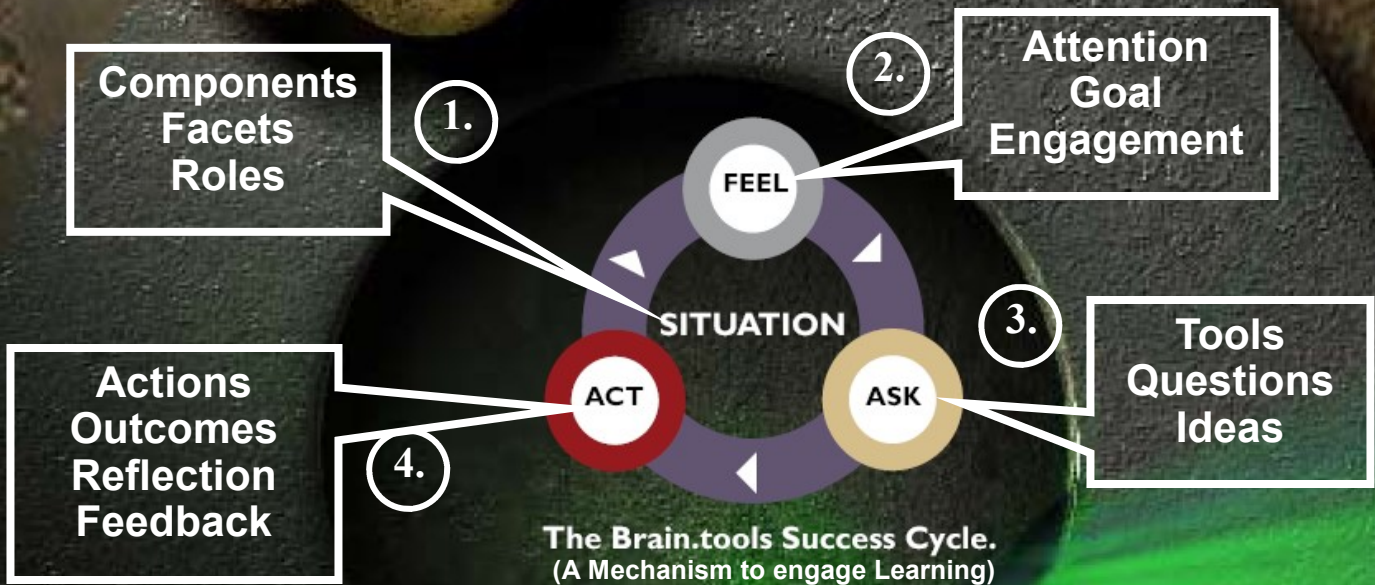


**Software
for your
brain.**

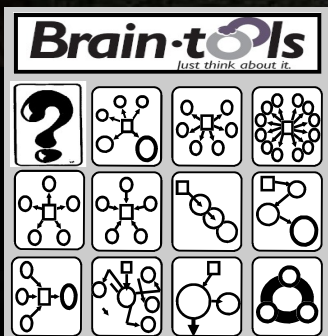


Learning with Braintools

Proactive, Learning Behaviour



4 Steps in Learning



Software for your Brain.
Symbols for Learning Literacy